A STUDY OF INTERNATIONAL COMMODITY AGREEMENTS

by

THOMAS JONES ROBERTS

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ABSTRACT

The following study of international commodity agreements, begins with a review of the inherent market and productive characteristics of primary commodities and particularly food staples. Inelasticity of their demand and supply, coupled with the dynamic effects of technological advance, business cycles and wars, lead to two principal difficulties, which are excessive instability of prices and a tendency towards the development and persistence of surplus productive capacity. These conditions cause much hardship amongst the primary producers concerned who are generally unable to help themselves, and call upon their governments for support. Such support is readily forthcoming in those primary producing countries which are particularly dependent upon an export trade in a few staple commodities. In the light of these difficulties the probable objectives of international commodity agreements is also briefly discussed.

A detailed case study of certain commodities with which international agreements have been concerned, then follows. The market characteristics, special difficulties, the history of past agreements, and an evaluation of their effects, is made for rubber, coffee, tea, wheat and sugar. In concluding, beef, tin and other international regulatory agreements are mentioned.

The opinions of various international bodies are then studied to indicate the direction of current thinking and the possible form of such regulatory agreements in the future. The viewpoints of various critics are also discussed in order to indicate the complexity of the issues involved and the divergencies of opinion which characterise this problem. A detailed review is made of proposals for buffer stock schemes since the idea has only lately received attention and seems to be the only feasible approach to the problem of price instability.

In conclusion, it is pointed out, that real problems exist amongst certain primary producing industries, and that international commodity agreements could make some contribution to their solution. The chief weaknesses of past agreements have lain in their price raising objectives and use of export quotas.

Individual commodity agreements on a short run basis, together with permanent buffer stock schemes are advocated as a desirable supplement to future anti-cyclical policies. The short run role of commodity agreements is emphasized because of the dangers of export quotas. Buffer stocks are advocated because the problem of price instability is a constantly recurring one. Strict adherence to the provisions of the ITO charter for such agreements will largely obviate the recurrence of their past mistakes. These conclusions are not final in that many problems such as the effective elimination of excess capacity yet remain to be solved. Moreover, it is pointed out that the ultimate control of the business cycle, and industrialization of certain primary producing nations would largely eliminate the problems besetting producers which have given rise to the need for International Commodity Agreements.
Because of the institutional nature of this problem little attempt has been made at a statistical analysis of international trade problems. The methodology has been based on a theoretical analysis of underlying problems, followed by a pragmatical approach to previous agreements and an investigation of the writings of the many authorities who have studied the subject.
This study centres around a very controversial subject, involving many complex issues. This preface is therefore written with the object of indicating something of the writer's interests and values, in order that any inherent biases which must inevitably be present in a work of this nature, may be more apparent to the reader, and help him in an objective evaluation of this study.

World War II has marked the beginning of a new era, and there are several facts which stand out in the writer's mind as milestones in this new epoch of mankind's history, and which though not necessarily of primary consideration in the writer's set of values at least have bearing on this particular study.

The first is embraced in all the thinking and the hopes for the future, embodied in the formation of the United Nations Organization and its ancillary specialized agencies. Much of this has been considered almost premature in its idealism and Utopian planning, yet it represents a very definite advance from post-World War I thinking and is a manifestation of the growing awareness of our international inter-dependence.

The second 'milestone' which is sharply focused through the writer's personal background, lies in the political revolution which has taken place amongst the economically backward nations, centred mainly in the far East. One could recall the independence of Burma, India and Pakistan in 1947, Indonesia's a year later, and even the first rumbles of political unrest in French Morocco. An economic or industrial revolution seems almost inevitable in the wake of this moral and political metamorphosis. One of the greatest problems of these countries lies in their dependence on a raw material economy and an income from the export of only one or two raw materials. Such countries entirely dependent on international trade
are often severely disadvantaged. A wider integration of their economies and a program of industrial development seem vital steps in their progress and development. Demographic arguments in particular can be marshalled to add strength to the need and urgency for raising their living standards.

The third factor, which is perhaps in the nature of a value premise and does not closely fit in with the present period of mankind's development, lies in the growing application of planning and control in the various fields of human enterprise and endeavour. If the writer were to try and classify students into two types, he would be tempted to see if they fitted into a dichotomy of "makers" and "users" of ideas and tools. The "makers" are the theoreticians and the true searchers after knowledge. The "users" are the experimenters and planners, often liable to accept dogma without challenge. Obviously, such a division is somewhat arbitrary and there may be no very clear dividing line. The writer would classify himself as a "user".

Neo-classical economic theories with their modern addendums of imperfect competition and macro-concepts, give the theory and tools of analysis which are used to understand certain problems of welfare. A "user" is dedicated to the idea of trying to plan and manipulate. The natural order of things is in large part a pre-supposition and a simplified hypothesis as to how the machine could or should work. The "users" are interested in that part of economics which tells us how we might apply the theory and knowledge to society in order to make it actually work in the most desirable fashion. The writer's particular set of values are such that this aspect appears as the significant part of economics. If this reasoning is not false, the "user" in economics may be analogous to the mathematician who is working as a statistician, or the organic chemist
who is working as a nutritionist.

These three facts or ideas have been woven into a basket which has carried the writer's thinking and retained his attention in this particular study. International Commodity Agreements have in the past been shrouded by a miasma of exploitation and ineffectiveness. The problems of backward countries of the far East are not exactly without the stigma of 'Imperialistic Exploitation'. Is it not true today that we are making an honest attempt to cooperate internationally in the economic sphere as well as in others; and are we not anxious particularly to help those countries which have commonly been closely connected with such international commodity agreements in the past? As a planner, the writer has tried to find out whether the need for such international agreements have their origin in any valid premises, and whether such arrangements can be of any use in the future.

I should particularly like to express my gratitude to Professor W. J. Anderson for his help and guidance during the preparation of this thesis. Such help is particularly appreciated in view of his absence in Ottawa during this period and also the lengthy nature of this study.

I should also like to thank particularly, Miss Frances Watt and the many other friends who helped with the tedious work of preliminary typing, preparing charts and proof reading.
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CHAPTER I

INTRODUCTION

A student of International Commodity Agreements (hereinafter referred to as ICA's) will at once be struck by several things. In the first place, the extent to which such agreements have developed during the past three decades, indicates that there must be a serious underlying trade problem. Secondly, he will notice that such agreements are closely bound up with numerous perplexing issues all of which may not be readily apparent. Furthermore he probably will conclude that there is no clear cut issue as to whether ICA's are beneficial or harmful.

It is hoped, therefore, in this study to substantiate some of the above introductory remarks by showing the very real nature and extent of the problems with which ICA's attempt to grapple. By considering subsequently, the record of success of such agreements in the past and by reviewing some of the current thinking and suggested plans for tackling these problems, it may be possible in conclusion to indicate the most significant conflicts which have yet to be resolved and the form in which it is believed that such international economic co-operation might best contribute to this problem.

A preliminary description of the nature, causes and objectives of ICA's is therefore made before considering some of the underlying problems. Although the writings of a dozen or more experts or the resolutions of many international, national political and institutional organizations might be referred to at this stage, it would be difficult to find a more succinct definition of ICA's than that given by Joseph Davis the director of the Food Research Institute at California, and one of the
leading authorities on the subject. He defines an ICA as:

"an agreement on a specific commodity or closely related group of commodities, chiefly foodstuffs and primary materials, made by two or more participating governments or with their approval and co-operation, involving a study of the international aspects of the commodity and/or some form of regulation of its trade, production and/or prices." 1

Davis further continues to distinguish ICA's from (a) Unilateral national commodity controls of great variety; (b) Highly specialized bilateral inter-governmental agreements, involving one or a few specific commodities; (c) Bilateral or multilateral inter-governmental agreements covering several commodities and/or commercial policy and practice; (d) International cartel agreements among two or more business concerns. 2

Again, forces which give rise to the formation of such international agreements have been outlined with varying emphasis by a number of writers and important committee resolutions. Thus the following quotation has been chosen not only for its adequacy but also because of its particular emphasis.

"It is widely recognized that supply and demand conditions for many basic agriculture staples are such as to create a special need for inter-governmental action to deal with burdensome surpluses. Although production tends to expand rapidly in response to price increases, its response to price declines is sluggish and sometimes perverse. In addition, the demand for commodities of this type is in most cases relatively inelastic. Hence arises the familiar

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1 Davis, Joseph S., "Experience under Intergovernmental Commodity Agreements", The J. of Political Economy, June 1946, Vol. LIV, No. 3, p. 194

2 Ibid., p. 194.
phenomenon of abnormally low agricultural prices and large surpluses which is so characteristic of periods of severe depression. The problem is more serious because of an apparent long run tendency for the supply of agricultural products to increase more rapidly than the demand. Thus there has been a pronounced tendency for governments to step in to protect the distressed producers, frequently through measures to support prices. These attempts have generally been unilateral, and their net affect on international trade has been highly restrictive.

In considering the objectives of ICA's the emphasis might vary very considerably according to the particular viewpoint presented. The altruistic and long run objectives of international bodies emphasize such objectives as a wider distribution of food, enhanced and equal access for consuming nations to vital raw materials, dissipation of chronic surpluses and adjustments in the direction of a better ordered productive system. At the other extreme, some ICA protagonists for farm products have quite frankly stated that they are

"monopolistic government supported cartels, intended to reduce production and raise prices in an attempt to strengthen the weak competitive position of farmers and give them the monopolistic powers ascribed to industrial producers".

There has been a marked evolution in thinking as to the objectives and functions of ICA's since the early years of the great depression, which has involved a broadening of viewpoint and greater attention to the general interest of the community as a whole. Past evidence of ICA's

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4 See Chapter IV, pages 133-44, of this thesis.

activities does much to justify accusations that they are monopolistic price raising devices, while a lot of the immediate post war thinking has tended to be almost too embracing in scope and character, relating several quite incompatible though desirable economic and social goals to the single mechanism of international commodity control. It is hoped to reveal subsequently that there are indications that national governments have profited from past experience with ICA's, that there has been recognition of some of the pitfalls, and that an honest attempt has been made to frame a realistic set of desirable and realisable objectives through the operation of such agreements.

UNDERLYING PROBLEMS

The following is an attempt to critically examine the alleged difficulties in the production and international trade in basic commodities, which have led to the formation of international agreements. Such problems are the result of the composite interaction of many changes and forces. It will simplify our examination, however, if these are considered under the following headings: (i) supply factors, (ii) demand factors, (iii) price instability, (iv) secular forces, (v) excess capacity. The significance of these various problems in the production of raw materials will be elaborated in the subsequent discussion of individual commodity histories.

(i) Supply Factors.

The supply of raw materials and primary commodities can be characterized as highly inelastic in response to price changes. That is to say that the volume of production of any particular commodity does
not readily adjust itself either to a rise in its price by expansion, or to a reduction in price by contraction. The main reasons for this rigidity in the supply situation can be found in the technological and economic nature of the production process of such raw materials. In the case of agricultural staples in particular, the production period may be one of considerable duration, varying from one year in the case of wheat and cotton, to five or six years in the case of coffee and even up to ten or twelve years in the case of rubber. Plans to expand or contract production can therefore be made only at certain appropriate times of the year, and even then such plans may not come to fruition until several years after initiation.

The production process for most agricultural staples is characterized, moreover, by high fixed costs and relatively low variable costs. Many of the raw commodities most important in international trade, are grown in tropical regions under conditions particularly suited to large scale or plantation production, where the capital requirements are generally higher than for other systems of farming. The Sugar Central in the West Indies represents, for example, a rigid economic system, heavily dependent on large volume and one that promotes regional concentration on a single crop. The fixed costs on South American coffee plantations, to use another illustration, have been estimated to comprise around seventy-five per cent of total costs, excluding interest charges.

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The high fixed costs of a plantation economy are not confined to slow growing herbaceous crops such as coffee, tea and rubber, but extend also to sugar cane. The situation is analogous to the problem of the specialized wheat growing areas where the lack of alternative crops prevents production from adjusting to moderate changes in prices. These are much greater barriers than the attractiveness of agriculture as a way of life which is so often quoted by writers on such problems.

Inelasticity of supply in these primary industries is the result of such a lack of alternative opportunities for factors of production. Land is the resource most inelastic in supply, especially where the area has been planted with a slow maturing crop such as tea. Labour also tends to be inelastic in supply. Whether it be on a large plantation employing imported labour on a long term contract (as in many parts of Malaya) or on a small family farm in the West, there is the same problem of a lack of alternative outlets for employment. Labour therefore, even when supplied by the proprietor himself, tends to become the residual claimant of any earned income. Likewise those specialized regions characterized by a plantation economy, commonly continue to produce at former levels even when there has been a severe drop in the price, because of the possibility of adjusting wages downward.

Johnson in an article contributed to the American Economic Review 8 points out that the usual arguments given to explain the inelasticity of supply in the agricultural industry are largely based on experience during the abnormal conditions of a depression. He points

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out that unemployment in the economy as a whole, makes supply inelastic in a number of manufacturing industries besides agriculture, during such times. Whilst certain capital resources and the land factor are highly inelastic in supply, he points out that labour is more elastic, the supply function shifting with changes in the general level of business activity. The relative constancy of productive levels in agriculture he attributes rather to flexible feed, livestock and labour costs which allow sufficient marginal opportunity for employment throughout the business cycle.

Supply inelasticity is also due in large measure to the pattern of small productive units which is again typical of many agricultural staples. A large number of small producers have nothing to gain from restricting production when the price falls, and in fact have every incentive to try and increase production in order to preserve their income.

There is, however, more elasticity to supply in response to a rise in prices. In fact there is evidence of very considerable elasticity in this direction in the long run. However, because of the time lag between actual production and development of new capacity, this upwards elasticity of the supply schedule is only very slight in the short run. A more detailed analysis of the supply characteristics of agricultural staples may be found in Professor Shepherd's "Agricultural Price Analysis" from which Chart I is taken. When the demand increases from D to D₁ and subsequently falls to D₂, the price initially raised to
P falls not to $P_1$ as it would if the supply schedule was equally elastic in contraction, but to $S_1$ since the supply curve in contraction is highly inelastic.

The effect of the supply inelasticity which characterizes these commodities can be seen in the pattern of international trade in raw materials. In times of depression the volume of trade in raw materials does not decline nearly as severely as the decline in manufactured and semi-manufactured products. This is well brought out in the League of Nations Review of World Trade in 1936.\(^9\)

**TABLE I.**

DECLINE OF VOLUME OF TRADE IN RAW MATERIALS AND FINISHED GOODS DURING THE DEPRESSION YEARS.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>1929</th>
<th>1932</th>
<th>1933</th>
<th>1934</th>
<th>1935</th>
<th>1936</th>
<th>1937</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foodstuffs</td>
<td>100</td>
<td>89</td>
<td>83</td>
<td>82</td>
<td>85.5</td>
<td>85.5</td>
<td></td>
</tr>
<tr>
<td>Materials, raw or partly manufactured</td>
<td>100</td>
<td>81.5</td>
<td>87.5</td>
<td>88</td>
<td>91.5</td>
<td>95.5</td>
<td></td>
</tr>
<tr>
<td>Manufactured articles</td>
<td>100</td>
<td>59</td>
<td>60.5</td>
<td>66.5</td>
<td>69.5</td>
<td>75.5</td>
<td></td>
</tr>
<tr>
<td>ALL COMMODITIES</td>
<td>100</td>
<td>74.5</td>
<td>75.5</td>
<td>78</td>
<td>82</td>
<td>85.5</td>
<td>97.5</td>
</tr>
</tbody>
</table>


(ii) Demand Factors: Price Elasticity.

The demand for agricultural staples and indeed most raw materials can also be characterized as highly inelastic. There is however some variation in the elasticity of demand between different commodities and further investigation and empirical research in this field would be useful. Pioneer work has already been conducted by Henry Schults with sugar and E. J. Broster with tea. Such basic knowledge as to the market demand characteristics of different vital raw materials would greatly strengthen any future attempts to assess the potential world market situation and to stabilize prices.

Income Elasticity.

It is important to note that the income elasticity of demand for non-food products such as rubber or the chief natural fibres is higher than for food products. It has been shown, for example, that the demand for cotton varies with the level of industrial activity rather than any changes in the level of consumers' incomes (though all three are correlated). By comparison, the income elasticity of the demand for food staples is lower, showing negligible increase in the volume consumed even at the peak of a business boom. Habit forming foodssuch as the beverages tea and coffee are faced by even more stable demand schedules than such staples as wheat or sugar.

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10 The term elasticity refers to the response of consumption levels to changes in price. See G.S. Shepherd, Op. Cit., pp. 52-53.

11 Schultz, Henry: The Theory and Measurement of Demand, Chicago, 193


For many agricultural products therefore income elasticity of demand is less than unity. For example, a man with twice as much income as another does not eat twice as much bread and potatoes; he may in fact eat less of such foods in which case the income elasticity of demand would be negative. The income elasticity of the higher quality foods such as beef and fruits is, however, considerably higher than for cereals. Schultz has contributed a very comprehensive account of the nature and significance of the income elasticity of such commodities.\(^{14}\)

The United States National Resources Committee has also made a valuable study of the variations in consumer expenditure for food staples. Again it is only possible in this study to draw attention to some of the more

<table>
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<th>New England States</th>
<th>Southeast</th>
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<tr>
<td>Article</td>
<td>Article</td>
</tr>
<tr>
<td>Sugar</td>
<td>Milk, Cream, Ice Cream</td>
</tr>
<tr>
<td>Potatoes</td>
<td>Bread</td>
</tr>
<tr>
<td>Flour</td>
<td>Sugar</td>
</tr>
<tr>
<td>Bread</td>
<td>Potatoes</td>
</tr>
<tr>
<td>Milk, Cream, Ice Cream</td>
<td>Butter</td>
</tr>
<tr>
<td>Flour</td>
<td>Eggs</td>
</tr>
<tr>
<td>Eggs</td>
<td>Flour</td>
</tr>
<tr>
<td>Meat, Poultry, Fish</td>
<td>Fresh Vegetables</td>
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<tr>
<td>Fresh Vegetables</td>
<td>Meats</td>
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<tr>
<td>Fruits</td>
<td>Fruits</td>
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detailed studies on demand elasticity. Table 2, taken from a study by Waite and Cassady, shows the income-expenditure elasticities for a number of food products, in two districts in the United States. It is significant that the products in both areas with the highest income elasticity are of a perishable nature and not very significant in international trade.

While the relative decrease in the actual physical volume of raw materials exported is much less than for non-agricultural products the decline in the value of products exported is considerable for both raw material and manufactured products. This is illustrated in Chart 2.

CHART 2
AGRICULTURAL & NON-AGRICULTURAL PRODUCTS: INDEXES OF VOLUME AND GOLD VALUE OF WORLD EXPORTS, 1929 - 37\(^x\) (1929 - 100)

\[ \text{Excludes trade between the United States and Hawaii and Puerto Rico. Also between Japan and Taiwan (Formosa)} \]


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(c) Clark, Colin: The Conditions of Economic Progress, pp. 436 - 439
(iii) Price Instability:

Arising out of the nature of the demand and supply is the problem of price instability since the level of prices is the result of the interaction of those forces which make up the supply and demand characteristics of raw materials.

The outstanding fact in the price behaviour of agricultural staples and other primary commodities, is that their price levels are subject to irregular and often violent price variations. This attribute of unstable prices has been well illustrated and discussed in a number of standard text books on agricultural economics, so that only the briefest outline must suffice here. Chart 3 shows a series of hypothetical supply and demand schedules for a primary commodity. In both cases the steepness of the curves indicates the high degree of inelasticity of both the supply and the demand. If an increase in demand is represented by only a slight shift of the demand schedule from $D_1$ to $D_2$ there is a very considerable rise in price from the level $P_1$ to $P_2$. Similarly an increase in the supply from $S_1$ to $S_2$ results in a very considerable fall in the price to $P_3$. Thus small quantitative changes in supply or demand result in quite considerable changes in prices.

CHART 3

$\begin{align*}
D_1 & \quad D_2 \\
S_1 & \quad S_2
\end{align*}$

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Because of the inelastic nature of demand, slight variations in the quantity supplied or the quantity demanded, will have severe repercussionary effects upon the price level. The quantity supplied is highly variable due to natural forces which are largely beyond the control of man. Thus the vagaries of Nature lead to the unexpected high and low yields. The extent of this yield instability varies between different crops, partly because of their particular growth habits. For example the severe drouths of 1934 and 1935 in the North American continent were very significant in mitigating the effects of surplus world wheat stocks.\textsuperscript{17} Again, many tree crops such as coffee have a definite fruiting cycle. After a year of good average yields the crop tends to fall off for a year or two while the plant recuperates. This cycle is exaggerated if a quiescent year coincides with adverse weather conditions, when the yields are very reduced.

Changes in demand as well as supply occur. These are due, in the long run, to changes in consumers' habits and tastes, resulting partly from the development of new substitutes or other technological advances. In the short run there are small fluctuations in demand arising from the business cycle. It is this type of demand change which is most significant in causing the price level to oscillate since they occur too rapidly to allow producers to adjust as they are able to do in meeting secular demand changes. This effect of the business cycle is perhaps the most crucial issue in the whole raw materials problem. The effect of the business cycle on raw material prices is very much more severe in the case of non-food products. The slight

\textsuperscript{17}Cairns, Andrew: "Commercial Policy and the Outlook for International Trade in Agricultural Products". Proceedings of the Fourth International Conference of Agricultural Economists Oxford University Press, pp. 171-183.

\textsuperscript{18}Wickizer, V.D., op. cit., page 4.
recession in 1921 following the postwar boom of 1919-20 resulted in very marked drops in the price levels of many important staples. For example, despite shipping shortages and accumulating stocks in the Orient, rubber prices hovered around 72 to 50 cents per pound during the closing years of the first World War. The business recession which followed the immediate post-war boom had immediate effects,\(^\text{19}\) however, and by the summer of 1921, rubber prices had fallen to 11.5 cents per pound. This instability of prices is particularly important for those countries whose economy is heavily dependent upon the export of a few raw materials. Their foreign exchange position becomes critical because of their great dependence on a balance of trade in order to obtain most of their consumption requirements. This is particularly so in the case of a product like coffee which accounts for 30 to 90 per cent of the total value of all exports for such countries as El Salvador, Colombia, Guatemala, Nicaragua, Haiti, Costa Rica and Brazil. Brazil had to give up her gold standard when faced with the rapid decline in coffee prices which occurred in 1930.\(^\text{20}\)

Similarly price declines in Rubber can upset the whole Malayan economy, whilst sugar prices are vital to Cuba, tea prices to Ceylon, wool prices to Australia and wheat prices to Canada and Argentina.

Many producers of minerals who were smaller in number than food producers, and thus better able to organize regulatory bodies, have formed

\(^{19}\) Knorr, K.E., World Rubber & Its Regulation, Food Research Institute, Stanford, pp. 90, 91.

international cartels partly with objective of stabilizing prices. Their efforts in that direction have not been too successful.

The following three staple commodities were all subject to strong market controls during the late 1930's, yet their prices changed drastically as is shown by the following figures. From February 12 to March 15, 1937, tin prices rose from £229 per ton to £311 per ton. In thirty-eight days from September 15 to November 8, 1937, tin prices fell from £264 to £181. The monthly average price of copper increased in New York between October 1936 and March 1937 from 9.563 cents per pound to 15.775 cents. Official export prices for steel merchant bars increased between December 1936 and June 1937, from £4.26 to £6.\(^{21}\) The above cartels resorted generally to making additions or cuts in export quotas whenever prices changed. However since changes in the production of such minerals only show their effect after several months have elapsed, the prevailing stocks and other anticipated arrangements for production have a much more immediate effect on prices.

It is the inability of a number of small unorganized producers to help themselves, coupled with the significance of the export revenue from the trade in such products, which leads governments to interfere and take steps to try and stabilize the prices of certain raw materials. Unilateral action might be described as valorization.\(^{22}\) The operations of the


\(^{22}\) The term originates from the Brazilian word "Valorização", signifying the act or process of government interference to raise prices.
Canadian wheat board in the late 1920's, the United States policy with respect to cotton and the Brazilian coffee control programme are examples of such valorization schemes. The basic idea underlying valorization is to take advantage of the inelasticity of demand by withholding surplus stocks of the commodity.  

**Cyclical Price Fluctuations**

In the short run the principal problem lies in the existence of production cycles stimulated by price changes and also contributing to them. This phenomenon is a result of the inability of a large number of small producers to forecast future supply and demand requirements which leads the industry to overdo adjustments to price changes. Thus, one producer will decide to expand production when prices are high. If every producer acts in a similar manner the aggregate supply is greatly increased though this is not apparent until a year or more after the decision to expand production has been made. This causes prices to fall which induces producers to contract production. The supply falls and prices rise up again. The cobweb theorem has been developed to explain the mechanism of this recurring price and production cycle.

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Chart 4 illustrates this theorem. When the demand curve shifts from $D_1$ to $D_2$ because of a general increase in consumers' demand, the price will rise from $P_1$ to $P_2$. However, at this price, the quantity $Q_2$ will be supplied, so that the market is not in equilibrium. This quantity will in turn react to produce a price of $P_3$ which will call forth a quantity of $Q_3$. In this chart, the supply schedule has been drawn more elastic than the demand. The 'cobweb' produced is, consequently divergent. When the elasticities of both schedules are equal, the range of fluctuations remains constant, the 'cobweb' returning to its point of origin. When the demand schedule is more elastic than the supply schedule the cobweb is convergent, resulting in the stable equilibrium of classical economic theory. The second case, with a constant range of price fluctuations explains the regular price and production cycles which are more characteristic of the production of primary commodities with which this study is concerned.

It can readily be appreciated that the more inelastic the supply and demand schedules are, the wider the range of price oscillation. The occurrence of the business cycle superimposed upon the producer generated cycle, exaggerates the dis-equilibrium. In boom times, supply inelasticities lead to very high prices which result in an over-optimistic outlook to expand output whilst in the trough of a depression, producers may suffer such low prices as to force them into bankruptcy. There may consequently be
an excessive liquidation of production resources in terms of the long run requirements of normal times. This will result in an even greater rise in prices with the following upswing of the business cycle.

(iv) Secular Forces.

In the long run there are many factors which have significant repercussionary effects on the international trade in raw materials. A detailed consideration would again be outside the scope of this essay. Changes in the concentration and rate of increase of national populations have a dynamic effect on the market for raw materials. Studies have revealed a definite pattern of growth transition in relation to the level of cultural and economic development within a nation. Backward countries with a predominantly agrarian economy and rather rigid class patterns, are characterized by a fairly stable or gradually increasing population, with very high birth and death rates. Other nations beginning to industrialize and utilize the advances in science, tend to have a declining death rate as a result of the application of improved hygiene and medical knowledge. Their birth-rate, however, remains high, with a consequent rapid upsurge in population. The most advanced industrial nations again appear to have returned to a position of equilibrium with low birth and death rates. The former is the result of voluntary restriction of family size because of the out-weighing economic advantages which are attainable with small families.

The growth of demand through population increase is greatest in those countries with the lowest effective demand, which might be
characterized by demographers as subject to Mathus's Law. In those industrially developed countries which constitute the biggest effective market for primary commodities, the population is however, tending to reach a static or even declining equilibrium. Such countries might be characterized as subject to Engel's Law. We have the possibility therefore that technological advances may result in an expansion of production of such raw materials which constantly outstrips the effective demand, yet simultaneously there might be potential markets developing in the backward countries which could impose a very severe strain on our productive resources.

The dynamic effects of the rate of technological progress have been recognized since the beginning of this century. The great classical economist, John Stuart Mill, demonstrated that improvements in the productive process would tend to have an adverse effect on primary producers since such would lessen the demand for labour and land resources and make the products of industry relatively more expensive. Technological progress leads to a downward trend in costs, which necessitates the retirement of old high cost capacity, which cannot either physically or profitably be modernized. Advances in technique have a dis-equilibrating

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25 That there is a tendency for populations expand more rapidly than food production, so that nations will be limited in their rate of growth by technological development and their population will tend to be restricted to a subsistence level.

26 That an expanding income amongst consumers leads to a changing pattern of expenditure with a lower rate of expenditure on stable food-stuffs, particularly cereals.

effect. The significance of the particular application of technological advance to international trade, is revealed in the growing trend in the inter-war years, to adverse terms of trade for the primary producing countries. The large scale importing countries are often in a position to act as monopsonists and they may even raise the prices of the industrial goods they sell to such primary producers. In secondary and manufacturing industries, as productive efficiency increases so can output. This is not so in the agricultural industry where surplus labour must simply be removed. If neither immigration or industrialization occurs, the terms of trade of such countries experiencing rapid technological advance, may often be extremely adverse. T. W. Schultz and Colin Clark have both demonstrated the effect of this technological progress on the primary producers.

Other secular changes in production due to the dynamic effects of war and technological advance will become apparent in the next chapter. It is a tragic fact that the former often stimulates the latter. The development of anti-malarial drugs, synthetic rayon and rubber were largely the results of German chemists striving to prepare for war through achieving economic anarchy. It will be seen in the subsequent study of


individual commodities, how wars may commonly cut off the cheaper more efficient producing areas. Disruption of trade routes leads to stimulation of high cost production at home. When conditions return to normal political consideration in the form of government promises to domestic producers together with some of the frictions mentioned earlier on (high fixed cost, atomistic productive units et cetera) often prevent readjustment of the supply to actual demand conditions.

Finally we should consider the effects of industrialization in the present so-called backward nations which constitute the chief source of raw materials. The pattern of world trade in primary commodities has been largely between a small group of Western European importers and a number of distant producers in the tropics, south temperate zone, and North America. As these primary exporting countries develop their own manufacturing industries, as has already happened in some of the dominions, an increasingly complex problem will probably develop in these highly industrialized nations whose whole economy has been geared to the outward flow of manufactured or processed goods and the inward flow of the products of agriculture.

(v) Excess Capacity.

Excess Capacity can arise out of the failure of an industry to adjust to the above mentioned secular forces. It constitutes, perhaps, the most vital problem with which ICA's have to deal. Excess capacity might be defined as a status of chronic over-production, whereby the productive resources are so much greater than the effective demand, that the return to some factors of production is below what similar factors earn elsewhere. The possibility of such a condition of excess
capacity persisting was not recognized by the earlier classical economists since it is a basic tenet of their doctrine that natural forces would always be operating to equilibrate the forces of supply and demand. It was not until attention began to be focused upon the extent of monopolistic or imperfect competition with a seemingly normal society that the problem of excess capacity became fully apparent. Chamberlin who has made one of the main contributions to the theory of monopolistic competition, developed a very definite theory whereby a firm could be in equilibrium with the coexistence of excess capacity, owing to the mutually recognized inter-dependence of producers in many industries. Such conditions lead entrepreneurs to avoid competing on a price basis and even to take positive measures such as market sharing or following-the-leader as to price policies, which result in maintaining prices at artificially high levels. If such conditions are accompanied by any degree of freedom of entry of new competitors, the high prices prevailing lead to high profit expectations which attract new enterprises, and which result in this condition of excess capacity. Chamberlin's theory depends upon the existence of a non-aggressive price policy within the industry in question. Excess capacity can, however, develop in primary industries where the pricing system seems to comply in every way with a perfectly competitive market. The exact concept of excess

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capacity is therefore subject to several different interpretations.\textsuperscript{34}

The problem of excess capacity has been particularly acute in primary industries because of the disruptive effect of the secular forces discussed above, and short run changes in demand arising from war coupled with short run changes in supply due to large and small crops. It is the production of many of these primary commodities that several years are required in order to add productive capacity. It is typical of the agricultural industry, that a decision to expand productive capacity while motivated primarily by current market conditions, is made on the assumption that similar profit possibilities will be present for some years to come.\textsuperscript{35}

From the writings of the many statesmen and economists who have considered the problem of excess capacity or its symptoms of chronic surpluses, there emerges a fairly clear picture of how this phenomenon relates to the difficulties of international trade in raw materials, and the way in which it is both a result of the inelasticities of supply and demand discussed earlier, and the result of the incidence of dynamic changes. Changes in consumers' tastes, technological advances, the extension of production into new and lower cost areas and the production of popular substitutes, have all been suggested as contributory


factors resulting in a condition where:

"stock and carry-overs are accumulating (if the commodity is non-perishable), prices and returns to producers are too low to permit profitable operation of a large part of the industry, and producers are seeking alternative means of securing a livelihood. 36

The maladjustments are perpetuated by the fixed nature of capital goods, the absence of attractive alternative enterprises, the immobility of large groups of workers, and even from government protective and price raising policies. Black and Tsou in their article on ICA's in the Quarterly Journal of Economics37 quote Lord Keynes as having attributed such chronic surpluses to the effect of excessive government subsidies and tariffs and the stimulus of occasional years of very high prices. The authors further suggest that the existence of some natural resource of soil and climate, leads to excess capacity, whenever this resource can be cheaply exploited with the aid of a sizable fixed capital investment. 38 K. E. Knorr in the preface of his study of rubber regulation states that:

"Conditions of free competition often promote selective dis-investment only after a long period of attrition, spelling acute distress for all producers and particularly for those producing countries whose prosperity depends heavily on the industry in question." 39


38 Ibid., page 538.

39 Knorr, K. E., World Rubber and its Regulation, Stanford University Press California.
J. W. F. Rowe in his study of artificial control schemes in primary industries, draws attention to the existence of excess capacity in many of these industries, well before the financial crash of 1929.\textsuperscript{40} It is not therefore simply the result of an unduly depressed demand. He further points out\textsuperscript{41} how this condition of excess capacity is usually manifested by a resistance of old, high cost capacity, to obsolescence. This clearly points up the relationship between technological advance and its dis-equilibrating effects which was first described by J. S. Mill. Rowe finally points to the significance of high profits in leading to over-expansion in such industries. He defines normal profits as "such a rate of return to capital and enterprise as will maintain the existing volume of production but not increase it".\textsuperscript{42} His definition might have been more explicit if he had also included high profit expectations. Apparently the existence of high profit expectations may be the chief cause of excess capacity in primary industries, rather than the existence of any definite non-agressive price policies. High profit expectations may result from the inelasticity of supply which is sometimes unable to adjust rapidly enough to expanding demand. The inaccuracy of producers' expectations as described by Johnson,\textsuperscript{43} coupled with occasional very high prices lead to expansion whose repercussionary effects may not be felt until some years later. This pattern of over expansion in response to unduly high prices has been clearly demonstrated in a number of instances of which two are cited.

\textsuperscript{40} Howe, J.W.F., Op. Cit., page 170.  
\textsuperscript{41} Ibid., p. 195.  
\textsuperscript{42} Row, J.W.F.: Op Cit., page 234.  
\textsuperscript{43} Johnson, Gale: Op. Cit., Chapter V, pp. 72-86.
The enormous expansion of productive capacity in the rubber industry which became apparent from 1930-34 was largely the result of the new planting made during 1925, a year of very high prices. Similarly the big coffee crop in the State of Sao Paulo, Brazil in 1927, coupled with the very high prices received under that government's valorization scheme, were largely responsible for the excess capacity which became apparent around 1932.

While it is recognized by all writers on the subject that such excess capacity is eliminated under competitive conditions, it is of importance to this study because the process of readjustment is only very gradual, and gives rise to such hardship amongst producers, that in practice governments have generally been forced to intervene before the process of readjustment through the operation of natural forces is ever completed.

**Summary**

It is hoped that the foregoing preliminary survey of the conditions and problems surrounding the production of raw materials has demonstrated the existence of certain forces and productive properties which give rise to serious problems for the producers of primary products. Most important of these are the acute distress caused among producers by, (i) excessive price instability and, (ii) the creation of chronic surplus capacity.

ICA's become an important consideration for national governments when there are a large number of small independent producers,

engaged in the intensive production of a commodity, which depends upon distant overseas markets and which constitutes a large part of the national income.

OBJECTIVES OF INTERNATIONAL COMMODITY AGREEMENTS.

Although a detailed consideration of both the desirable and feasible objectives of ICA's must be left till the concluding portion of this study, it is now possible to make some tentative postulates as to the desirable goals for such international cooperation, the possible conflicts of interest and the probable objectives of such agreements.

If desirable objectives of ICA's are to be framed in economic terms they must recognize firstly, that the general public interest must always predominate over the conflicting interests of any special group. The chief interests of the general public lie in the elevation of consumption levels and particularly in the prevention of their temporary decline, as a result of violent business fluctuations. The means by which consumption levels are raised lie in provision for expansion of production through the optimum utilization of the low-cost, more efficient productive units.

In the light of the difficulties outlined above, it seems likely that ICA's will be concerned particularly with the problems of raising and maintaining price levels and trying to retain a maximum share of the market, since the impetus to organize commodity agreements comes generally

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at a time when markets are glutted and prices are very low. There is a very real danger that there will be excessive liquidation of productive capacity during the trough of a depression, and a desirable criterion has been suggested by Rowe as to the levels to which prices might be raised under such conditions. He suggests that the consumer

"ought not to pay a price under restriction higher than is necessary to maintain inefficient working order, that proportion of the capacity which will be required in the future." 47

Any remedial measures must also in the long run make positive provision for the liquidation of excess productive capacity. Resistance to a downward trend in prices will tend to preserve high cost and less-efficient productive capacity, and is justifiable only as a temporary measure in the depths of a depression, when the readjustment and reallocation of resources is impossible. We shall subsequently see that the strong desire on the part of producers, to protect their vested interests will have run contrary to such goals and will tend to result in the persistence of such ICA's, which in their regulatory capacity, should be purely temporary.

The actual mechanisms by which governments are able to alleviate the distress amongst producers and help towards readjusting supply and demand, will consist of export and import quotas, price discrimination, and stock holding operations. In the international field destruction of physical stocks would never be contemplated, though attempts might be made to control the supply through the amount produced as well as marketed. Alternatively governments might resort to international

ICA's are likely to be the outcome of one or many divisions of interest, however. Governments of primary exporting countries have opposing interests to those nations wholly dependent upon imports. Consuming nations moreover, do not necessarily represent the general interest of their nationals. This has been particularly so in the history of wheat and sugar, where the chief consuming countries have for national defense and political reasons attempted to preserve a considerable measure of economic autarchy. This has resulted in the protection and stimulation of high cost domestic production which has been bitterly resented by the chief exporting nations. The viewpoint of these partly self sufficient importing nations is well presented by Giuseppe Orlando in presenting Italy's attitude towards international wheat policy.

There is also a conflict of interests between the triangle of producers, manufacturers and ultimate consumers. The manufacturer is not concerned so much with price levels as with stability since this enables him to avoid changes in the size of his stock and its balance sheet value. The consumer is of course primarily concerned with low


50 Hexner, Ervin: Op. Cit., p. 120.
prices, whilst the producer will forego high prices only to the extent that he can expand his market thereby.

This chapter whilst giving only an elliptical presentation of the underlying difficulties which lead to the formation of ICA's and their probable objectives, will now serve as a background against which the following individual commodity studies can be evaluated.
CHAPTER II

INDIVIDUAL COMMODITY STUDIES

The economic nature of production together with an account and evaluation of Control Measures in the rubber, coffee and tea industries.

(i) Rubber

Rubber has been selected as the first commodity for study because it has been subject to the most prolonged and extensive control and has consequently received most notice in the writings of both critics and advocates of ICA's. Before the second world war, the crude rubber industry was encumbered with large surplus output facilities which, under conditions of free competition, tended to result in excess supplies and severely depressed prices. Also supply and demand conditions were such as to create violent price fluctuations. Both these factors at times caused intense suffering in the producing industry. The importance of the industry may be indicated by the fact that in 1937, rubber represented 54 per cent of the total value of exports from British Malaya, 31 per cent of the value of Netherlands Indies exports, and 23 per cent of the total value of Ceylon's exports. In value, rubber was the leading commodity imported into the U.S.A. up to 1939.1

Rubber has unique properties which make it suitable for diverse uses. It is impermeable to liquids and gases, resistant to electrical currents, elastic and resistant to abrasion. It finds its uses in such diverse articles as water proof clothing, automobile tires, electrical

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1 Knorr, K.E. World Rubber and Its Regulation, Stanford University Press, California, p. 2.
insulators, hoses, shock absorbers and sporting equipment. Raw rubber comes from the coagulation of rubber granules, contained in the latex of various plants. The chief commercial source is "Hevea Brasiliensis", an indigenous tree of the Amazon basin. The shift in rubber production from Brazil to the Orient occurred around the end of the nineteenth century. The devastation of the Singalese coffee industry by disease gave impetus to rubber expansion. Plantations began to produce on a large scale by 1910. The following table indicates the rapid extent of expansion in Oriental Plantation production.

### Table 3

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Cultivated area (acres)</th>
<th>Total Exports (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1899</td>
<td>4,000</td>
<td>4</td>
</tr>
<tr>
<td>1905</td>
<td>127,000</td>
<td>145</td>
</tr>
<tr>
<td>1910</td>
<td>1,125,000</td>
<td>8,200</td>
</tr>
</tbody>
</table>

Source: Knorr, K.E., World Rubber and its Regulation (Food Research Institute, Stanford University, California, page 10.)

Reclaimed rubber is also a significant factor in the supply of rubber. In the United States such reprocessed rubber constitutes about 27 per cent.

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2 Lawrence, Oliver: "International Control of Rubber", Commodity Control in the Pacific Area, Stanford Univ. Press, California, 1935, Chapter XIII.
as much as crude rubber absorption. Synthetic rubber under the
impetus of the second world war has also become a significant source
of supply. At the present time, though possessing some qualities
superior to those possessed by raw rubber, none of the several different
types of synthetic product measure up to natural rubber in every respect.
Consequently their main use is in blending with the natural product.
However the extent to which synthetic rubber can replace raw rubber has
been demonstrated by Nazi Germany's wartime production, and Russia's
present utilization.

Plantation rubber, with which this study is concerned, still
constitutes the major source of rubber. The rubber bearing latex is
obtained by tapping, an operation which involves cutting narrow diagonal
strips of bark from the bole of the tree. Latex exudes from the surface
and is drained into containers, down the diagonal slope of the new
incision. About a hundred-and-sixty of such tapping operations during the
year will give a yield of four to five pounds of crude rubber per tree.

Market Characteristics:

The supply of raw rubber is relatively inelastic as rubber trees
do not reach bearing age until five to seven years after planting. They
reach their maximum yield at about thirteen years of age. The economic
life span of the tree is not definitely known but is probably about fifty
years. In the mid 1930's it was estimated to cost from $200 to $400 per
acre to plant and raise estate trees. About 99 per cent of all plantation

4 Knorr, K.E.: Op. Cit., p. 18
rubber comes from Eastern Asia. British Malaya is the foremost exporter, followed by Indonesia. Up to the time of the Japanese occupation of those areas in 1940, 78 per cent of all exports came from Malaya and the Netherlands East Indies. *

In the short run, production is continuous with a slight falling off during the winter months when the tree sheds its leaves. The equitable equitorial climate of rubber growing areas causes little yield variability. There is moreover only slight response in yields from heavier tapping, and resting of the tree results only in a very transient increase in yields when tapping is recommenced. The tree produces latex in response to tapping. Supply varies, however, in response to prices since native producers tend to cease tapping operations when prices are low, and to tap very intensively when prices are high. The European Estates, on the other hand, continue to maintain output even in face of a falling demand, due to their relatively high proportion of fixed costs. Estate labour is often employed on a long-term contract and is obtained at considerable expense. These differences in the response of estate and native production to price changes are illustrated in chart five.

Since there is a time lag of some two-and a half months between tapping and receipt in rubber manufacturing plants, the volume of crude rubber stocks varies greatly with changes in demand. Significant inverse correlation has been found between the movement of rubber prices and rubber stocks. *

The demand for rubber is concentrated mainly in the wealthier countries of which the United States is by far the biggest consumer. In 1937–39, per capita rubber consumption in the United States averaged 8 pounds, in Britain 514 pounds per capital, and in Italy only 1.2 pounds per
capita. Table 4 shows the annual rubber absorption in selected regions, during the inter-war years.

**CHART 5**

**ESTATE AND NATIVE RUBBER PRODUCTION IN MALAYA AND THE NETHERLANDS INDIES, & CRUDE RUBBER PRICES AT SINGAPORE, ANNNUALLY 1929-34.**

<table>
<thead>
<tr>
<th>Period</th>
<th>U.S.A.</th>
<th>United Kingdom</th>
<th>Continental Europe</th>
<th>Rest of World</th>
<th>U.S.A.</th>
<th>United Kingdom</th>
<th>Continental Europe</th>
<th>Rest of World</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920-22</td>
<td>228.4</td>
<td>17.6</td>
<td>53.8</td>
<td>26.3</td>
<td>70.0</td>
<td>5.4</td>
<td>16.5</td>
<td>8.1</td>
</tr>
<tr>
<td>1927-29</td>
<td>55.1</td>
<td>55.1</td>
<td>55.1</td>
<td>71.8</td>
<td>61.3</td>
<td>7.9</td>
<td>20.4</td>
<td>10.4</td>
</tr>
<tr>
<td>1937-39</td>
<td>524.1</td>
<td>114.8</td>
<td>114.8</td>
<td>131.0</td>
<td>50.3</td>
<td>11.0</td>
<td>26.1</td>
<td>12.6</td>
</tr>
</tbody>
</table>

Source: Knorr, K.E.: World Rubber and Its Regulation (Food Research Institute, Stanford University, California).
The automobile industry is by far the biggest consumer of rubber. In the U.S.A. 76.6 per cent of all crude rubber consumed between 1938-40, went into tires, inner tubes and tire sundries.\textsuperscript{7} Consumption is very unresponsive to changes in the price of rubber. Variations in the total consumption volume are determined chiefly by the changing level of industrial activity. The prices of raw rubber in no way affects the demand for automobiles, and there is no significant mathematical correlation between crude rubber prices and the price of automobile tires and tubes.\textsuperscript{8} The close correlation between changes in the level of industrial production and rubber absorption in the United States, plus the great dependence of the world market on American consumption, has proved a highly unsettling factor throughout the interwar period. During the great depression, United States production of automobiles dropped from 5,300,000 in 1929 to 1,300,000 in 1932.\textsuperscript{9} The significance of the United States market is particularly apparent from a comparison of crude rubber imports between different nations during the depression of the 1930's. Due to the relative unimportance of automobile industries in governing rubber consumption in European countries, and a secular upward trend in rubber utilization for other purposes, the demand for rubber from all other countries except the United States, remained relatively constant in terms of import levels.\textsuperscript{10}

The time lag between planting and the maturation of trees renders prices a rather inadequate guide for investment in additional

\textsuperscript{7} Ibid., p. 46
\textsuperscript{8} Ibid., p. 73
\textsuperscript{10} Rowe, J.W.F.: Markets and Men, A study of Artificial Control Schemes in some Primary Industries, Cambridge University Press, 1935, page 142,
capacity. It is not surprising therefore that the simultaneous 
response from a great number of producers with relative similarity 
in reaction patterns, information, and outlook, tends to result in 
over-expansion of capacity in response to price changes. This is born 
out by the direct relationship between new plantings and the long-run 
trend of rubber prices, as shown in Table 5.

TABLE 5
NEW RUBBER PLANTINGS AND NEW YORK 
CRUDE RUBBER PRICES, AVERAGES 1900 - 1933

<table>
<thead>
<tr>
<th>Period</th>
<th>Additional Planted Area</th>
<th>Annual Average</th>
<th>Average Annual Price</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estates</td>
<td>Natives</td>
<td>(cents per pound)</td>
</tr>
<tr>
<td>1900 - 09</td>
<td>439</td>
<td>78</td>
<td>109.8</td>
</tr>
<tr>
<td>1910 - 14</td>
<td>219</td>
<td>117</td>
<td>123.4</td>
</tr>
<tr>
<td>1915 - 19</td>
<td>174</td>
<td>169</td>
<td>63.8</td>
</tr>
<tr>
<td>1920 - 24</td>
<td>88</td>
<td>95</td>
<td>25.4</td>
</tr>
<tr>
<td>1925 - 28</td>
<td>215</td>
<td>375</td>
<td>63.0</td>
</tr>
<tr>
<td>1929 - 33</td>
<td>130</td>
<td>78</td>
<td>9.2</td>
</tr>
</tbody>
</table>

Source: Knorr, K.E. World Rubber and its Regulation (Food Re­
search Institute, Stanford University, California) 
p. 67.

The foregoing account indicates how the rubber industry is 
subject to both price instability and excess capacity. The price inelas­
ticity of demand, together with an unresponsive supply situation and a 
high degree of dependence on the level of United States industrial 
activity, gives rise to wide fluctuations in price levels. The longevity 
of the rubber tree, its ability once mature to exist without much care, 
and the large capital investments involved in the plantation economy, 
coupled with inadequate information on consumption and production trends,
has led to the development of excess productive capacity.

**History of Control Schemes:**

The post-war recession of 1920 was met by a voluntary restrictive scheme on the part of rubber growers under the aegis of the Rubber Growers Association. When this scheme broke down in 1921, the Rubber Growers Association appealed to the British Colonial Office to assume compulsory control. Accordingly, a committee under the chairmanship of Lord Stevenson, was appointed in 1921, to investigate the situation in the industry.\(^{11}\) The Stevenson Committee made its report the following year, in which it was estimated that present production would have to be cut by 25 per cent. Though the British dependencies of Malaya and Ceylon at that time contributed 70 per cent of the world output, the cooperation of the authorities of the Netherlands East Indies was considered essential. The Dutch Government, however, refused to co-operate, ostensibly on political grounds, as they argued that it was against their policy of "laissez-faire". It seems more probable that they were doubtful of their ability to control native production. The Stevenson Committee finally recommended application of its restriction plan regardless of Dutch collaboration. The scheme consisted essentially of a restriction of production through a prohibitive scale of export quotas in order to maintain prices at a certain level. A price of one shilling and three pence was set up as the pivotal price and the participating countries were to be allowed a

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varying percentage of their exports in a certain base year, according to the potential demand. Table 6 shows the actual price levels during the operation of the Stevenson Scheme and the export percentages that were allowed.

TABLE 6
PRICES AND EXPORT PERCENTAGES DURING OPERATION OF THE STEVENSON SCHEME

<table>
<thead>
<tr>
<th>Restriction Period</th>
<th>Pivotal Price</th>
<th>Average Price</th>
<th>Percentage of Standard Exportable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>s. d.</td>
<td>s. d.</td>
<td></td>
</tr>
<tr>
<td>1922-1923</td>
<td>1 3</td>
<td>1 2.3</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>1 3</td>
<td>1 4.9</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>1 3</td>
<td>1 2.2</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>1 3</td>
<td>1 2.0</td>
<td>60</td>
</tr>
<tr>
<td>1923-1924(1) (11)</td>
<td>1 3</td>
<td>1 2.2</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>1 3</td>
<td>1 0.9</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>1 3</td>
<td>11.0</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>1 3</td>
<td>1 2.6</td>
<td>55</td>
</tr>
<tr>
<td>1924-1925</td>
<td>1 3</td>
<td>1 6.0</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>1 3</td>
<td>1 7.4</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>1 3</td>
<td>3 2.5</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>1 3</td>
<td>3 7.3</td>
<td>75</td>
</tr>
<tr>
<td>1925-1926</td>
<td>1 3</td>
<td>3 10.7</td>
<td>85</td>
</tr>
<tr>
<td></td>
<td>1 3</td>
<td>2 4.0</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>1 9</td>
<td>1 9.0</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>1 9</td>
<td>1 8.2</td>
<td>100</td>
</tr>
<tr>
<td>1926-1927</td>
<td>1 9</td>
<td>1 7.3</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>1 9</td>
<td>1 7.7</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>1 9</td>
<td>1 6.2</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>1 9</td>
<td>1 4.6</td>
<td>60</td>
</tr>
<tr>
<td>1927-1928</td>
<td>1 9</td>
<td>1 7.0</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>1 9</td>
<td>1 0.6</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>1 9</td>
<td>9.2</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>1 9</td>
<td>8.9</td>
<td>60</td>
</tr>
</tbody>
</table>

It can be seen during the first two years of the scheme that prices generally stayed below the pivotal range. When world absorption began to expand and stocks declined, however, the market turned panicky and rubber prices began to jump up. The mechanical rigidity of the Stevenson plan prevented the swift adjustments that the situation demanded. The 1925 boom in rubber prices was certainly aggravated by the operations of the Stevenson plan. Subsequent complaints from United States representatives led to a modification of the plan so that export quotas could be increased by 10 per cent at a step. However, the pivotal price was raised at the same time to one shilling and nine-pence per pound. This latter action in raising the pivotal price, brought forth many bitter comments. There is no evidence that such action was justified since estate costs were estimated at the time to be only ten or eleven pence per pound.12 In the words of K. E. Knorr, "the most important and deplorable consequence of the Stevenson scheme was the tremendous increase in total capacity which was to accrue from 1930 to 1934, and which resulted largely from the exorbitant prices of the middle 1920's."13

After 1926, prices declined again, and it became increasingly obvious that the restricting countries ceased to command sufficient monopoly power to render the Stevenson Plan workable. The British controlled share of world exports had dropped from 75 to 55 per cent of

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12 Lawrence, Oliver: (International Control of Rubber), Op. Cit., p. 415.
total exports\textsuperscript{14} by November 1928, when Prime Minister Stanley Baldwin declared the Stevenson plan to be abandoned. The Netherlands East Indies nearly doubled their productive capacity during these years.

A number of authorities have analyzed the effects of the Stevenson Scheme and make exhaustive criticisms,\textsuperscript{15} and it is only possible to summarize some of their conclusions. That prices were raised above normally profitable levels is shown in the accompanying table of selected dividends paid by certain British Companies before and after the operations of the scheme.

**TABLE 7**

DIVIDENDS OF BRITISH RUBBER GROWING COMPANIES

<table>
<thead>
<tr>
<th>Name and Amount of Share</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1920</td>
</tr>
<tr>
<td>Anglo - Malay (£1)</td>
<td>6</td>
</tr>
<tr>
<td>Chersonese (2/-)</td>
<td>10</td>
</tr>
<tr>
<td>Highlands, etc. (£1)</td>
<td>7.5</td>
</tr>
<tr>
<td>Linggi (£1)</td>
<td>7.5</td>
</tr>
<tr>
<td>London Asiatic (2/0)</td>
<td>7.5</td>
</tr>
<tr>
<td>Selangor (2/-)</td>
<td>12.5</td>
</tr>
<tr>
<td>Sunger Kapar (2/-)</td>
<td>10</td>
</tr>
<tr>
<td>United Serdang (2/-)</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: Economist, (London), July 30, 1929, page 204.

These prices were not so high as to prevent the secular upward trend in rubber consumption which occurred during the six years

\textsuperscript{14} Rowe, J.W.F.: "Studies in the Control of Raw Material Supplies" No. 2 Rubber, Royal Economic Society, Memorandum No. 29, April 1931.

that the scheme was in operation, but they undoubtedly enabled the less efficient high cost plantations to remain in production and increased rather than diminished, the problem of chronic surplus capacity. The London Times, which is usually at pains to support the actions of the Government, made this commentary in 1925;

"When the restriction was introduced, a number of companies forming a comparatively small percentage, were on point of falling out of production, owing to the unremunerative price of rubber. This group was comprised of the smaller and less efficient, badly financed, and economically weak companies largely the inevitable legacy of 'boom' conditions; they formed that part of an industry which must always languish when boom conditions come to an end. Restriction frustrated the eliminative work of the price factor and prevented the reorganization and amalgamation of those companies from which, it is indicated, the large excess of production might have emanated. On these grounds it is well to conclude that, in the absence of restriction, much of the undesirable element of production would have gone out, unless basic laws of economics were to be flouted. Had this been the case the industry would, at the end of 1922, have moved towards gradual recovery on a sounder, cleaner basis, especially as the increase in consumption has been fairly persistent."17

Rowe makes quite an able defense of the Stevenson Scheme, pointing out that there were conditions of acute distress in the rubber industry during 1921 especially in Malaya where the large number of Chinese producers with their precarious credit structure would have upset the whole Malayan economy if their government had not insisted on restriction. He admits however that restriction was not instituted early enough since

16 Wallace & Edminster: Op. Cit., page 185

17 The Times, February 10, 1925.
it should have been used to remove the surplus of 1922-23. It should, moreover, have been terminated in 1924-25 when conditions in the industry began to recover. It was unfortunate that the scheme persisted and became in effect a monopolistic exploitation of the consumer. He concludes in a subsequent study that "all the disastrous history of the latter years of the scheme does not, however, undermine the validity of the proposition that the scheme as originally established was sound, and that if it had been brought to an end when the demand recovered, say in 1924 or early 1925, all would have been well."

**The International Rubber Regulation Agreement:**

For a period of six and a half years after the termination of the Stevenson Scheme, the rubber market was free. This period coincided with the trough of a severe depression, and prices fell from 20.2 cents per pound in September 1929 to 2.7 cents per pound in June 1932. The ability of European Estates to maintain their output and survive the severe slump of prices, revealed the manner in which they were able to reduce production costs drastically, despite the very high proportion of fixed costs.

During these years, producers were, however, continually clamouring for Government intervention and control. British and Dutch Planters formed a liaison committee in 1930 with such objectives. The Dutch Government at first refused to consider their requests for participation in a control scheme, mainly because of the difficulty anticipated in trying to control native production. (The Dutch Government was already participating in Sugar and Tea Control Schemes). However, by 1933 the Dutch

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Government changed its policy, decided in favour of government control, and so negotiations started immediately. In April 1934 the International Rubber Regulation Agreement was drawn up and duly ratified by the governments of Britain, Holland, France, India and Thailand. These countries, in combination, furnished 98.7 per cent of the world's rubber exports in 1934.  

The new scheme was much less inflexible than the Stevenson Plan. It was based simply on the provision of export quotas without any attempt to maintain a pivotal price. Moreover, unlike the Stevenson Plan, provision was made for restricting new planting and some attempt was also made to allow for potential production rather than adhering to a past pattern of production as under the former scheme.

The agreement was to be administered by an International Rubber Regulation Committee, hereinafter referred to as the IRRC. A consumers panel, with advisory powers only, was appointed. Table 8 shows the quotas as they were set up for the years 1934 - 1938.

TABLE 8
NEW RUBBER EXPORT QUOTAS (in tons)
UNDER INTERNATIONAL RUBBER REGULATION AGREEMENT
1934 - 1938

<table>
<thead>
<tr>
<th>Country</th>
<th>1934</th>
<th>1935</th>
<th>1936</th>
<th>1937</th>
<th>1938</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaya</td>
<td>504,000</td>
<td>538,000</td>
<td>568,000</td>
<td>589,000</td>
<td>602,000</td>
</tr>
<tr>
<td>Netherlands East Indies</td>
<td>352,000</td>
<td>400,000</td>
<td>443,000</td>
<td>467,000</td>
<td>485,000</td>
</tr>
<tr>
<td>Ceylon</td>
<td>77,500</td>
<td>79,000</td>
<td>80,000</td>
<td>81,000</td>
<td>82,500</td>
</tr>
<tr>
<td>India</td>
<td>6,850</td>
<td>8,250</td>
<td>9,000</td>
<td>9,000</td>
<td>9,250</td>
</tr>
<tr>
<td>Burma</td>
<td>5,150</td>
<td>6,750</td>
<td>8,000</td>
<td>9,000</td>
<td>9,250</td>
</tr>
<tr>
<td>North Borneo</td>
<td>12,000</td>
<td>13,000</td>
<td>14,000</td>
<td>15,500</td>
<td>16,500</td>
</tr>
<tr>
<td>Sarawak</td>
<td>24,000</td>
<td>28,000</td>
<td>30,000</td>
<td>31,500</td>
<td>32,000</td>
</tr>
<tr>
<td>Siam (Thailand)</td>
<td>15,000</td>
<td>15,000</td>
<td>15,000</td>
<td>15,000</td>
<td>15,000</td>
</tr>
</tbody>
</table>

Source: Lawrence, Oliver: Commodity Control in the Pacific Area, (Editor W. L. Holland,) Chapter XIII, page 421.

Knorr, K.E., Op. Cit., p. 109
It is interesting to note in the foregoing table, that Siam was given an extremely liberal quota allowance. She was also allowed to make new planting as desired. The inclusion of Siam in the agreement was, however, felt to be essential at any cost because of her strategic geographic location and the possibility of smuggling.

The original agreement, which was to terminate in 1938, was renewed in 1937 for a five year period. It was again extended for a few months in 1943 to facilitate the post war establishment of a non-regulatory organization embracing the major importing as well as consuming countries. The scheme was finally terminated in April 1944.  

The history of the scheme affords evidence of a constant tendency for the IERC to make insufficient and tardy quota increases whenever an upward shift in the demand was anticipated. Consequently the scheme did nothing to mitigate the effects of price instability. When there was a repetition in 1937 of the boom like conditions which had previously occurred in 1925 in the rubber market, the United States Department of Commerce blamed the Control Scheme entirely, stating that, "effect of international rubber regulation thus far is in the direction of a reduced volume of international trade at an unreasonable price, when the world needs increased volume at a reasonable price."  

The official report of the IERC claims that control did reduce price fluctuations, and supports this contention by stating that "the average price throughout the pre-war period of regulation was 7.35 pence

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21 Knorr, K.E.: Op. Cit., p. 125
22 Rubber News Letter, March 31, 1937, p. 2
per pound. This is to a decimal point, the price which prevailed when the agreement was signed in May 1934. From a statistical viewpoint such a statement is, of course, correct but gives no indication of the degree of dispersion around the average, and is no proof of stability. Table 9 shows the extent to which rubber prices actually did fluctuate during these years.

**TABLE 9**

**TABLE SHOWING EXTENT OF PRICE MOVEMENTS FOR RAW RUBBER IN LONDON DURING OPERATION OF INTERNATIONAL RUBBER REGULATION AGREEMENT**

<table>
<thead>
<tr>
<th>Period</th>
<th>Highest</th>
<th>Lowest</th>
<th>Fluctuations</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1934</td>
<td>7 5/8</td>
<td>5 25/32</td>
<td>127/32</td>
<td>6 13/12</td>
</tr>
<tr>
<td>1935</td>
<td>6 13/16</td>
<td>5 3/16</td>
<td>15/8</td>
<td>6</td>
</tr>
<tr>
<td>1936</td>
<td>11 1/8</td>
<td>6 1/2</td>
<td>45/8</td>
<td>7 4/4</td>
</tr>
<tr>
<td>1937</td>
<td>11 3/4</td>
<td>6 3/4</td>
<td>7</td>
<td>9 1/2</td>
</tr>
<tr>
<td>1938</td>
<td>8 9/16</td>
<td>5 1/4</td>
<td>35/16</td>
<td>7 7/32</td>
</tr>
<tr>
<td>1939</td>
<td>8 7/8</td>
<td>7 5/8</td>
<td>7 1/4</td>
<td>8 5/32</td>
</tr>
</tbody>
</table>


The success of the control arrangement in combating undue price oscillation depended on the ability of the IRRC to forecast requirements at least three or four months ahead. The decision of the IRRC invariably

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conflicted with the recommendation of the Advisory Panel of Industrial Consumers, whenever changes in the volume of rubber stocks seemed imminent.\(^{24}\) Whilst the latter, preoccupied with future supplies was likely to overestimate requirements, the IRRC preoccupied by a fear of surpluses was subject to a downward bias. K.E. Knorr points out that it is an implied tendency or policy of all producer-operated restriction plans to keep world stocks down to a low level since small stocks minimize the risk of sudden price falls when consumption contracts.\(^{25}\)

In attempting to evaluate the success of the operations of the International Rubber Regulation Agreement it is necessary to realize that the statement of objectives as given in the preamble of the Agreement are restricted to somewhat vague generalizations about attainment of an "equitable" and "fair" price level for both producers and consumers, by eliminating surplus stocks and adjusting supplies to the current demand. The Agreement studiously refrains from referring to surplus production capacity, although this constituted the chief source of the troubles to be remedied. The authors of the scheme presumably hoped that consumption would eventually catch up with such capacity. Within the terms of its stated objectives, the IRRC can be commended for having resisted extreme price demands, an attitude which was not shared by the International Tin Committee.\(^{26}\) Although average profits in the States would undoubtedly have been much lower without control, they were not strikingly high under regulations\(^{27}\) and do not give the same evidence of monopolistic extortion

\(^{24}\) Knorr, K.E. *Op. Cit.*, p. 149
\(^{25}\) Loc. Cit.
\(^{26}\) See pp. 123-130 of this Thesis.
\(^{27}\) See Tables 7 & 10.
as those during the period of operation of the Stevenson Scheme. Table 10 shows British Rubber Company earnings and dividends for the years immediately before and during restriction.

In the short run it appears that regulation, whilst it did not moderate price swings, was able to reduce surplus stocks gradually, to maintain a profitable price level, and save investors from painful losses. However in the long run investments in obsolete producing units were preserved, and as restriction fell with equal incidence on both high and low cost producers, the more inefficient were in effect specially favoured.

TABLE 10
BRITISH RUBBER COMPANY EARNINGS AND DIVIDENDS
ANNUALLY 1924 - 1940

<table>
<thead>
<tr>
<th>Twelve Months to June 30</th>
<th>No. of Companies Analyzed</th>
<th>Average earned per ordinary Share (per cent)</th>
<th>Average Paid per ordinary Share (per cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1926</td>
<td>280</td>
<td>24.2</td>
<td>19.9</td>
</tr>
<tr>
<td>1927</td>
<td>233</td>
<td>29.1</td>
<td>23.8</td>
</tr>
<tr>
<td>1928</td>
<td>361</td>
<td>15.4</td>
<td>11.2</td>
</tr>
<tr>
<td>1929</td>
<td>360</td>
<td>8.4</td>
<td>6.2</td>
</tr>
<tr>
<td>1930</td>
<td>336</td>
<td>8.0</td>
<td>5.8</td>
</tr>
<tr>
<td>1931</td>
<td>340</td>
<td>1.4</td>
<td>1.2</td>
</tr>
<tr>
<td>1932</td>
<td>326</td>
<td>1.7x</td>
<td>0.1</td>
</tr>
<tr>
<td>1933</td>
<td>298</td>
<td>1.4x</td>
<td>0.1</td>
</tr>
<tr>
<td>1934</td>
<td>301</td>
<td>0.4</td>
<td>0.8</td>
</tr>
<tr>
<td>1935</td>
<td>345</td>
<td>4.1</td>
<td>3.3</td>
</tr>
<tr>
<td>1936</td>
<td>346</td>
<td>4.3</td>
<td>3.6</td>
</tr>
<tr>
<td>1937</td>
<td>388</td>
<td>6.2</td>
<td>4.8</td>
</tr>
<tr>
<td>1938</td>
<td>377</td>
<td>11.8</td>
<td>8.0</td>
</tr>
<tr>
<td>1939</td>
<td>362</td>
<td>7.0</td>
<td>4.6</td>
</tr>
</tbody>
</table>

x - loss


As the demand for rubber contained in rubber goods is markedly price-unresponsive, industrial consumers can readily pass on the extra costs of
their raw material. Consequently it is the final consumer who has born the cost of artificially prolonging the life of redundant and obsolete productive capacity.\textsuperscript{28}

The agreement also tended to preserve the status quo between the lower cost native producers and European owned plantations. This aspect of the problem has hitherto been neglected so we shall turn to a brief consideration of the problems of native production before summarizing this case study.

Knorr expresses the view that a fear that the industry was 'going native' may have been the primary raison d'être for the Regulation Agreement.\textsuperscript{29} In 1936, the chairman of the British North Borneo Company admitted frankly "that one of the primary objects of the Rubber Control Scheme was to protect European capital in plantation companies in Malaya, Borneo, and the Netherlands East Indies from competition arising from the production of rubber by the native at a fraction of the cost involved on European owned estates". Native production is almost equal to total plantation production and is especially important in Siam, Java, Borneo and Sumatra. Furthermore the native producers cost structure is simple. He is often able to subsist independently of any income from rubber sales, and will therefore cease tapping when prices are low. Moreover in areas like Sumatra and Borneo where the land is not densely settled, natives commonly plant rubber after a patch of cleared jungle has produced several rice crops and gives evidence of exhaustion. This rubber will however be tapped later on if prices appear favourable and this tapping is moreover,

\textsuperscript{28} Ibid., pp. 157 - 164

\textsuperscript{29} Ibid., p. 109
far more drastic than that practiced by European estates. The situation is different amongst native producers in British Malaya and Ceylon, since they are very dependant in these areas upon an income from rubber sales. Such natives tend to respond to a falling market by expanding production as opposed to those in Indonesia and Siam.

The rapid development of native production is well illustrated in Table 11.

**TABLE 11**

**EXPORTS FROM THE NETHERLANDS EAST INDIES**

<table>
<thead>
<tr>
<th>Year</th>
<th>Estate Exports</th>
<th>Native Exports</th>
<th>Total Exports</th>
<th>Ratio of Native to Estate Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>1929</td>
<td>152.9</td>
<td>108.6</td>
<td>261.5</td>
<td>71 : 100</td>
</tr>
<tr>
<td>1930</td>
<td>152.8</td>
<td>90.5</td>
<td>243.3</td>
<td>59 : 100</td>
</tr>
<tr>
<td>1931</td>
<td>168.7</td>
<td>90.2</td>
<td>258.9</td>
<td>53 : 100</td>
</tr>
<tr>
<td>1932</td>
<td>149.8</td>
<td>61.4</td>
<td>211.2</td>
<td>41 : 100</td>
</tr>
<tr>
<td>1933</td>
<td>116.0</td>
<td>113.0</td>
<td>279.0</td>
<td>68 : 100</td>
</tr>
</tbody>
</table>

Source: Lawrence, Oliver: Commodity Control in the Pacific Area, (Chap. XIII, Editor W.L. Holland) page 416.

The bulk of the native acreage was planted in the years between 1910, - 1919 and 1924 - 1929, both periods of very high rubber prices. Undoubtedly the excessive planting by natives contributed to the surplus productive capacity in the industry, and the inflexible nature of Plantation production, made native production appear particularly aggravating. However there is ample evidence that the IRRC discriminated quite unfairly against native producers. Over the first two years and seven months of the scheme, two-thirds of the value of all native rubber exported, was absorbed
by export duties. In the closing months of 1936, the duties on native exported production accounted for as much as 85 per cent of the value. Rowe in his rubber study, gives evidence that the government assessments of native small holdings were much too low at the initiation of the scheme. Plantation production could compete successfully with native production if time was allowed for more extended planting of superior stock, if native executives and administrators were employed, and the smaller uneconomic estates were merged. The present directorial system and capital structure of many plantations would also need drastic re-organization and pruning.

**Summary and Conclusions**

Regulation in the rubber industry has been facilitated by the fact that there were a relatively small number of important producing nations in one localized area of the world. Since no important consuming nation was also a large scale rubber producer, the restriction schemes have tended to neglect the consumer's interests. The Stevenson Plant was too rigid and its continuation after conditions of general recovery in the industry, together with the high prices it maintained, caused it to be in effect, a producer's monopolistic organization. The International Rubber Regulation Committee was more flexible in operation and did not create unduly high prices. However, it undoubtedly preserved the condition of surplus output capacity, and put the burden of preservation of high cost inefficient producers on the shoulders of the consuming public.

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30 Ibid., p. 122
31 Ibid., p. 128
The elimination of excess capacity could have been helped to some extent by the following provisions:

(1) The effective assessment of native and estate capacity on an equal basis.

(2) Adoption of the principle of differential assessment of estate capacity in accordance with a few broad criteria of efficiency such as age of trees, and yields per acre.

(3) Maintaining a low price level that might not be considered "fair" by the majority of producers, but would be higher than prices in the absence of control. (In concrete terms during the middle and late 1930's control policy should have prevented prices from rising about ten cents per pound until a sufficient margin of surplus capacity had been eliminated)

There is further more, a definite need for stabilization of rubber prices. However in the absence of adequate stock holdings, regulation can do little to mitigate such price fluctuations. Formation of buffer stocks in the chief consuming countries would probably be a suitable way of combating the problem of price instability. It should be realized however that the propensity of raw rubber to fluctuate with changes in the volume of industrial production, is shared by many other raw materials. Efforts to stabilize industrial production by general monetary, fiscal and other counter-cyclical measures are likely to be more potent stabilizing factors than any buffer stock scheme.

At the present time, though there is potential surplus capacity, the Korean war and general political tension has stimulated demand and kept it in line with supplies. Synthetic rubber will in the future limit

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34 Rowe, J.W.F.: (Rubber Memo), Op. Cit., p. 83
the powers of raw rubber producers to exploit the consumer. This
greater inter-dependence of consumer and raw material producing nations
has been recognized by the formation in September 1944 of a rubber study
group. The study group at present includes all substantially interested
countries including Australia, Belgium, Burma, Canada, Ceylon, Czechoslovakia,
Denmark, France, Hungary, Italy, Liberia, Holland, Britain and the United
States. The purpose of the organization is to promote international co-
operation concerning rubber trade. The study group may convene an inter-
national conference to discuss the formation of an ICA if it considers
conditions necessitate such action.

Perhaps the most important lesson from this study of rubber, lies
on the apparent confusion between long and short run objectives. It seems
almost as though an essentially short run solution justifiable in such a
context, has persistently received a long run application with consequent
detriment to the industry as well as to society as a whole. There appears
to be a definite tendency for governments to allow the pressure from
interested parties to perpetuate such control schemes, which are either
wholly unwarranted, or unadapted to a real solution of the long run problems.
In fairness to rubber producers the following quotation is used by way of
conclusion:

"Such (ICA's) interferences with the working of the
the laws of supply and demand bring certain temporary
advantages, but are generally accompanied by disadvant-
gees of a more permanent kind. The difference of
opinion between the supporters and opponents of such
schemes may largely be explained as differences between
'short period' and 'long period' views applied to the

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industries in question ... such schemes have the disad­
avantage of keeping production and strengthening the
organization of weak or high cost producers — they
increase the cost of production by reduction of outputs
and by the costs of administration of the scheme — they
discourage consumption by increasing the price of the
commodity ...... Further whatever efforts are made to
secure equitable treatment of all producers, grave
inequalities in the administration of such schemes are
inevitable .... having regard to the above consideration,
regulation schemes should never be prolonged for a great­
er period than is absolutely necessary .... Schemes for
restriction and regulation of such industries as ours
(rubber) only become necessary because the conditions of
the industries are economically unhealthy, and consequent­
ly the same return upon capital should not be expected of
them while working under such schemes as could reasonably
be expected if the Industries were in an economically
healthy condition." 36

(ii) Coffee

Though coffee is produced in nearly fifty different countries
and colonies, in all parts of the world, it is primarily of interest to
the Western Hemisphere. This is because Brazil produces nearly 60 per
cent of the world's supplies, and the United States consumes nearly 50
per cent of total world exports. Coffee is included with wine, tobacco,
tea and cocoa as the five "enjoyment goods", since in the 1930's it
ranked fifth in value amongst foodstuffs in international trade. It was
exceeded by wheat, sugar, pork products and butter. 37 Coffee is further­
more one of the few basic commodities that still shapes the economic
life of more than half a dozen nations; Madagascar, Kenya, El Salvador,
Colombia, Haiti, Guatemala, Nicaragua, Costa Rica and Brazil are all
dependent upon coffee exports for vital foreign exchange supplies. Coffee

36 Welch, J. H. (chairman of the Rubber Plantation Investment Trust Ltd):
37 Wickizer, V. D.: The World Coffee Economy with special reference to
Control Schemes, Food Research Institute, Stanford, California,
1943, p. 11.
is one of the major commodities in the trade of the United States and in 1946 the value of green coffee imports in that country amounted to $468,000,000.\textsuperscript{38}

**Market Characteristics**

Coffee is obtained from a pair of seeds contained in the fruit of a perennial bush, which grows in mountainous regions in the sub-tropics. The species Coffea Arabica, indigenous to parts of Arabia and Ethiopia, is still the source of 90 per cent of world coffee consumption. It is usually grown at elevations of 2000 to 5000 feet. Two other species have been brought into extensive cultivation within the past three or four decades. C. Robusta is a low quality coffee, but highly resistant to disease and able to grow at lower elevations. C. Liberica is popular with small holders since the ripe fruits do not fall from the bush and can be harvested at any season.\textsuperscript{39} Fruiting is fairly continuous throughout the year. The geographic habitat together with the growth requirements of the coffee plant, lead to wide variations in yields. Coffee requires heavy and regular rainfall and is susceptible to drought and frost. The significance of climatic influences is revealed in the 1941 report of the Brazilian National Coffee Department.\textsuperscript{40} The 1940-1941 drought in the province of São Paulo was officially characterized as "one of the most calamitous of any in the memory of man in that region." (São Paulo produced only 4,000,000 bags in that year as against a normal average of 14,500,000 bags.)


\textsuperscript{40} Guedes, Jayme Fernandes: "Brazil Coffee in 1941", Report submitted on April 30, 1942 to the Advisory Council of the National Coffee Dept., Rio de Janeiro, 1942, p. 45.
The coffee tree begins to bear fruit about five or six years after planting, but does not produce commercial quantities until it is six to eight years old. Yields vary from one to three pounds per tree, declining after the fifteenth year. Its economic life is limited to about forty years. 41

Coffee has no food value, but is simply a stimulant as the beans contain caffeine. There is considerable variation in the quality of coffee, arising both from its geographic source and the manner in which the beans are separated from the fruit pulp in preparation for market. A few generalizations must suffice. Brazilian coffees are generally of low quality and described in the trade as 'hard'. Almost all other countries produce 'mild' coffees. The better qualities are grown at the highest elevations. Moreover the better quality beans are prepared by removing the fruit pulp by the wet method, without allowing any fermentation to take place. 'Milds' are commonly used to impart flavour to blends predominantly composed of various Brazilian growths. 42

Statistics of world stocks and coffee production are still very unreliable, even in Brazil, the chief producing country. Table 12 shows the main sources of production, together with some indication of the trend in production during the decade between 1930 – 1940. It will be noticed that Brazilian production has tended to decline whereas that of Columbia, a producer of 'mild' coffees, has made considerable increases.

41 Wickizer, V. D. Op. Cit., p. 38

### TABLE 12

**WORLD COFFEE PRODUCTION 1929 - 40**

<table>
<thead>
<tr>
<th>Continents &amp; Countries</th>
<th>Thousands of Bags of 60 Kg.</th>
<th>Per cent of World Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1929-30 to 1933-34</td>
<td>1934-35 to 1938-39</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WORLD TOTAL</td>
<td>37,860</td>
<td>37,867</td>
</tr>
<tr>
<td></td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>South American</td>
<td>29,633</td>
<td>28,347</td>
</tr>
<tr>
<td></td>
<td>78.3</td>
<td>74.9</td>
</tr>
<tr>
<td>Brazil</td>
<td>24,519</td>
<td>22,441</td>
</tr>
<tr>
<td></td>
<td>64.8</td>
<td>59.3</td>
</tr>
<tr>
<td>Colombia</td>
<td>3,545</td>
<td>4,154</td>
</tr>
<tr>
<td></td>
<td>9.4</td>
<td>11.0</td>
</tr>
<tr>
<td>Venezuela</td>
<td>940</td>
<td>988</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>2.6</td>
</tr>
<tr>
<td>Others in S. America</td>
<td>629</td>
<td>764</td>
</tr>
<tr>
<td></td>
<td>1.6</td>
<td>2.0</td>
</tr>
<tr>
<td>Central America and Mexico</td>
<td>4,389</td>
<td>4,898</td>
</tr>
<tr>
<td></td>
<td>11.6</td>
<td>12.9</td>
</tr>
<tr>
<td>El Salvador</td>
<td>1,000</td>
<td>1,013</td>
</tr>
<tr>
<td></td>
<td>2.6</td>
<td>2.7</td>
</tr>
<tr>
<td>Guatemala</td>
<td>749</td>
<td>919</td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td>2.4</td>
</tr>
<tr>
<td>Mexico</td>
<td>635</td>
<td>714</td>
</tr>
<tr>
<td></td>
<td>1.7</td>
<td>1.8</td>
</tr>
<tr>
<td>Other</td>
<td>2,005</td>
<td>2,252</td>
</tr>
<tr>
<td></td>
<td>5.3</td>
<td>6.0</td>
</tr>
<tr>
<td>Africa</td>
<td>1,371</td>
<td>2,138</td>
</tr>
<tr>
<td></td>
<td>3.6</td>
<td>5.6</td>
</tr>
<tr>
<td>Asia</td>
<td>2,377</td>
<td>2,361</td>
</tr>
<tr>
<td></td>
<td>6.3</td>
<td>6.3</td>
</tr>
<tr>
<td>Netherlands Indies</td>
<td>1,978</td>
<td>1,999</td>
</tr>
<tr>
<td></td>
<td>5.2</td>
<td>5.3</td>
</tr>
<tr>
<td>Other</td>
<td>399</td>
<td>302</td>
</tr>
<tr>
<td></td>
<td>1.1</td>
<td>1.0</td>
</tr>
<tr>
<td>Oceania</td>
<td>90</td>
<td>103</td>
</tr>
<tr>
<td></td>
<td>0.2</td>
<td>0.3</td>
</tr>
</tbody>
</table>

Source: Wickizer, V.D.: The World Coffee Economy, (Food Research Institute, Stanford, California), 1943, page 19.
Reference has already been made to the plant's growth cycle. Years of high yields tend to alternate with years of low yields when the tree is recuperating. Coincidence of favourable or unfavourable climatic conditions exaggerate these differences, so that the output of one particular plantation may be ten times as great as its lowest output, in a favourable year.43

In addition to inelasticity of the supply of coffee due to its botanical origins, and the fluctuations in yield due to the plant's health cycle, there is a variation in supply which might be ascribed to psychological causes. Owing to the inability of a large number of small producers to forecast accurately the future profit possibilities, and the considerable time lag between a decision to expand productive capacity and the realization of such expansion, we have conditions conducive to grower produced market cycles. We have in effect the phenomenon which has been explained by the cobweb theorem.44 H. E. Jacob in his study of coffee well describes this phenomenon in the following words:

"Throughout the nineteenth century we can trace the history of this anarchic succession of over-production and under-production of coffee. Delight in a year when prices have been high is translated into an undue extension of planting which, four years later, leads to a recurrence of rock bottom prices. Then there is a panic. In the seventh year the pendulum swings back once more towards the side of extended planting."45

43 Wickizer, V.D.: (The World Coffee Economy), Op. Cit., p. 4
44 See Chap. 1 pp. 18-19
The resultant variability in the world's supplies of coffee is well illustrated in Table 13, showing the range in the size of the Brazilian crop.

### TABLE 13

**RANGE IN SIZE OF THE BRAZILIAN COFFEE CROP**
**BY DECADES SINCE THE 1890's**

<table>
<thead>
<tr>
<th>Decade</th>
<th>Average Crop Million bags</th>
<th>Index Number</th>
<th>Number of crops Above Av.</th>
<th>Below Av.</th>
<th>&quot;Large&quot; Number Range million bags</th>
<th>Number Range Million bags</th>
</tr>
</thead>
<tbody>
<tr>
<td>1890's</td>
<td>7.2</td>
<td>100</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>1900's</td>
<td>12.6</td>
<td>175</td>
<td>4</td>
<td>6</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>1910's</td>
<td>13.3</td>
<td>185</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>1920's</td>
<td>14.7</td>
<td>204</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>1930's</td>
<td>23.5</td>
<td>326</td>
<td>4</td>
<td>6</td>
<td>7</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: Wickizer, V. D.: The World Coffee Economy, (Food Research Institute, Stanford, California) 1943, page 110.

The demand for coffee tends to be very stable since, as an enjoyment good it is habit forming, and has only one use and that is as a beverage. People accustomed to drinking coffee wish for no other substitute. The United States is by far the heaviest consumer of coffee on a population basis, and with the exception of the Scandinavian countries, coffee has been kept beyond the reach of the masses in most other importing nations, as a result of high tariffs, colonial import prefer-

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46 The Brazilian Government is now financing a pilot plant to discover the commercial possibility of producing from green coffee beans a moulding powder for a new thermosetting plastic.
ences and taxes. Italy, for instance has a tax on coffee equivalent to 35 cents per pound.\footnote{Wickizer, V.D.: Op. Cit., page 17.} Tables 14 (a) and 14 (b) show per capita consumption and import levels for various countries and areas. The large Dutch element in South Africa accounts for the relatively greater preference for coffee in that area.

### TABLE 14 (a)

**NET IMPORTS OF GREEN COFFEE INTO WORLD MARKETS**

<table>
<thead>
<tr>
<th>Year</th>
<th>Annual Average in Millions of 60 Kg. Bags World</th>
<th>U.S.A. Percentage of World Imports</th>
<th>% U.S.A. increased over 1930 - 34 Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1930-34</td>
<td>25.1</td>
<td>12.0</td>
<td>47.9</td>
</tr>
<tr>
<td>1935-39</td>
<td>27.6</td>
<td>13.9</td>
<td>50.4</td>
</tr>
<tr>
<td>1940-44</td>
<td>20.3</td>
<td>16.4</td>
<td>80.7</td>
</tr>
<tr>
<td>1945</td>
<td>26.3</td>
<td>20.5</td>
<td>78.1</td>
</tr>
</tbody>
</table>


### TABLE 14 (b)

**ANNUAL PER CAPITA COFFEE CONSUMPTION IN POUNDS DURING DECADE 1929-1939**

<table>
<thead>
<tr>
<th>Country</th>
<th>Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>16.6</td>
</tr>
<tr>
<td>Sweden</td>
<td>16.4</td>
</tr>
<tr>
<td>Norway</td>
<td>13.2</td>
</tr>
<tr>
<td>U.S.A.</td>
<td>13.0</td>
</tr>
<tr>
<td>Belgium</td>
<td>12.8</td>
</tr>
<tr>
<td>Netherlands</td>
<td>10.1</td>
</tr>
<tr>
<td>France</td>
<td>9.8</td>
</tr>
<tr>
<td>Switzerland</td>
<td>8.2</td>
</tr>
<tr>
<td>Germany</td>
<td>5.1</td>
</tr>
<tr>
<td>Argentina</td>
<td>4.2</td>
</tr>
<tr>
<td>Canada</td>
<td>3.2</td>
</tr>
<tr>
<td>Italy</td>
<td>2.1</td>
</tr>
<tr>
<td>Britain</td>
<td>0.75</td>
</tr>
</tbody>
</table>

Source: Wickizer, V.D.: The World Coffee Economy, (Food Research Institute, Stanford, California), 1943, p. 16.
In the long run there are possibilities for considerable changes in the world pattern of coffee consumption. Examination of past and present trends gives ample evidence of this. In the past thirty years imports into European countries have declined from 50 to 40 per cent of world coffee exports, whilst imports into the United States had increased from 33 to nearly 50 per cent of world coffee exports by 1939.\textsuperscript{48} In the world as a whole, there has however, been a steady upward trend in coffee consumption levels.\textsuperscript{49} The gradual growth in the preference for mild over Brazilian coffees has also been an impressive trend in recent decades. Holland, once the stronghold of coffee drinking on the European continent, has in recent years shown a marked shift towards cocoa consumption, and this is a substitution not a supplementation, since per capita coffee consumption in that country has fallen from 15.7 pounds to 9.3 pounds between 1910 and 1935.\textsuperscript{50} It will be recalled that coffee was the preferred drink of the British until the middle of the eighteenth century, and it was moreover the great popularity of the London coffee houses which served to spread the tea drinking habit.

In the short run there is a slight response in consumption levels, to price changes since the cost of the raw product is roughly 50 per cent of the retail price. Wholesalers and distributors are able

\textsuperscript{48} Ibid., p. 12
\textsuperscript{49} Taylor, Henry C.: (World Trade in Agricultural Products) \textit{Op. Cit.}, p. 70
to stabilize retail prices to a considerable extent, however, by varying their blends and using more cheap grades when prices are high. The Pan American Coffee Bureau is a producer's organization formed in 1937 with the objective of promoting coffee consumption in the United States. There is little evidence however that this organization has had any appreciable effect in expanding coffee consumption in view of established trends before it began its activities.

Surplus productive capacity became a problem in the world's coffee industry from about 1927. This problem became centred particularly in Brazil as the world's largest producer and because of the unique character of her coffee which suffered a declining demand in favour of the better quality 'mild' coffees. The position today is much healthier, as a result partly of a natural decline in Brazilian production from exhaustion of many plantations, together with that country's restriction on new plantings during the past years. Fixed costs form a higher proportion of total costs in coffee plantations, than they do in either rubber or sugar plantations. This factor combines with an inherent annual variability in output, to result in profits which cause new planting at wrong times. Table 15 shows the way in which surplus stocks of coffee accumulated during the interwar years. Since these surpluses have largely accumulated in Brazil, the Brazilian Government has combatted this problem by a

52 Wickizer, Op. Cit., p. 52
53 Ibid., p. 94
deliberate policy of crop destruction. In the twelve years 1931-1942, over 75,000,000 bags of coffee were destroyed. That is sufficient to meet the consumption requirements of the entire world for three years. 

TABLE 15

WORLD COFFEE EXPORTS, SURPLUSES AND PRICES, BY FIVE YEAR AVERAGES, 1919-1939

<table>
<thead>
<tr>
<th>Export Years</th>
<th>Exports</th>
<th>Average Annual excess of Production Over Exports</th>
<th>Cumulative Excess</th>
<th>Price of Santos 4's (New York)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1919 - 23</td>
<td>20.6</td>
<td>-0.2</td>
<td>-1.0</td>
<td>16.7</td>
</tr>
<tr>
<td>1924 - 28</td>
<td>22.9</td>
<td>5.7</td>
<td>27.5</td>
<td>22.0</td>
</tr>
<tr>
<td>1929 - 33</td>
<td>25.3</td>
<td>12.6</td>
<td>90.5</td>
<td>12.8</td>
</tr>
<tr>
<td>1934 - 38</td>
<td>27.0</td>
<td>10.9</td>
<td>145.0</td>
<td>9.7</td>
</tr>
</tbody>
</table>

Source: Wickizer, V.D. The World Coffee Economy, (Food Research Institute, Stanford, California), 1943, page 121.

History of Control Schemes

The early history of coffee regulatory measures is a history of control within the borders of Brazil since the effects of her domestic policy were inevitably international. It was not until the beginning of the second world war that political forces became strong enough to induce Latin American producers to co-operate in solving their common problems.

54 Ibid., p. 7
At the beginning of this century the sources of the world's coffee were localized to the extent of nearly 40 per cent in the single state of São Paulo. Yield instability had such a marked effect on world prices, that the state government instituted a stabilizing scheme as early as 1905. The objective of the scheme was to equalize prices by government storage of part of the crop, in surplus years. The state also took steps to regulate production by restricting new plantings. This valorization scheme as it came to be called, lasted until the outbreak of the first world war.

With government financial support, a second valorization scheme was put into operation in 1917 until 1920 when the federal government took over the control scheme. A permanent price stabilizing scheme was set up early in 1925 after the government had completed construction of a large number of storage warehouses. A succession of bumper crops between 1927 and 1929 over-extended the credit facilities of the scheme, which was forced to cease operation when the financial crash came in 1929. A new defense scheme was started in 1930 which lasted until 1937. During this period, the Brazilian government relied on the prohibition of new planting and the destruction of supplies, to maintain prices. Efforts on the

55 See Chapter I, page 15
part of the Brazilian government to obtain an international agreement, repeatedly failed, so in 1937 a radical change of policy was made. The Brazilian government allowed free competition to take over the industry, though she continued to purchase and destroy surplus coffee stocks.

In reviewing the effects of Brazilian coffee control schemes, there are grounds for believing that much harm was done to the industry. Though growers undoubtedly received abnormal profits during the 1920's, the price paid for such prosperity in later years more than offset the temporary gains. Control encouraged over-expansion of coffee production in its early years. It inhibited agricultural diversification, and the resultant high prices in Brazil, stimulated competition from other producers. Whilst coffee became of increasing importance within her domestic economy, Brazil's relative importance in world trade deteriorated very considerably. This history of Brazilian control is exactly analogous to United States cotton control under the Agricultural Adjustment Act. In both cases, storage programmes with price stabilizing objectives, have become in effect price raising measures with a consequent inevitable accumulation of stocks. It is however not possible to speculate intelligently as to what would have happened to Brazilian producers without government intervention.

The problem was essentially a human one and a strict policy of laissez-faire would have resulted in much suffering amongst producers. In the words of a Brazilian official quoted by Professor Rowe: "It is better to destroy coffee than to destroy human lives".
The Inter-American Coffee Agreement

There is quite an extended record of international conventions and conferences between coffee producing countries, though it was not until the chief consuming country took the lead that agreement to any material extent was reached.

An International Coffee Conference was first called in 1902, following a record crop in Brazil and a drastic fall in coffee prices on the New York market. Nothing materialized from this conference. The Brazilian Government made attempts in 1931 and 1936 to secure agreement with other countries. The first pan-American Coffee Conference was convened at Bogota in Columbia. It resulted in the formation of an International Coffee Bureau for statistical and promotional activities. The second pan-American Coffee Congress which was held in Havana in 1937, revealed the sharp conflict of interests between Brazil and Columbia. It was after the failure of this conference to produce any international agreement that Brazil abandoned her domestic price support policies.

The invasion of the low countries in 1940 revealed the extent to which European markets were being cut off, and emphasized to Latin-American producers the importance of the United States market. At a third pan-American coffee conference in 1940 it was decided to invite the United States to participate in some regulatory agreement. A conference on Western Hemisphere defense in July 1940 resulted subsequently in the production of the Inter-American Coffee Agreement, which was put into effect in April 1941.

The Inter-American Coffee Agreement included fourteen Latin-American producing countries, accounting for 85 per cent of the world's production. It was dominated by the United States as a consuming country and was similar to the International Beef Conference in this respect. The agreement established a relatively large import quota for the United States (15,900,000 bags) which was divided between signatory and non-signatory countries. No price provisions were made in the agreement. It was to be administered by a board comprising one delegate from each country, and having the following voting powers - twelve votes for the U.S.A., five for Brazil, three for Colombia and one each for the remaining countries. The export quotas for individual countries were not set solely on the basis of the coffee production of each country, or on recent participation in the United States market, or any other mathematical formula. They were the result of compromises based on negotiations. The original agreement, made to last until October 1943, was extended for two further periods of twelve months. Thereafter the agreement was terminated, though the Inter-American Coffee Board continued to function until September 1948, as a medium for international exchange of information and co-operation.

The Inter-American Coffee Agreement has been described as a model ICA on which any future agreements relating to other commodities could be based. The United States in her position as a monopsonist

60 See pages 125-127 of this Thesis.
certainly did not exploit the producing countries. There is evidence in fact to the contrary, since the agreement was originally designed in the interests of hemispheric solidarity, and the United States was at particular pains to treat its Latin-American neighbours generously. The Agreement did not, however, contribute anything towards solving the fundamental problems of the world coffee economy, and the high prices which American consumers were obliged to pay for coffee during the war years only added to the inflationary boom experienced in all the coffee producing countries. It seems likely that a buffer stock arrangement would be the most beneficial international scheme that could be devised to stabilize grower's incomes. There are however considerable administrative difficulties since a large crop would always tend to bring larger return to growers as long as the buffer stock agency bought up surpluses. Similarly, because a short crop involves such high unit costs to producers, a "stabilized" price would tend to show a loss to growers. Wickizer in his study of world coffee problems, considers that a buffer stock scheme, would "perhaps not be feasible at all, for coffee."

**Summary and Conclusions**

The case study of coffee reveals in very clear relief, those economic characteristics which give rise to price instability

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65 Ibid., page 215
and excess capacity described in chapter one. The history of Brazilian Control Schemes reveals the manner in which one country may often be obliged to shoulder the burden of what is really a worldwide problem. International cooperation was only made possible by the political generosity of the principal consuming country which in turn was motivated by the exigencies of war.

The Brazilian record of valorization reveals the common danger of such schemes in setting price raising objectives as their real goal. Such policies undoubtedly aggravated Brazil's position in the world coffee economy and rigorous control in latter years was largely needed because of the over-expansion caused by injudicious price regulation in earlier years.

(iii) Tea

International trade in tea has been subject to a high degree of regulation since 1938. Yet because of the economic characteristics of the industry and the relationship between the chief exporting and importing nations involved, control has operated without any apparent friction and indeed might be judged highly successful. Tea regulation has not given rise to any of the public opprobrium which has been attached to the burning of coffee in Brazil, or the restriction of rubber stocks by the International Rubber Regulation Committee.

Tea, like coffee, belongs with the five most important enjoyment goods or world trade. Though lagging behind coffee in commercial importance, it is still the world's most widely used beverage being cheaper than coffee or cocoa. Among food-stuffs important in international trade, tea exports are usually only exceeded in value by wheat, sugar, butter, pork
products and coffee. Tea has no food value, but like coffee contains the stimulant caffeine.

**Market Characteristics**

The tea plant "Thea Sinensis", a member of the camellia family is indigenous to China which is still the largest producing country. The great bulk of Chinese tea, is however, consumed internally. Four-fifths of all tea exports come from the "black tea countries", that is India, Ceylon, Indonesia, and Pakistan. Three types of tea are produced from the same plant, according to the processing methods employed. The plucked shoots (leaf buds with top young leaves) are dried to produce green tea, dried and fermented in the preparation of oolong tea, and roasted in an oven, a process known as 'firing', in the preparation of black tea. The tea bush, which grows best on well drained slopes under generous rainfall, takes three or four years before it is big enough to stand up to plucking. A further four to six years are required to fully establish an estate. The tree if carefully pruned, will then continue productive for several decades.  

The supply of tea is very stable since weather affects yields and moreover output can be considerably increased by the application of fertilizers and by varying the number of leaves plucked with the new shoots. When the prices are very low, planters commonly resort to finer plucking, which whilst reducing yields, also gives a better quality product. Plucking of the tree has to be continuous however in contrast to rubber

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66 For a detailed account of the different kinds of tea and methods of preparation for market, see Harler, C.R., *Culture and Marketing of Tea*, London, 1933.
plantations where the tree can be rested indefinitely without injury. Finer plucking therefore requires a generous labour force since it is a slower and more skilled operation than coarse plucking. Coarse plucking allows the larger coarser leaves to be pulled off the plant together with the young shoot, and such a process requires less manual dexterity.

The supply of tea in the long run is, however, relatively inelastic, due to the high fixed costs and capital requirements, which characterize the industry. A plantation in the early thirties it was estimated, would cost not less than £100, per acre to bring to maturity. The plantation system is typical of the industry, and there is very little tea production by native small holders. In contrast to raw rubber and green coffee, tea cannot be stored for long periods. After three or four months the poorer quality teas completely lose their flavour. This factor enhances the long run inelasticity of the supply situation.

There is a wide range in production costs, the better quality teas emanating from the high altitude plantations where growth is slow and costs comparatively high. The finest quality teas come from Assam and the poorest from Indonesia. Lower quality teas are almost flavourless, and are commonly used as fillers in making up blends. A rising level of tea prices, for this reason, tends to discriminate against the better quality producers, since wholesalers purchase a relatively greater proportion of the lower grade 'filler' teas, when prices are high.

Aggregate world tea production is probably about two billion

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pounds annually.\textsuperscript{69} China and Russia are big producers though the latter country is still a net importer of tea. Some tea is grown in Kenya, Uganda and Nyasaland. Table 16 shows the chief exporting producers of tea.

<table>
<thead>
<tr>
<th>Exporting Country</th>
<th>Average for 1934-38</th>
<th>1946</th>
<th>1947</th>
<th>1948</th>
<th>1949</th>
</tr>
</thead>
<tbody>
<tr>
<td>India and Pakistan</td>
<td>152</td>
<td>136</td>
<td>193</td>
<td>171</td>
<td>276</td>
</tr>
<tr>
<td>Ceylon</td>
<td>100</td>
<td>132</td>
<td>150</td>
<td>154</td>
<td>135</td>
</tr>
<tr>
<td>China and Taiwan (Formosa)</td>
<td>51</td>
<td>7</td>
<td>17</td>
<td>18</td>
<td>20</td>
</tr>
<tr>
<td>Indonesia</td>
<td>68</td>
<td>3</td>
<td>4</td>
<td>9</td>
<td>22</td>
</tr>
<tr>
<td>Japan</td>
<td>18</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Others</td>
<td>8</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>16</td>
</tr>
<tr>
<td>TOTAL</td>
<td>397</td>
<td>296</td>
<td>361</td>
<td>350</td>
<td>436</td>
</tr>
</tbody>
</table>


The demand for tea is generally recognised as being highly inelastic. In the first place, because it is an enjoyment food and habit forming, competition with other beverages is very limited. Moreover, because of its low price, tea is normally accessible to the mass market in all the chief importing countries. (This is in contrast to coffee which is still a luxury food in most European countries).\textsuperscript{70} However, tea consumption is adversely affected by a high level of tea prices. In nearly all countries, except the United States, duties are imposed on tea for revenue

\textsuperscript{69} Wickizer, V.D.: Tea Under International Regulation, Food Research Institute, Stanford, California, 1944, p. 28.

\textsuperscript{70} See page 58 of this Thesis.
purposes. There is some evidence that the expansion of tea consumption has been seriously checked by such tea taxes and duties and the incidence of colonial preferences.\textsuperscript{71} The vast potential markets for tea consumption within the producing countries of the Orient are only just beginning to be developed.\textsuperscript{72} Per capita consumption is highest in the United Kingdom, as is shown in Table 17.

\textbf{TABLE 17}

\textbf{PER CAPITA TEA CONSUMPTION IN PRINCIPAL IMPORT MARKETS, 1930-39}

<table>
<thead>
<tr>
<th>Country</th>
<th>Apparent consumption per capita (pounds)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average 1930-34</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>9.6</td>
</tr>
<tr>
<td>Eire</td>
<td>8.0</td>
</tr>
<tr>
<td>Australia</td>
<td>7.0</td>
</tr>
<tr>
<td>Canada</td>
<td>3.8</td>
</tr>
<tr>
<td>Netherlands</td>
<td>3.1</td>
</tr>
<tr>
<td>French Morocco</td>
<td>2.8</td>
</tr>
<tr>
<td>Union of So. Africa</td>
<td>1.3</td>
</tr>
<tr>
<td>Egypt</td>
<td>0.8</td>
</tr>
<tr>
<td>Iran</td>
<td>0.8</td>
</tr>
<tr>
<td>U.S.A.</td>
<td>0.7</td>
</tr>
<tr>
<td>Germany</td>
<td>0.2</td>
</tr>
</tbody>
</table>

Source: Wickizer, V. D.: Tea Under International Regulation, (Food Research Institute, Stanford, California, 1944, p. 52.

\textsuperscript{71} Taylor, Henry C.: \textit{Op. Cit.}, p. 89

\textsuperscript{72} In the 1948 Review of International Commodity Problems by the Interim Co-Ordinary Committee for International Commodity Agreements it is stated that the exported percentage of the Indian crop in recent years has been slightly smaller due to internal consumption.
Efforts to expand tea consumption have been extensive, though it is doubtful whether they have been very successful. The International Tea Market Expansion Board was established in 1935 to co-ordinate the promotional work of the black tea countries. Its activities have been confined to propaganda in the chief importing countries whilst the domestic market has been neglected until recently. Before the second world war this Board was spending annually £500,000 for propaganda purposes.

Table 18 showing the relative position of the chief importing countries, demonstrates the overwhelming importance of Britain in the world's tea trade. The London tea market is dominated by four British firms, and world Tea prices are "made" in this market. It would be difficult without extended facilities, to ascertain the extent and significance of monopolistic competition in the tea industry. Certainly tea wholesalers in London are in the position of oligopsonists, and the inflexibility of tea prices tends to support the view that a non-agressive price policy is followed.

<table>
<thead>
<tr>
<th>Country</th>
<th>In Thousands of metric tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>215.1</td>
</tr>
<tr>
<td>United States</td>
<td>43.0</td>
</tr>
<tr>
<td>Australia</td>
<td>24.8</td>
</tr>
<tr>
<td>Canada</td>
<td>19.6</td>
</tr>
<tr>
<td>Egypt</td>
<td>16.1</td>
</tr>
<tr>
<td>Union of S. Africa</td>
<td>9.0</td>
</tr>
<tr>
<td>Eire</td>
<td>8.4</td>
</tr>
<tr>
<td>Netherlands</td>
<td>7.7</td>
</tr>
</tbody>
</table>


A comparison of tea, tin and rubber prices between the industrial boom of 1920 and the crash of 1929, shows that tea prices declined by only 18 per cent, whilst tin prices declined by 31 per cent and rubber prices by as much as 72 per cent. Moreover tea export prices showed only a 46 per cent decline between the years 1929 and 1938, whilst coffee export prices over the same period showed an 80 per cent decline.

As early as 1931, the Imperial Economic Committee, (now known as the Commonwealth Economic Committee), investigating the tea market, pointed to the dangers of this excessive concentration in the buying, and even advocated concentration amongst producers to counteract this danger. To quote that Committee's report:

"In a highly sensitive market such as the tea market is, .... the absence of one of the big buyers for any considerable period may in itself cause a depression in prices."

Dr. Wickizer, on the other hand, in his study of Tea regulation, does not think that this concentration of buyers in the tea industry has been significant in affecting the course of international regulation and states that "the existence of large combinations and some degree of imperfect competition is not necessarily incompatible with either producers' or consumers' interests."

There has been a tendency towards the development of excess capacity in the tea industry since the boom that followed the first world

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75 *Ibid.*, p. 112
war. By 1921 current production of tea was estimated to exceed consumption by 25 per cent. Subsequent boom conditions hid the trend for production to exceed consumption until 1928 when surplus stocks began to accumulate once more. Expansion was undoubtedly not so excessive in the tea industry as in other plantation crops. The moderate prices under International Regulation prevented excessive expansion in countries outside the agreement. However there was ample evidence of excess productive capacity at the beginning of the second world war. In 1939 world potential exportable production under normal conditions, totalled 1,105,000,000 pounds, whilst consumption of exported teas totalled 890,000,000 pounds only.

History of Control Schemes

The history of marketing control schemes in the tea industry shows the same pattern as that followed by rubber. Tea Growers' Associations formed the first voluntary restriction schemes in the early years after the first world war, and it was not until the severe depression of the early nineteen-thirties that producers felt compelled to call upon their governments for support in regulating the industry.

As early as 1920, when tea prices fell from 15-3/4 pence per pound to only 5 pence, the planters' associations of India, Ceylon and the Netherlands Indies voluntarily agreed to restrict the crop of that

79 Ibid., p. 60
year to 90 per cent of the previous five years' average production. Poor
crops combined with improved industrial activity brought prices back to
remunerative levels the following year, and it was not until 1928 that
prices began to decline again. When the depression "broke" in 1930, the
Netherlands Indian, British Indian and Ceylon producers quickly decided
to reduce the outputs of their estates. The scheme failed, but is
interesting in that it attempted to prevent the shift in blenders'
demand towards filler teas which usually accompanied a rise in prices,
by calling upon the producers of cheaper teas to make greater reduction
in output than the producers of finer teas. World exports increased during
1931 without any restriction, but stocks were accumulating to new high
levels. Whereas the Dutch had been reluctant to participate in ICA's, they
now took the initiative and sought an understanding with the British.
Accordingly an agreement was entered into in April 1933, to be effective for
five years. In 1936, the agreement was extended, with slight modifications
for another period of five years i.e. from April 1938 until March 1943. The
Agreement was renewed for a third period in 1943, to extend for two years
after the end of the war. Subsequently producers' associations renewed
the scheme from April 1948 till March 1950 pending the support of the
newly autonomous governments of Pakistan, Ceylon, Indonesia and India.

83 See pages 38 and 43
This was obtained in 1950 when a new agreement to last from April 1950 to March 1955 was formed. This had the backing of the governments of India, Pakistan, Ceylon and Indonesia.  

The essence of the first regulation scheme, which has set the pattern for all subsequent agreements, has been the raising tea prices from depressed levels and stabilizing them at profitable levels to growers, by regulating the amount of tea reaching overseas markets. The export quota was the device used, each country being given a basic quota, subject to adjustment from time to time. An International Tea Regulation Committee (hereinafter referred to as the ITC) set varying percentages of this basic export quota which was reviewed and revised, if necessary, once a year. In comparison with the rubber regulation agreement, provisions for revising or renewing quotas were much less flexible, yet the tea industry was not subject to the same degree of price instability and the operations of the scheme subsequently worked quite smoothly. The ITC was also made responsible for prohibiting new planting except in exceptional circumstances. It was not until 1936 that the ITC was made responsible also for collecting statistical data for the industry as a whole.

In the 1933 Agreement, the three participating governments India, Ceylon and the Netherlands Indies, were allowed to select any year between 1929 and 1931 as the base year for the establishment of quotas. The following standards were set up, as shown in Table 19.

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TABLE 19
STANDARD EXPORTS SET FOR THE FIRST PERIOD OF REGULATION (1933-1938)

<table>
<thead>
<tr>
<th>Country</th>
<th>Base Year</th>
<th>Standard Exports in pounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>1929</td>
<td>382,594,779</td>
</tr>
<tr>
<td>Ceylon</td>
<td>1929</td>
<td>251,522,615</td>
</tr>
<tr>
<td>Netherlands Indies</td>
<td>1931</td>
<td>173,597,000</td>
</tr>
</tbody>
</table>

Source: Wickizer, V.D.: Tea under International Regulation (Food Research Institute, Stanford, California), 1944, page 75.

In reviewing the first five years of operation of the scheme, disappointment was expressed in many quarters that consumption had not expanded appreciably. Even the ITC in its annual review admitted that the scheme had "not succeeded to the full extent hoped." 88 Jack Brooks made the following evaluation:

"On the credit side may be set down the facts that tea stocks have been reduced 35 per cent; auction prices have gone up 50%; exports reduced by approximately 12 per cent ... But the bare 5 per cent increase in world tea absorption after five years' active campaigning is however, not as good." 89

However, during the operation of the scheme up to the outbreak of the second world war, tea prices remained fairly stable and quota adjustments, as shown in Table 20, appeared reasonable. It was necessary to increase the quotas in 1941 to 125 per cent of the 'standard' exports. In effect the ITC allowed free exports of tea until the end of the war,

88 International Tea Committee, Report for 1937-38
shipping facilities being the only limiting factor. In comparison with tin and rubber regulation agreements, tea quotas were never restricted by more than 82\% per cent. Rubber quotas were commonly as low as 45 to 60 per cent of the basis year, and tin quotas were even restricted as low as 35 per cent of the standard quota.

**TABLE 20**

WORLD TEA PRICES AND PERCENTAGE OF STANDARD QUOTAS ALLOWED FROM 1932-33 TO 1939-40

<table>
<thead>
<tr>
<th>Years ending March 31.</th>
<th>Quota (per cent)</th>
<th>Prices &quot;All Tea&quot; London, pence per pound</th>
</tr>
</thead>
<tbody>
<tr>
<td>1932-33</td>
<td>None</td>
<td>9.6</td>
</tr>
<tr>
<td>1933-34</td>
<td>85.0</td>
<td>12.9</td>
</tr>
<tr>
<td>1934-35</td>
<td>87.5</td>
<td>12.6</td>
</tr>
<tr>
<td>1935-36</td>
<td>82.5</td>
<td>13.1</td>
</tr>
<tr>
<td>1936-37</td>
<td>82.5</td>
<td>13.4</td>
</tr>
<tr>
<td>1937-38</td>
<td>87.5</td>
<td>15.2</td>
</tr>
<tr>
<td>1938-39</td>
<td>92.5</td>
<td>14.1</td>
</tr>
<tr>
<td>1939-40</td>
<td>95.0</td>
<td>14.1</td>
</tr>
</tbody>
</table>

Source: Wickizer, V.D. Tea under International Regulation, (Food Research Institute, Stanford, California), 1944, page 75.

In evaluating the history of tea control it must be conceded that the ITC followed a moderate price policy and that it made genuine efforts to consider the general interest. For example, in explaining the 1940 increase in quotas the ITC stated that it felt that,

"supplies of tea should exceed rather than fall short of requirements, and that it was necessary to guard against any suggestion that the regulation scheme was being used to maintain prices at an unduly high level". 90

A very enlightened statement of policy is also contained in the official review of tea regulation.

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90 ITC Report for 1940 - 41, - p. 4.
"One of the strongest features of the scheme has been the maintenance of the policy established at the outset that the principle of control was as far as possible to obtain equilibrium between supply and demand, and in exercising control the International Tea Committee have always endeavoured to see that in the matter of supply there should be a liberal margin to meet any emergency."91

Because of this, the profits in the industry have in recent years averaged from 10 to 12.5 per cent whilst profits before the great depression were commonly as high as 40 and 50 per cent.92 Table 21 shows the earnings of six selected tea companies before and after regulation.

**TABLE 21**

**EARNINGS OF SIX SELECTED TEA COMPANIES**
**IN INDIA AND CEYLON, 1924-39**

<table>
<thead>
<tr>
<th>Period</th>
<th>INDIA</th>
<th>CEYLON</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Consolidated Tea and Lands</td>
<td>Kanan Devan (Assam)</td>
</tr>
<tr>
<td>1924-33Av.</td>
<td>-</td>
<td>38.1</td>
</tr>
<tr>
<td>1927</td>
<td>47.6</td>
<td>58.8</td>
</tr>
<tr>
<td>1932</td>
<td>-</td>
<td>5.2</td>
</tr>
<tr>
<td>1933</td>
<td>21.6</td>
<td>20.2</td>
</tr>
<tr>
<td>1937</td>
<td>18.8</td>
<td>25.5</td>
</tr>
<tr>
<td></td>
<td>Average Price Realized (pence per pound)</td>
<td></td>
</tr>
<tr>
<td>1924-33Av.</td>
<td>16.75</td>
<td>24.5</td>
</tr>
<tr>
<td>1927</td>
<td>32.5</td>
<td>37.5</td>
</tr>
<tr>
<td>1932</td>
<td>Nil</td>
<td>7.5</td>
</tr>
<tr>
<td>1933</td>
<td>15.0</td>
<td>15.0</td>
</tr>
<tr>
<td>1937</td>
<td>13.0</td>
<td>16.0</td>
</tr>
<tr>
<td>1939</td>
<td>10.0</td>
<td>14.5</td>
</tr>
<tr>
<td>Ordinary Dividends (per cent)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1924-33Av.</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>1927</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>1932</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>1933</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>1937</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>1939</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

Source: Wickizer, V.D.: Tea Under International Regulation (Food Research Institute, Stanford, California), 1944, page 124.

91 ITC Review of the Tea Regulation Scheme, 1933-43, p. 3.
The tea industry also definitely enjoyed greater stability than existed before the 1933 Agreement, as is shown by the annual price ranges up to the time that the British Ministry of Food closed the London Tea auctions.

**TABLE 22**

PRICE RANGES IN ALL TEA SOLD AT LONDON AUCTIONS BETWEEN 1922 & 1939

<table>
<thead>
<tr>
<th>Six-year Periods</th>
<th>Range (pence per pound)</th>
<th>Range (per cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1922 - 27</td>
<td>15.1 to 19.8</td>
<td>31</td>
</tr>
<tr>
<td>1928 - 33</td>
<td>9.5 to 16.7</td>
<td>76</td>
</tr>
<tr>
<td>1934 - 39</td>
<td>12.9 to 15.2</td>
<td>18</td>
</tr>
</tbody>
</table>

Source: Wickizer, V.D.: Tea under International Regulation, (Food Research Institute, Stanford, California), 1944, page 122.

On the deficit side, there is evidence that control stimulated production amongst countries outside the agreement. China refused to participate in the 1933 Agreement, because she had plans for expanding production which was then at a low ebb. However the initial expansion was never maintained, though Japan and Formosa appear to have derived lasting benefit, as is shown in Table 23.

**TABLE 23**

EXPORTS OF TEA FROM COUNTRIES NOT ADHERING TO THE INTERNATIONAL TEA AGREEMENT 1932-33 to 1939-40

<table>
<thead>
<tr>
<th>April-March</th>
<th>China</th>
<th>Japan</th>
<th>Formosa</th>
<th>French Indo-China</th>
<th>Total</th>
<th>Percentage of World Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>1932-33</td>
<td>91.4</td>
<td>27.8</td>
<td>14.9</td>
<td>1.5</td>
<td>135.6</td>
<td>14.0</td>
</tr>
<tr>
<td>1933-34</td>
<td>91.5</td>
<td>32.9</td>
<td>16.0</td>
<td>1.6</td>
<td>142.0</td>
<td>17.7</td>
</tr>
<tr>
<td>1934-35</td>
<td>102.0</td>
<td>28.9</td>
<td>21.5</td>
<td>2.8</td>
<td>155.2</td>
<td>17.9</td>
</tr>
<tr>
<td>1935-36</td>
<td>91.0</td>
<td>37.3</td>
<td>20.0</td>
<td>2.5</td>
<td>150.8</td>
<td>17.8</td>
</tr>
<tr>
<td>1936-37</td>
<td>90.3</td>
<td>36.9</td>
<td>21.6</td>
<td>3.0</td>
<td>153.8</td>
<td>18.5</td>
</tr>
<tr>
<td>1937-38</td>
<td>70.5</td>
<td>51.9</td>
<td>21.8</td>
<td>4.3</td>
<td>148.5</td>
<td>17.0</td>
</tr>
<tr>
<td>1938-39</td>
<td>92.1</td>
<td>41.4</td>
<td>25.2</td>
<td>4.7</td>
<td>163.4</td>
<td>17.7</td>
</tr>
<tr>
<td>1939-40</td>
<td>71.6</td>
<td>55.6</td>
<td>25.3</td>
<td>6.5</td>
<td>160.0</td>
<td>17.2</td>
</tr>
</tbody>
</table>

The restriction scheme definitely had an adverse effect in price differentials since it tended to stimulate the demand for the lower grade teas because the scheme resulted in a high and rising level of prices which operated against the producers of high quality tea. Table 24, showing the average annual prices for different quality teas, confirms this tendency for lower quality teas to have recovered more rapidly after the depression, whilst the fine quality Darjeeling teas were still selling at an 11 per cent discount.

**TABLE 24**

PRICE CHANGES IN DIFFERENT TEA QUALITIES
BETWEEN 1926-28 and 1939-40

<table>
<thead>
<tr>
<th>Tea</th>
<th>Av. Price 1926-28</th>
<th>Index # 1926-28</th>
<th>Averages for years indicated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1926-28</td>
<td></td>
<td>1930-32</td>
</tr>
<tr>
<td>Darjeeling (fine quality)</td>
<td>16.78 (annas)</td>
<td>100</td>
<td>71</td>
</tr>
<tr>
<td>Assam (med. Quality)</td>
<td>13.39 as.</td>
<td>100</td>
<td>62</td>
</tr>
<tr>
<td>Gosher &amp; Sylhat (common tea)</td>
<td>11.61 as.</td>
<td>100</td>
<td>48</td>
</tr>
</tbody>
</table>

Source: Wickizer, V.D.: Tea Under International Regulation, (Food Research Institute, Stanford, California), p. 87

As judged by economic criteria, tea regulation in restricting new planting must inevitably be guilty of protecting vested interests. The protection afforded weak producers during the 1930's also tended to delay necessary adjustments in productive capacity.
International tea regulation might also be criticized on two other points according to desirable requisites for ICA's, as outlined by the specialized agencies of the United Nations Organization. The Agreements have always been producer controlled and sponsored, having neither official consumer representation, or direct government control. As regards the former, the ITC official review recognizes this weakness, but points out the difficulties in the following words:

"It is impossible to find suitable representatives for all the different countries using tea, nor would it be possible to make a choice from the distributing trade in the various regions as buyers are much too individualistic and competitive. Past experience shows, however, that it is necessary to satisfy the Governments of consuming countries that the powers entrusted to a committee controlling a scheme of this kind are being exercised in a proper manner and it should be left to them to elect one of their officers to serve on the controlling body for this purpose." 94

In practice it is obvious that it has been to the advantage of the dominating British interests to keep prices low, as they constituted the biggest consumers. A high level of prices would also favour Dutch producers since the common teas come mainly from Javanese plantations. This has led Wickizer to conclude that "when a control scheme is wisely managed, the necessity for participating by consuming countries is entirely lacking." 95

The question of making the scheme an official intergovernmental agreement has frequently been raised. The ITC itself took active steps in 1939 to transform the agreement in this manner, but the

93 See Appendix A, 11 & 111 pages 184-187
95 Wickizer, V.D., Op. Cit., p. 139
matter was dropped with the outbreak of hostilities. We may conclude therefore that government sanction and legislative backing is necessary to make dissident minorities conform, but that comprehensive governmental regulation of such agreements is not a prerequisite to their successful functioning. Indeed the history of rubber regulation shows us that governments are no less susceptible to making mistakes than are producer sponsored organizations.

Summary and Conclusions

The success of the tea regulation agreements can be attributed to the concentration of financial interests, both producing and selling in two countries, Britain and Holland. Moreover the high capital requirements and long period of waiting, before a tea garden starts producing, together with the high labour requirements for harvesting, and the technical process of preparing the product for market, has served to prevent extensive development of native production which has been such a problem in the rubber industry. The ease with which supply can be restricted in the short run, by finer plucking, has also eliminated the need for costly storage which has characterized the coffee industry.

Perhaps the most significant lesson from this study of tea regulation is the fact that such ICA's tend to persist. Control originated from the great depression and the very low prices which prevailed in the early 1930's. However, even after substantial industrial recovery and relatively prosperous conditions amongst tea growers, regulation has persisted. This protection of vested interest is almost inevitable in schemes dominated by producers, and prevents a proper readjustment of productive capacity and efficient resource allocation in those
primary producing countries. Even the most efficient producers are not in favour of continued control since it shelters their weaker competitors. The ITC in its annual report of 1937-38 stated that it did not consider that continuous regulations were necessary or desirable. It anticipated, then, that "five years would be sufficient for the recovery of the industry and the relinquishment of regulation". However, a similar control agreement is still in operation fourteen years after this statement was made.

CHAPTER III
CONTINUING INDIVIDUAL COMMODITY STUDIES

(iv) Wheat

This survey of international control of the wheat market and the study of sugar that follows, both present an entirely different theoretical pattern to the commodities previously considered. However, this division into chapters is for convenience rather than for any desire to make a fundamental distinction between commodities. All primary commodities have inherent production problems which tend to result in price instability and the failure of supply to adjust readily to peculiar characteristics, and no two are faced with exactly similar difficulties.

Wheat and sugar do have some common characteristics which give rise to similarities in the international trade problems of each. In both products, there are a large number of producing countries, and very few importers of any consequence are unable to supplement imports to a varying degree by domestic production. Without that absolute degree of dependence on exporting countries which characterizes the chief consumers of the commodities hitherto examined, importing countries have been able to modify and construct the pattern of international trade in accordance with the needs for self defence, preservation of a precarious trade balance, or the subsidization of domestic primary producers.

Market Characteristics:

Wheat is the most important primary product in international trade. Because it forms the basis of the diet of so many nations and because those of western civilizations in particular, have regarded it-
as the staff of life, wheat has been subject to exhaustive study  
for a prolonged period. The examination of wheat problems must 
necessarily be brief, and a greater amount of attention has been 
devoted to other commodities in this study, for the very reason 
that statistical records of wheat trade and production variation 
are so extensive, and that many volumes have already been written about 
every aspect of wheat production.

Wheat is an annual crop, and like sugar belongs to the 
"grass family" or order Graminaceae. Originating in Asia Minor, 
wheat flourishes best in temperate zones, though cultivation has 
been extended to sub-arctic and semi-tropical regions of the world. 
It is therefore grown very widely. The primary wheat producing areas 
are, however, the natural prairie, pampas or steppe lands; treeless, 
black-soil regions, characterized by a low annual rainfall. There are 
few alternative methods of utilizing the land in such areas except by gra­ 
zing herds. Extensive methods of cultivation are employed in these 
areas, and wheat can be produced very cheaply. It is such specialized 
producing areas which are normally dependent upon overseas markets, 
and which suffer the most when wheat production is artificially stim­ 
ulated in areas adapted to a more diverse system of agriculture.

1 Ashley, Sir William: The Bread of our Forefathers.—an Inquiry in 

2 There are a series of over 180 studies contained in twenty volumes 
entitled "Wheat Studies", published by the Food Research 
Institute, California. See also 
Crookes, Sir William: The Wheat Problem, Longmans Green & Co., 1917, 
Hevesy, Paul de: World Wheat Planning and Economic Planning in Gener­ 
al, Oxford Univ. Press, 1940, and also 
The supply of wheat is fairly elastic in the long run and significant correlation has been discovered between the acreage planted and the general level of industrial activity. The high level of output maintained during the depression of the 1930's was a result of the lack of alternative opportunities for the factors of production, a condition creating supply inelasticity which is common to a number of products. The supply of wheat on an individual national basis is highly unstable due to the effects of climatic variations. This will be shown later. The aggregate world supply of wheat tends to be quite stable since the wide geographic range of producing countries tends to have a compensating effect. There is, however, significant variation in occasional years. Thus in 1928 crops were good everywhere amounting to 3,903,000,000 bushels while the droughts of the middle 1930's on the North American continent had world wide repercussionary effects, total world production falling by as much as 600,000,000 bushels in 1934.

The demand for the wheat of any one exporting country is fairly elastic in international trade. Thus the price problem of various large producing countries is not the same. This can be appreciated by comparing conditions between the United States and Canada. Both are large wheat producers but the former produces almost entirely

4 The extent of such variability is well shown in the study by Temoshenko, V.P.: "Variability in Wheat Yields & Outputs", Wheat Studies of The Food Research Institute, March 1943, Vol. XIX, pp.190-96.
5 Figures exclude Russia who was not an important exporter during this time. Taken from The World Wheat Situation, 1934-35, Appendix Table I, Wheat Studies, Food Research Institute, California, Vol. XII, P. 161.
for a domestic market and consequently faces a highly inelastic demand. Canada depends upon the export trade for two-thirds of her exports and because the resultant demand is fairly elastic, she would not be able to resort to any of the domestic price raising measures resorted to by the United States Government.

The individual consumer's demand for wheat is highly inelastic since bread is the staple of diet in the chief wheat importing countries. This is a significant factor in facilitating national self-sufficiency policies which involve measures that raise the price of bread. The demand for wheat is subject to problems which distinguish it from the commodities considered in the previous chapter, since there are three distinct sources of consumption. This is illustrated in Chart 6, showing a hypothetical demand schedule. The steepest, inelastic part of the schedule represents that quantity which enters international trade, and is demanded for human consumption. The lower part of the schedule represents those price ranges within which wheat is extensively used as a feed for livestock. Finally as a source of starch, there could be an unlimited demand for wheat for industrial processing and manufacture of alcohol, provided the price level was low enough.

The income elasticity of demand for wheat is also quite low. As consumption levels are raised in the wheat consuming countries, the lower income groups tend to eat more wheat per capita in preference to rye and millets, while those on the high levels tend to eat less wheat per capita as its place in their diet is partially taken by other foods.
regarded as preferable.

At lower prices therefore fluctuations in yields would have a less pronounced price effect as the adjustment would be made in livestock feed and industrial uses. However, costs are such that wheat cannot be produced in the price range that will attract industrial uses.

A History of International Wheat Agreements.

The number of committees, councils and conventions which have revolved around the problem of formulating an international wheat agreement during the past two decades, exceeds forty.

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Following is a brief account of the events which led to these negotiations.

The 1914-18 war had the first great disruptive effect on the world wheat trade. Prior to 1915, Russia was one of the largest exporters, with average annual exports of over 19,000,000 quarters. The United States averaged 13,000,000 quarters and Argentina 10,000,000. After the war Russian exports were suddenly and completely cut off, stimulating production in Argentina and Australia. Between 1924 and 1928, Australia and Argentina increased their share of the world export trade from 27 to 35 per cent, while Canada and the U.S.A. decreased their share from 57 per cent to 35 per cent. After 1919, Germany, France and Italy imposed substantial import tariffs on wheat in an effort to become more self sufficient. Following the financial crash of 1929, the position rapidly deteriorated, with the chief European wheat importing countries taking more and more active steps to stimulate home production. Germany, Italy and France were the first nations after the onset of the depression to impose quantitative regulation of the demand of millers, by compelling them to grind a

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7 A helpful summary of two decades of international wheat negotiations that preceded the present International Wheat Agreement (1949) is provided by H. Tyszynski, "Economics of the Wheat Agreement", *Economics*. Vol. XVI No. 61, Feb. 1949, pp 27-29

8 1 Quarter = 8 bushels.


certain percentage of domestic wheat. In 1931 Belgium subjected imports to a licensing system and the Netherlands introduced fixed prices and compulsory milling quotas. In 1933 Italy raised the compulsory milling quota for domestic wheat to 99 per cent. By the early 1930's the wheat economy was thoroughly state controlled in Germany, Italy and France. Table 25 illustrates the extent to which these three nations had stimulated domestic production.

**TABLE 25**

<table>
<thead>
<tr>
<th>Production</th>
<th>Germany</th>
<th>France and French North Africa</th>
<th>Italy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grain</td>
<td>-625</td>
<td>-442</td>
<td>-151</td>
</tr>
<tr>
<td>Wheat</td>
<td>-278</td>
<td>-273</td>
<td>-262</td>
</tr>
<tr>
<td>Net imports of wheat</td>
<td>-220</td>
<td>-116</td>
<td>-217</td>
</tr>
</tbody>
</table>


Czechoslovakia, Portugal and Sweden had stopped importing wheat and even Chinese imports (including Manchurian ports) dropped from 74,000,000 bushels in 1933 to 7,000,000 bushels in 1937. While between 1909-10 and 1913-14, Britain, Germany, Holland, Belgium, Italy and France depended on imports to the extent of 33 per cent of their total requirements, by 1938-39 these same countries imported only 27 11 per cent of their requirements.

Robert Schwenger gives a comprehensize list of the different kinds of barriers resulting from the intervention of various governments, which parties to a foreign sale of American wheat might have to face during the 1930's. These included competing against subsidized producers, as in Britain, and tariff duties exceeding seventy-five cents a bushel in Austria, Estonia, France, Germany, Lithuania, Poland, Rumania, Turkey, Yugoslavia, Egypt and Mexico. He lists import quotas, milling regulations, foreign exchange restrictions and preferential treatments among different importing countries. In addition the chief exporting nations, including the U.S.A., Argentina, Australia, and Uruguay subsidized their exports on at least one occasion. With the exception of Germany, and possibly Italy, these restrictive government measures were not born out of any aggressive designs but were in the nature of self defence mechanisms against the onslaught of severe world wide depression, coupled with the general feeling of the need for self sufficiency in food production. It is easy to see that such measures serve only to deepen and lengthen the depression, and created much human suffering in the great wheat growing regions of the world. But in individual countries it did reduce unemployment.

World wheat supplies were more than ample during this period. The shortages suffered from 1914-1919 led to a temporary stimulation of world demand, and the annual average volume of wheat exports approached the level of 800,000,000 bushels between 1922 and 1932. Nevertheless, huge surpluses accumulated which were only absorbed by the succession of severe droughts from 1934 to 1937. The year 1938 was again a bumper crop year, with yields totalling 20 per cent above the average annual

12 Ibid., pp. 69-70
utilization in the six preceding years. Negotiations for international agreements, as will later be seen, coincided with such periods when the wheat surplus was unduly large.

**International Wheat Agreement 1933:**

Wheat stocks in the four principal countries, Canada, U.S.A., Argentina and Australia, had risen from 270,000,000 bushels in 1923 to 656,000,000 bushels by 1931. Competition became increasingly severe between the four wheat exporting countries, and Eastern European countries which occasionally had quite substantial surpluses for export. The Economic Committee of the League of Nations suggested an international conference with the objective of reaching some agreement on the wheat trade, and conferences were subsequently held in 1931 in Rome and later in London. Negotiations broke down when the U.S.A. declared that it would be unconstitutional for her to regulate exports.

The Monetary and Economic Conference held in 1933 produced few tangible results, but one of the problems it considered was the world wheat trade, and the secretary general of the Conference actually called a meeting of the principal wheat exporting countries


For a detailed account, see Taylor A.E. "The International Wheat Conferences during 1930-31". Wheat Studies, Vol. VII, August 1931, Food Research Institute, Stanford University, pp.439-475.
for the purpose of negotiating a wheat agreement. An international agreement was subsequently reached in the same year (1933) since every nation realized that

"the lower the price at which the exporters were forced to sacrifice their wheat the higher and more costly were the tariffs, bounties, and restrictions which the importing countries found it necessary to impose in order to protect their home producers." 18

The new agreement was signed by nine exporting and twelve importing countries. It provided for export quotas totalling 516,000,000 bushels in the first year, and for a 15 per cent cut in production in the four big exporting countries in the two ensuing years.

The importing countries also agreed to reduce their tariffs as soon as the international (i.e. London) wheat price rose to 63 gold cents per bushel for a continuous period of four months. The agreement contained no provision for the direct limitation of production.

Although in the first year net exports were 10,000,000 bushels less than the amount allowed under the agreement, prices declined very considerably to 43 cents per bushel. The Agreement consequently broke down after a year of operation since export quotas had failed to raise prices.

However Argentina exceeded her quota and recriminations spoiled the atmosphere for revising the pact. The Wheat Advisory Committee, which was created for the purpose of administrating the agreement, continued to

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function, however, and was subsequently responsible for renewed international negotiations.

The large World crop of 1938 stimulated these negotiations but the United States had for some time been anxious to obtain international agreement and her subsidization of wheat exports was directed towards this end. The Annual Report of the Secretary of Agriculture for the U.S.A. for 1935 contained the following note:

"The U.S. stands ready to cooperate with other nations in bringing about an adjustment of world production to world demand. It is believed that an effective International Wheat Agreement will be hastened if this country continues to produce a sufficient amount of wheat so as to remain an active participant in world trade." 22

Again, in his annual report for 1938 the Secretary of Agriculture states that:

"Our government is doing what it can to persuade other wheat exporting nations to join in what might be called an ever normal granary plan; in a plan to stabilize the amount of wheat offered on the World's markets year after year." 23

Argentina, Australia, Canada and the U.S.A. had reached the basis for an agreement, when Hitler started his blitzkrieg in Poland, and negotiations were dropped. Baron Paul de Hevesy in a footnote in his monumental study of wheat describes the progress in 1939 amongst the four negotiating countries. It had been decided to allocate an export quota of about 125 million bushels for the Danubian countries and the Soviet Russia, and that the balance be divided in approximately


23 Davis, J.S., Loc. Cit.
the following proportions: Canada 40 per cent, Argentina 25 per cent, U.S.A. 18 per cent and Australia 17 per cent.

Wheat surpluses very quickly began to accumulate in the major exporting countries during the war, and these nations, together with Britain resumed active work on the problem in July 1941. A succession of meetings culminated in the 1942 Memorandum of Agreement and Draft Convention. It was agreed at that time that some form of international agreement was urgently needed in order to deal with the wheat surplus problem and thus prevent the outbreak of a "wheat war" as soon as shipping and trade barriers became free at the close of hostilities. There was also the additional problem of making provision for supplies of relief wheat to war devastated countries as soon as the enemy was defeated.

Cairns, who was secretary of the original Wheat Advisory Committee, stated in 1949 that this agreement had achieved its limited objectives, that of providing for a wheat relief pool and convening a fully representative wheat conference. There is evidence, however, that the Memorandum of Agreement was at the time intended to be a model for an agreement to go into operation at the cessation of hostilities. In actual fact it was several years after the end of the war that an agreement was reached and this differed quite substantially from the 1942 Memorandum.

The preamble of this agreement is phrased in highly commendable though idealistic terms. It calls for:

"A substantial decrease in uneconomic incentives to high-cost production, a lowering of barriers to world trade, and an increase in the consumption of wheat through a lowering of prices."

Dr. Davis makes an exhaustive criticism and analysis of this 1942 Agreement and is able to point out that for all the intricacies of its manifold devices, the agreement provisions fall very far short of the objectives as stated in the preamble.

The distinctive features of the 1942 Agreement were as follows: (1) The provision of unusually large reserve stocks. (2) Regulation of the price. (3) Production control. (4) Export quotas.

The first provision (reserve stocks) was to be achieved by the four producing countries namely Argentina, Australia, Canada, and the United States, pledging that stocks of old wheat held at the end of their respective crop years would not be less than 35, 25, 80 and 150 million bushels, nor more than 130, 80, 275, and 400 million bushels respectively.

Production was to be controlled by the four exporters pledging themselves to see that wheat production in their territories did not exceed the quantity needed for domestic consumption plus their export quotas, plus their maximum reserve stocks. Export control was to be achieved by dividing the latest estimate of the total volume of international trade in wheat and flour, whatever its size in the following percentages: Argentina 25 per cent, Australia 19 per cent, Canada 40

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per cent, and U.S.A. 16 per cent.

In the matter of prices a basic maximum and minimum world export price (c.i.f. U.K. ports) was to be set, to hold for one year, and no sales were to be allowed outside this price range.

The provision of a large wheat carry-over implied that government subsidization or purchase would be necessary in the four exporting countries. Such reserves were intended to function as valorization stocks, or price stabilizers, so that consumers would be protected from any sudden price rises which might result from wheat shortage in a particular crop year.

The minimum reserve stocks specified in the Agreement, 28 Davis points out, are about 50 per cent above the normal average which would greatly add to the cost of carrying stocks, and was beyond the storage facilities of Argentina and Australia. He further states that such an equalization reserve to minimize price fluctuations would be better held by an international non-political corporation. Table 26 shows the wheat reserves as suggested in the draft agreement, compared with actual wheat carry-overs in the four chief exporting countries for different periods.


29 See Chap. IV. of this thesis
TABLE 26

WHEAT CARRY-OVERS IN THE FOUR CHIEF EXPORTING COUNTRIES, COMPARED WITH STANDARDS SPECIFIED IN THE DRAFT CONVENTION (in millions of bushels)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.A.</td>
<td>July 1</td>
<td>117</td>
<td>131</td>
<td>150</td>
<td>400</td>
<td>378(1933)</td>
<td>633</td>
</tr>
<tr>
<td>Canada</td>
<td>Aug. 1</td>
<td>40</td>
<td>101</td>
<td>80</td>
<td>275</td>
<td>218(1933)</td>
<td>424</td>
</tr>
<tr>
<td>Australia</td>
<td>Dec. 1</td>
<td>8</td>
<td>8</td>
<td>25</td>
<td>80</td>
<td>35(1934)</td>
<td>118</td>
</tr>
<tr>
<td>Argentina</td>
<td>Dec. 1</td>
<td>18</td>
<td>15</td>
<td>35</td>
<td>130</td>
<td>36(1929)</td>
<td>165</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>183</td>
<td>255</td>
<td>290</td>
<td>885</td>
<td>667</td>
<td>1240</td>
</tr>
</tbody>
</table>

Davis raises doubts about the effectiveness of most of the provisions in this draft agreement. The provision for quotas, he feels, will give rise to many difficulties, since the distribution of wheat exports in the past has been so variable that a rigid quota system will make no allowance for the vagaries of nature and will tend to run counter to the economic principles of drawing most freely from abundant resources whilst economizing on scarce resources. He raises other doubts which might be equally applicable to any agreement of this nature. The concomitant extension of state control of industry, which such an agreement implies, runs counter to his liberal economic philosophy. He feels that the implicit tolerance of export subsidization policy on the part of member governments is an additional weakness. The implication moreover, that governments will be able to restrict domestic production, upon which the success of the proposed agreement was supposed to depend, has not, Davis points out, been borne out by the experience of the U.S. government, under the Agricultural Adjustment Act. Nor does the draft include any positive inducements to

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high-cost wheat producing countries to make shifts, thus enlarging the markets for the low-cost producer exporting countries.

In the spring of 1947 a fifth international wheat conference was held in London. This convention produced a new memorandum on a proposed international wheat agreement which contained actual suggestions for price ranges, but was otherwise similar to the 1942 draft. Three alternatives were presented as follows:

(a) 125 - 155 Canadian cents per bushel for No. 1 Manitoba Northern Wheat

(b) 125 - 155 cents per bushel for three years and 100 - 155 cents for the rest of the period covered by the agreement.

(c) 125 - 180 cents per bushel, then 100 to 155 cents per bushel for the rest of the period covered by the agreement.

Early in the proceedings Argentina refused to participate, so therefore an entirely new type of Agreement was drawn up consisting of a multi-lateral purchase and sales contract, but without any attempt to include production control measures. However at this time the United Kingdom government objected to the proposed price levels, claiming that they did not allow for the essential deflationary adjustment which would be required as conditions returned to normal. Negotiations were opened again the following year and the participating governments of Australia, Canada, and the U.S.A. signed a multi-lateral contract form with provisions for a uniform maximum price of two dollars per bushel and a declining scale of minimum prices from one dollar fifty to one dollar ten per bushel. The U.S. Senate re-

31 Ibid., p. 56.
fused to ratify this agreement before the deadline and the various interested nations began to lose hope of any agreement ever being reached.

The United Nations Food and Agricultural Organization was however strongly in favour of some form of multi-lateral trade agreement being reached which would include the provision for special sales of surplus stocks to nutritionally deficient countries at reduced rates. Moreover the International Federation of Agricultural Producers had continued to campaign very actively for the formation of such an agreement. When President Truman officially declared that his government had confidence in the value of a wheat agreement, at the FAO Annual Conference in 1948, the Preparatory Committee again became active and requested the United States government to reconvene a conference.

The 1949 Wheat Agreement.

After prolonged negotiations and many disappointments an agreement was reached in July 1949 which was signed by five major exporting and thirty-six importing countries. The agreement which is extant, is to last for four years terminating in 1953.

The objectives of this agreement as set out in the first Article of its text are:

"to assure supplies of wheat to importing countries and markets of wheat to exporting countries at equitable and stable prices." 35

Like the 1942 draft there is provision for maximum and minimum prices within which signatory countries guarantee to purchase or


sell the quotas allotted to them. Article eight of the Agreement sets out the following maximum and minimum prices:

<table>
<thead>
<tr>
<th>Crop Year</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1949 - 50</td>
<td>$1.50</td>
<td>$1.80</td>
</tr>
<tr>
<td>1950 - 51</td>
<td>$1.40</td>
<td>$1.80</td>
</tr>
<tr>
<td>1951 - 52</td>
<td>$1.30</td>
<td>$1.80</td>
</tr>
<tr>
<td>1952 - 53</td>
<td>$1.20</td>
<td>$1.80</td>
</tr>
</tbody>
</table>

Where quotas are not fulfilled, the Wheat Council has the right to allocate wheat between the other exporting countries. Provision is also made for quota adjustments in the event of the withdrawal of any participating country, or for adjustments between member nations if dictated by the necessity of preserving monetary reserves, safeguarding the balance of payments, or resulting from a short crop.

The price provision under this agreement differs only from the 1948 draft in that the maximum price has been reduced from two dollars to one dollar per bushel. Yet this aspect of the agreement, which had been the rock upon which negotiations had foundered a year previously, did not present a serious obstacle to their successful conclusion. One critic of this agreement has pointed out that the various wheat importing countries were anxious to stabilize their outlays for wheat at this time, since it was a period of rising prices.

The United States was also interested in reducing bilateralism in the

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36 Ibid., p. 16 - 18
world wheat trade. Without such incentives, it is probable that the other chief exporting countries would have had little desire to collaborate and no agreement would have been reached.

Article II of the Agreement sets out the schedule of guaranteed sales per crop year for the signatory exporting countries.

<table>
<thead>
<tr>
<th>Country</th>
<th>1949 Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>80,000,000</td>
</tr>
<tr>
<td>Canada</td>
<td>203,069,635</td>
</tr>
<tr>
<td>France</td>
<td>3,306,934</td>
</tr>
<tr>
<td>U.S.A.</td>
<td>168,069,635</td>
</tr>
<tr>
<td>Uruguay</td>
<td>1,837,185</td>
</tr>
<tr>
<td>TOTAL</td>
<td>456,283,389</td>
</tr>
</tbody>
</table>

Provision was also made for a gradual shift in the export quota by reducing that allocated to the U.S.A. and increasing that allocated to Canada and Australia. It will be noticed that the U.S.S.R. and Argentina are not included in this list. Both nations were represented at the negotiations, but Argentina from the outset was opposed to collaboration and the Russian delegate after taking a most constructive interest throughout the negotiations was unable to agree on the final provisions since his government demanded an excessive quota (50 per cent more than her allocated share), and remained intransigent despite the willingness of other nations to increase her share by as much as 20 per cent (10 million bushels). During the negotiations, the chief controversial issue lay in the desire of the U.S. government, backed by Canada, for the inclusion of some positive provision to check:

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high cost wheat subsidization programs on the part of importing nations. The second issue was a result of the desire to accommodate the recommendation of the Food and Agriculture Organization to make provision for the sale of produce in excess of commercial demand at special prices for nutritional programs. In both cases various nations were not prepared to countenance what they considered an encroachment upon their national autonomy, though they were not opposed to the principle of independent action to comply with such measures.

The new wheat agreement has met with a varied response from different authorities. The wheat trade as a whole seems to be strongly opposed to the Agreement because of the extent of government regulation of the milling trade which is an inevitable concomitant. There has also been quite detached theoretical criticisms such as that presented by Pederson, or Golay, whose articles have already been cited. Both these writers show that because this ICA regulates the price and quantity of only a proportion of the total volume of international wheat trade, the agreement will tend to exaggerate price swings in the free market, and will operate in effect, directly counter to its price stabilizing objectives. The whole volume of wheat movement in international trade is currently about 500,000,000 bushels. The

39 Ibid., pp 7-8

40 See for example the two articles by Dr. Clare Burgess, Director of Carr's Flour Mills, England, and H.C.L. Strange, Director, Searle GrainCo. Ltd. of Canada, in the International Journal of Agrarian Affairs. Op Cit., p. 51-77.

41 Pederson, J.: The Justification of Commodity Agreements, p. 40-50

agreement provided for 450,000,000 bushels from the large signatory exporting nations, but in practice with a world production of 6-8,000,000, a much larger proportion moving in international trade could be outside that quantity of wheat negotiated under the terms of the agreement.

If the free market price of wheat fluctuates below the minimum set-up under the agreement, exporting countries will be at an advantage. If such an advantage is passed on to the grower, wheat acreages will increase, and this will depress prices even further. Regulation therefore will have a tendency to run directly counter to the national stabilizing forces which tend to operate in a free pricing system.

Reports on the current operations of the Wheat Agreement seem to indicate that it is today relatively ineffective in altering or influencing the pattern of international trade, or national production policies. The over-riding consideration at the present time for all wheat importing countries, is their need to preserve a balance of trade and to purchase as much wheat as they are able from soft currency areas such as Australia and France. There have consequently been considerable purchases during the past two years, under bilateral negotiations and at prices outside the range of the agreement.

Summary and Conclusions:

The history of wheat regulation is a record of comparative failure. But the very many repeated attempts to reach an agreement

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would indicate the existence of real problems, and the continued belief that an ICA might be able to make some positive contribution towards their solutions.

But failure in itself can point out some valuable lessons which have not been apparent in the commodities hitherto studied. The inability to separate exporting from importing nations, and the necessity for including a large number of producing and consuming countries in any negotiations, has resulted in there being a continued divergence of interests. A study of the various conferences, the reason for the breakdown of agreements in the past, and the different conflicting issues, leads us to the following tentative postulates.

ICA's in the past succeeded only where one national or sectional interest was dominant—whether this be organized producers, or a monopsonistic buyer. The origin of such agreements in the wheat trade seemed to have been rather more political than economic, with the consequence that their stated objectives tend to be too comprehensive and nebulous when considered in the light of their actual provisions. Instead of trying to guarantee to peoples everywhere a minimum or rising standard of subsistence, examination shows that participating nations have been motivated by a desire to promote national self-sufficiency, to obtain sufficient foreign exchange to maintain even a fair balance of payments and to afford their farmers a reasonable income in defiance of economic laws of resource allocation.

The origins of the present wheat agreement and the negotiations which started in 1941 show us also the extent to which difficulties experienced during the early 1930's have channeled our thinking with
respect to international collaboration in the economic field. Though there is ample evidence of the existence of problems before the great depression, the wheat producers' particular difficulties only became acute during the depression and it is this period also which brought forth a veritable crop of ICA's in other commodities. The architects of ICA's still tend to think in terms of a recurrence of such a condition of stagnancy and resultant international trade wars.

The long run problems of international resource allocation (comparative advantage) in the production of wheat, and the short run problems of price instability arising from yield variability, both become clouded behind the issue of a possible recurrence of severe depression and international trade wars. The particular wheat problems might in part be solved by well planned international collaboration, but become hedged about instead by purely national interests, and the insecurity born of such fear results in the failure of these agreements.

(v) Sugar

A survey of world sugar production and trade reveals a very similar pattern to that which has characterized the problems relating to wheat. Sugar, like wheat, is produced by a large number of nations of wide geographic dispersion. Most of the important sugar importing nations, however, have regulated their domestic sugar trade in order to foster a measure of self-sufficiency from home production. The international trade in this commodity has therefore been extensively regulated and constricted by diverse government restrictions. But the sugar industry reveals such a wide range of problems that the history
of international control seems to illustrate the diversity of international commodity agreements more than it reveals any principles of general applicability.

Market Characteristics:

After wheat, sugar is the second most important agricultural commodity in international trade. The large volume of international trade in sugar (over one-third of world's production) is all the more surprising when it is realized that practically no nation of importance in foreign commerce, is completely dependent for its supplies from outside sources. This is because the product is obtained from two distinct sources. The sugar cane plant of tropical regions and the sugar beet plant of temperate zones. Though the latter is a comparatively recent and more expensive source of sugar, its production has been fostered in the chief importing countries in temperate zones, for a number of reasons. Inherent economic forces in the cane sugar industry which lead to difficulties for producers have been amplified by the non-economic forces expressed in government regulation of sugar production.

The sugar cane plant, which is still the main source of raw sugar, is a giant perennial grass, closely related to the bamboos both genetically and in appearance. Originally indigenous to India, cane production was centred in Brazil up to the beginning of this century and then Cuba. Sugar cane has subsequently become an important product once more in India where plant breeding work in Coimbatore has actually provid-

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44 In 1948 international trade in sugar amounted to 11 million tons, 1/3 of total production. See:
45 Plant breeders have crossed sugar-cane with certain species of wild bamboo in order to impart desirable characteristics in new commercial strains.
ed the stimulus for recent developments in Japanese and Australian production. The importance of sugar cane in the economy of certain tropical countries is demonstrated by its percentage contribution to the total value of exports between 1933-37, as given in the following list. Barbadoes, 98 per cent; Mauritius, 95 per cent; Martinique, 81 per cent; Fiji Islands, 73 per cent; Puerto Rico, 66 per cent; Japan's Sea Islands, 64 per cent; Cuba 75 per cent; and Hawaii, 59 per cent. Most of these "sugar islands" are heavily dependent upon imports for most of their food supplies, and are therefore particularly dependent upon sugar prices.

Cane sugar is adapted to a plantation economy since preparation of the product for market requires, in addition to the extraction of the juice from the cane stalks, an industro-chemical process of purification in centralized mills. It is therefore characterized by intense regional specialization, lack of alternative opportunities for employment and a high proportion of fixed costs. As the plant is a perennial, the practice of "ratooning" (allowing new cane stalks to grow from the roots after the crop has been harvested) coupled with the immobility of labour, makes production costs highly flexible in nature, and the supply of sugar highly inelastic in the face of declining prices. It costs little to go on producing for two or even three years from an area once planted, and when sugar prices drop, labour is obliged to accept a corresponding fall in wages.

Beet sugar comes from the tap root of a biennial plant of

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Swerling, B.C.: International Control of Sugar, 1918-41, Stanford University Press, California, p. 7
maritime origins, belonging to the family of Chenopodiaeeae. Commercial
eextraction of sugar beet was started by European nations during the
Napoleonic Wars. Thus in 1850, cane was supplying over eighty-five per
cent of the world's sugar. Governmental beet subsidies drove that
share down to 34 per cent by 1900. Subsequent revitalization of the cane
industry recaptured 75 per cent of the world's supply, but the depress­
on of the 1930's with its renewed emphasis on beet, drove cane sugar
contribution down to 65 per cent by 1939. Beet production has not
therefore been the result of military self-sufficiency policies alone,
but also, as a desirable manner of relieving under employment in the
agricultural industry, it has been the result of depression policies of:
direct subsidization to industry.

The two most important sugar exporters are Cuba and Java;
Jawanese cane production is intensive with comparatively high costs
and high yields. Cuban cane production is by comparison, extensive
with low yields and costs. Java supplies the Eastern hemisphere and
Cuba the West. Table 27 shows the chief sources of sugar in terms of
production only. While the Japanese Empire is self-sufficient, and such
countries as Britain, Canada, Switzerland and Turkey, are net importers,
countries like Australia, South Africa, Poland and Czechoslovakia, only
export their surpluses over domestic requirements.

The widespread sources of supply of sugar, mean that in the
long run, there is considerable upward elasticity of supply.

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48 Ibid., p. 11
49 Howe, J.W.F.: (Markets and Men), Op. Cit., p. 79
This is typical of all the primary commodities so far studied, as also is the difficulty that their industries experience in contracting supply when the demand declines. Potentialities for production expansion have been demonstrated by Cuba and Java during the 1920's. The former increased her output by fifty per cent or one million tons, between 1923-24 and 1927-28. Cuban production increased more than a million tons, or twenty-five per in the single crop year 1924-25.

**TABLE 27**

**OUTPUT OF LEADING SUGAR-PRODUCING AREAS 1939 - 40**

<table>
<thead>
<tr>
<th>Cane Sugar</th>
<th>Beet Sugar</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>1. India (brown)......3.2</td>
<td>1. U.S.S.R. .............2.5</td>
</tr>
<tr>
<td>2. India (refined)......1.4</td>
<td>2. Germany ............2.3</td>
</tr>
<tr>
<td>3. Cuba ..............2.8</td>
<td>3. United States .......1.5</td>
</tr>
<tr>
<td>4. Java ..........1.6</td>
<td>4. France ..........1.0</td>
</tr>
<tr>
<td>5. Japanese Empire .....1.3</td>
<td>5. Czechoslovakia ....0.5</td>
</tr>
<tr>
<td>6. Brazil .....1.2</td>
<td>6. Great Britain ....0.5</td>
</tr>
<tr>
<td>7. Philippines .....1.0</td>
<td>7. Italy .............0.5</td>
</tr>
<tr>
<td>8. Australia ........0.9</td>
<td>8. Poland ............0.4</td>
</tr>
<tr>
<td>9. Puerto Rico .......0.9</td>
<td>Total ..........9.2</td>
</tr>
<tr>
<td>10. Hawaii ..........0.8</td>
<td></td>
</tr>
<tr>
<td>11. South Africa ....0.5</td>
<td></td>
</tr>
<tr>
<td>12. Argentine .......0.5</td>
<td></td>
</tr>
<tr>
<td>13. B.W.I. and Guiana ..0.5</td>
<td></td>
</tr>
<tr>
<td>14. Peru ..........0.4</td>
<td></td>
</tr>
<tr>
<td>Total ........17.0</td>
<td></td>
</tr>
</tbody>
</table>

Source: Swerling, B.C. International Control of Sugar, 1918-41 (Stanford University Press, California), page 5.

The demand for sugar has been heavily influenced by state policies and national intervention, rather than by consumer's choice. Virtually every major consuming country is an importer on balance, and every one controls its imports. Whether these limitations are in the

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form of simple tariffs or complicated quota arrangements, the retail prices paid by consumers have borne very little direct relationship to actual world sugar prices. It was estimated that in 1939, import and consumption taxes paid on sugar in Europe averaged around seven cents per pound, whilst in the U.S.A. retail prices averaged two cents per pound higher than world market prices during the past decade.

Table 28 gives a rough classification of per capita consumption levels between different nations. Countries like Sweden and the U.S.A. consume as much as one-hundred pounds per person per annum which indicates that many European countries would present a wide market for increased consumption if prices were allowed to seek their world level.

TABLE 28

SUGAR CONSUMPTION LEVELS

<table>
<thead>
<tr>
<th>Consumption of over 85 pounds per capita per annum</th>
<th>Consumption between 80 and 45 pounds per annum</th>
<th>Low Consumption Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>South Africa</td>
<td>India</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Central Europe</td>
<td>China (3 pounds per capita)</td>
</tr>
<tr>
<td>U.S.A. and Canada</td>
<td>Brazil</td>
<td>South and East Europe</td>
</tr>
<tr>
<td>Scandinavia</td>
<td>Argentina</td>
<td>Balkans</td>
</tr>
<tr>
<td>Switzerland</td>
<td>Peru</td>
<td>U.S.S.R.</td>
</tr>
<tr>
<td>Cuba</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


The U.K. and U.S.A. markets absorb between them, sixty percent of the world's sugar exports. Statistical investigation shows

a low price elasticity of demand for sugar in the U.S. and England. The short period demand for sugar is therefore quite inelastic on a world level. In the long run there has been an upward secular trend in sugar consumption levels, which was arrested only by the depression during the inter-war years. Like tea, there are signs that the vast potential market in the Orient is slowly becoming accessible. Like wheat, there are unlimited potentialities for industrial consumption of sugar if the price were low enough, as a source of industrial alcohol, and in the manufacture of yeast, glycerine and varnishes.

The sugar trade has experienced wide fluctuations in prices, and price instability has undoubtedly been a factor in stimulating government intervention, which has often resulted in high-cost un-economic surplus productive capacity. The extent of these price movements is illustrated by the plunge in sugar prices in May 1920 in New York, from 22.5 cents to 3.6 cents per pound by December of the same year. The severe drought of 1922-23 in Cuba likewise contributed to a three-fold increase in sugar prices.

While the world sugar price could never be unreasonably high because of the expansibility of sugar production and the dependence of the specialized cane producing areas on a large volume to reduce unit costs, sub-normally low levels have been possible.

Schultz, Henry: The Theory and Measurement of Demand (Chicago 1933) Chap. VI and
Swerling, B.C., Op. Cit., p. 29
Low prices have in fact commonly occurred, because of the high rate of technological innovation in the industry, the multitude of producing countries, and the complete absence of alternative outlets for labour resources.

A History of International Sugar Agreements:

ICA's in the sugar trade can only be evaluated in the light of a brief history of the developing pattern of world sugar production, and the relevant national policies of important nations. The history of sugar leads one to ask the question whether economic nationalism could not be regarded as the foremost and only real problem in the industry. The foregoing discussion of the commodities market characteristics must therefore be kept in mind.

Governments show a long history of special interest in sugar. Preferential tariffs in Europe were imposed as early as 1650, to promote imperial refineries. Colonial tariff preferences were also introduced early in the nineteenth century.  

The two world wars had a devastating effect on international sugar trade, and might actually be focused upon as the root of all the difficulties which have been experienced during the past forty years. The continued expansion of protected and sheltered markets, and the growth of imperialization, have resulted in a progressive shrinkage of the free market, upon which the lowest cost primary exporting nations have depended. Supplies cut off during the two wars have resulted in an artificial stimulation of production from other sources. The

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55 Ibid. p. 1
inherent downward inelasticity of supply for sugar has subsequently been reinforced by nationalistic sugar policies. Producers have been shielded from the full import of low sugar prices by tariffs and subsidies. During the inter-war years, free multilateral trade in sugar was replaced by imperial trade (sugar enjoying a preference) to the extent of two thirds of world exports. In particular one may cite the way in which Cuba lost her share of the U.S. market during the inter-war years, owing to the latter's imperial preference policy and the way in which Java in the same period similarly lost her chief market due to India's policy of national self-sufficiency. The following countries succeeded in replacing foreign sugar almost wholly by stimulation of domestic production, during the depression years; China, Turkey, Egypt, Eire, Austria, Sweden, Estonia, Latvia and Lithuania.

The two chief importing nations, Britain and the U.S.A., both stimulated beet sugar production after the 1914-18 war. Britain also introduced imperial preference in 1919 and the U.S.A. stimulated cane production in her island dependencies, (Hawaii, Puerto Rico and the Philippines) by the tariff increases of 1921 and 1922. The British preference system linked more consuming than producing countries, while the U.S.A. imperial preference network linked more sugar producing than consuming countries.

Thus it is not surprising that by 1940 the only markets in which truly free competition persisted were Iran, Switzerland, New

57 Ibid., p. 100
58 Ibid., p. 95
Zealand, British Malaya and Chile. The early history of international control starts logically with the struggle for survival of those large exporting nations outside the protective shelter of tariffs or imperial preference. These free-market exporting nations have been the lowest cost producers of sugar, and their survival, at first safeguarded by natural productive advantages, has subsequently been the main objective of international collaboration.

Our attention must first be focused upon Cuba since her national efforts to control sugar production were the consequence of a world wide problem (c.f. the history of Brazilian coffee control). After her revolt against Spain in 1896-98, the sugar industry was built up in Cuba under the stimulus of a reciprocity treaty with the U.S.A. The first world war and the immediate post war sugar famine in Europe accelerated a terrific expansion of production in Cuba. Excess capacity became evident by about 1924, and two years later the Cuban Government introduced its first crop restriction scheme. The government was obliged to take action since eighty per cent of her export trade was sugar, and Cuba was at that time supplying about one fifth of the world's total production, and therefore appeared to be in a position to take corrective action. The "Verdeja Crop Restriction Bill", passed in 1928, accordingly decreed that ten per cent of the current crop was to be left uncut. World prices were initially raised, but expanded production in Java and the United States sugar

Howe, J.W.F.: "Sugar", The Royal Economic Society, Studies in the Artificial Control of Raw Material Supplies, Memorandum No. 23, October 1930, p. 4
beet industry made Cuban restriction ineffectual and restriction was accordingly abandoned for the 1927-28 crop. A bumper crop the following year caused such acute distress amongst producers, however, that the government set up a single selling agency to market the crop. This was dissolved in 1930.

The International Sugar Agreement of 1931-35:

During the years that Cuba took unilateral action to restrict sugar production she made several efforts to reach an international agreement for controlling the industry. A meeting between Cuban delegates and representatives of the Polish, Czech and German sugar industries was held in Paris in 1927. Two more conferences were held in Warsaw and Berlin the following year. However no agreement was reached since it was felt that Cuba was responsible for the surplus, and Java the other important low cost producer, refused to countenance any restriction-scheme since her development of an improved variety of cane (POJ.2878) was making expansion quite profitable. By the end of 1929, European beet production was up to pre-war levels and Japanese and British tariff policies were so restricting the market for exporting nations, that every important producing nation was amenable to some form of international agreement.

The concern of American capital interests in the Cuban industry led to an alignment between United States insular producers and Cuba. In 1930 under the chairmanship of Thomas L. Chadbourne, a

Ibid., p. 40.
committee produced a plan for dividing the U.S. market between these producers and for the voluntary limitation of exports in 1931. These proposals were in the nature of a gentlemen's agreement and were not embodied in any written document, for fear of anti-trust proceedings on the part of the United States Government. However the Chadbourne Agreement as it came to be known, did govern Cuban action in the following year and also formed the basis for the 1931 International Agreement.

This agreement was the result of negotiations begun in 1930 between Java and Cuba, in Amsterdam. It was in effect an extension of the Chadbourne plan, being an agreement between the organized sugar industries of the participating countries, legislative support of governments (c.f. The International Tea Regulation Agreement). Table 29 shows the export quotas as allocated under the Agreement.

<table>
<thead>
<tr>
<th></th>
<th>1st Year</th>
<th>2nd Year</th>
<th>3rd Year</th>
<th>4th Year</th>
<th>5th Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cuba</td>
<td>655</td>
<td>805</td>
<td>855</td>
<td>855</td>
<td>855</td>
</tr>
<tr>
<td>Java</td>
<td>2,300</td>
<td>2,400</td>
<td>2,500</td>
<td>2,600</td>
<td>2,700</td>
</tr>
<tr>
<td>Germany</td>
<td>500</td>
<td>350</td>
<td>300</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>Poland</td>
<td>306,812</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hungary</td>
<td>84,100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belgium</td>
<td>30,275</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Czechoslovakia</td>
<td>570,817</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Swerling, E.C., International Control of Sugar, 1918-41 (Stanford University, California), page 44.

The combined quota of the nine ultimate adherents to the agreement was only 100,000 tons below their 1929-30 sales, which had been particularly

Ibid., pp. 41-45
heavy. Java's quota was over-generous and Cuba's somewhat restricted so that in 1933, the latter was allowed an upward revision of her quota, whilst Java's quota was reduced to 1,500,000 tons.

Because of large existing accumulated stocks between signatory countries, the agreement designated certain quantities of stocks as surplus, the release of which were to be charged against export quotas. There were no price provisions in the agreement.

The 1931 Agreement may be described as effective in having reduced accumulated stocks of sugar from 12.4 million tons in 1931 to less than 9 million tons in 1935. Moreover the aggregate production of these countries declined by 6,400,000 tons during this period. However world output declined by only 1,700,000 tons and domestic output in the U.S.A. increased by 4,000,000 tons during the same period.

The agreement failed to solve the problem of excess capacity, or to improve price levels materially during the five years of its operation, because it was apparent that the problems of the industry could not be solved by exporting countries alone, and that the nationalistic policies of the main consuming countries still dominated the industry.

The 1931 Sugar Agreement is therefore an interesting contrast alongside the Stevenson rubber agreement. Whilst critics of the latter point out how producer interests had succeeded in sustaining inefficient production through monopolistic action, the sugar agreement failed even to maintain the output of low-cost producers in the face of the growing

64 Ibid. p. 45
65 Ibid. p. 49
strength of economic nationalism in the main consuming countries.

**The 1937 International Sugar Agreement**

The world sugar industry was in a state of progressive deterioration during the late 1930's so that an increasing number of sugar producing and consuming nations became interested in arriving at some form of international agreement. By 1937 it was estimated that national subsidies to the extent of one billion dollars were being handed out annually to encourage sugar production. The World Monetary and Economic Conference held in 1933 recognized the unsatisfactory state of the industry and the inability of the Chadbourne group of countries to meet the difficulties adequately. Though laissez-faire was the "leitmotif" of the 1933 Conference, they advocated some form of joint governmental action for certain primary industries and a special committee considered Cuban and British draft proposals for stabilizing world sugar production. Cuba wished for provisions that would maintain the status quo in the industry. Britain, in the face of the then existing surplus capacity (production was ten million tons in excess of consumption), recommended a plan based on an amplification of the Chadbourne Agreement, which was rejected because Cuba felt she was disadvantaged under such terms.

The Conference convened in London in 1937 was, however, the direct result of the recommendation of the World Monetary and Economic Conference, and resulted in the International Sugar Agreement, which has been extended by protocol until the present day. The original members

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of the 1937 Agreement were Australia, Belgium, Brazil, Cuba, Czechoslovakia, Dominican Republic, France, Haiti, Netherlands, Peru, Philippines, Poland, Portugal, Union of South Africa, U.K. and U.S.A., and Yugoslavia. Since its inception, China, Germany, Hungary, India and Russia have dropped out. Unlike the 1931 Agreement this was a government sponsored arrangement with an officially appointed administrative Sugar Council which was representative of importer and exporter interests. The provisions of the agreement are both comprehensive and ambitious.

They include a series of export quotas, limits on stock holdings within the chief exporting countries, and an undertaking by the importing countries not to use any artificial control measures to expand production and to allow exporting nations to supply whatever demands might develop. Export quotas are allocated on the basis of a strict delimitation of the "free" world market. In 1937 the requirements of this free market aggregated 3,170,000 tons. The actual allocation of quotas in the 1937 Agreement was to be reached by a long process of bargaining, and would be subject to revision annually. This provision was an improvement on that of the Chadbourne Agreement which made no allowance for a downward adjustment of quotas. The International

70 The full text of the International Sugar Agreement of 1937 is given in the International Labour Organization's Publication, Inter-governmental Commodity Control Agreements, Montreal, 1943.
Sugar Council regulating the agreement was empowered to reduce all quotas by five per cent in the first two years, if necessary. There was never any specific provision for maintaining a particular price level.

In operation the Agreement has probably never been very significant. Failure to ratify was a stumbling block in 1937 while in the following year the threat of war was already acting as a price stimulant as well as strengthening nationalistic productions policies. During the second world war, Cuba benefited enormously from the fact that Javanese production was cut off by the Japanese and she has again re-captured a substantial proportion of the World's sugar trade. The devastation of Central European beet production stimulated post war sugar production in the cane producing areas, so that the International Sugar Council estimated that by 1950 there would be an excess in sugar supplies available for the "free" market of over one million metric tons by December 1950. However the outbreak of hostilities in Korea has rapidly altered the situation, and export quotas have even had to be raised in the face of rising prices.

In the opinion of most critics, international control of the sugar industry has been free of the many faults of many of the other commodity agreements. It has appeared to consider fairly, both consumer and producer interests, and far from reducing the volume of international trade, these agreements have sought to prevent Java and Cuba, both low cost producers, from being progressively squeezed out.

72 1948 Review of International Commodity Problems, Op. Cit., p. 41, shows how Cuban production expanded from 3.5 million tons in 1940-41 to 5.7 million tons in 1947-48
of the sugar markets. The history of regulation in the international field has however tended to point up the ineffectiveness of such collaboration in the face of national policies.

**Summary and Conclusions:**

The sugar industry is beset by problems of extreme price instability and a downwards elasticity of supply. Suffering amongst producers is particularly acute in such an industry where many producing territories are highly specialized, have no other developed industries, and depend upon distant markets for almost their entire production.

These inherent problems have been obscured by problems common to the whole world in the twentieth century, namely, the disturbing dynamic effects of technological advance and the more serious impacts of two wars and a severe depression. Out of the latter happenings have grown fears of national insecurity and fears of unemployment, foreign exchange difficulties, and the artificial creation or sudden loss of markets. The result has been a wish for national insulation from such external disruptions, and a drive to achieve the maximum amount of economic autarchy and security.

National agreements have been the child not the father of governmental interference in the sugar industry. They have assumed the role of a bridge for the gap between incompatible national policies, but the present disturbed condition in the world gives far greater strength to non-economic policies, and has made the record of achievement of such ICA's relatively obscure.

Though there are similarities between the records of international wheat and sugar trade, the dire consequences of uneconomic
policies has been far more apparent in the case of sugar. Yet the industry has taken no more positive measures that in the case of wheat. The significance of the U.S.A. and Britain in the world trade might in part be the key to this weakness. These two nations combined, control over half the world's sugar trade, yet each is heavily committed to a policy of imperial preference and protected markets entirely at variance with liberal trade ideas. In the case of wheat, with a sharpened political division between consuming and producing nations, the effect of trade restrictions and nationalistic policies can be more openly acknowledged, and international negotiations have often attempted a quite bold approach.

(vi) Beef

No study of ICA's would be complete without some mention of beef since this commodity has become a significant item in overseas trade with the development of refrigeration, and it has been subject to an international agreement at one time.

World trade in live cattle is very limited, mainly between contiguous countries such as Canada and the U.S.A., or Eire and Britain. The meat trade of the world has however, been truly global. Consumption is largely centred in the United Kingdom which before the last war, accounted for 60 per cent of all beef imports, 94 per cent of the mutton, and 72 per cent of the pork which entered the world trade.

The entire international meat market was subject to deliberations by the League of Nations Economic Committee in 1933, which

74 Taylor, Henry C.: Op Cit., p. 152
eventually reported to the Council "that it regarded an international agreement necessary to solve the problems of the meat export market". However nothing transpired until Britain took independent action in 1937. Before this time, her policy of imperial preference had resulted in a stimulation of exports from Australia and New Zealand, whose net exports increased by 36 per cent between 1924 to 1928 and 1934 to 1938. The South American countries on the other hand saw their imports drop off by an average of 621,000,000 pounds or 30 per cent during the same period.

The 1937 Beef Conference (or agreement in the language of this study) was an outgrowth of the Ottawa agreement of 1932, and was consequently designed to give imperial preference to Dominion producers whilst at the same time protecting British farmers. The agreement was ratified on January 1, 1937 and it covered "all forms of beef, veal, edible offals thereof, and live cattle for slaughter". Argentina, and Brazil acceded to the agreement in the same year, and Uruguay in 1939. The essence of the conference was to apportion the U.K. market between the major exporting countries viz. Argentina, Australia, Uruguay, New Zealand, Eire and Brazil. Decisions on obtaining quotas

75 League of Nations, Document, 1933, II, 1938, pp. 4 following
were to be unanimous, and the objective was to stabilize beef prices and imports at around the level of ten cents per pound. The actual average price for the first three years of the scheme's operation, was one-quarter cent under this goal.

The Beef Conference had its headquarters in London and the U.K. government appointed a special official to represent the smaller supplying countries. Its operations were ineffective after the outbreak of war. During the time of its existence however, it functioned smoothly, member nations always being able to agree on export quotas. It is interesting to compare the wartime inter-American coffee agreement, where a large import was also responsible for sponsoring and regulating such an arrangement. In each case the importing government was not motivated directly by the general interest of its consuming public. Higher prices were acceptable to the U.S.A. if they benefited her Latin American neighbours. Higher beef prices were acceptable to the British government if they afforded the domestic producers some security and gave preference to dominion interests. Britain was actually faced with the problem of reconciling the conflicting interests of colonial or dominion areas, her domestic producers, the consumer, the meat trade, and the public treasury. A not dissimilar conflict of interests has hampered the sugar policies of both Britain and the U.S.A.

MISCELLANEOUS ICA's:

In the interests of brevity, though ostensibly as agricultural

Black and Tsou: (International Commodity Agreements), Op. Cit., p.528
economists, we shall make little more than a passing reference to international regulation of the tin industry, various agreements for the conservation of marine resources, and other raw material's agreements.

(vi) Tin

The tin industry has been subject to continuous regulation from 1931 to 1946. In March 1950, the United Nations Interim Co-ordinating Committee for ICA's, after considering the report by a tin study group, recommended the convening of a conference to draw up a new tin agreement. There have consequently been many apologists and critics of tin control. British and Dutch interests in the far East and in Bolivia have been able to dominate the industry. Technological advance (development of modern tin dredges and better extraction methods) has tended to produce excess capacity, which has been carefully preserved by very high prices which in turn have restricted tin consumption.

The product has unique metalurgical qualities, which make it an invaluable ingredient of many alloys which in turn are only a part of some other final manufactured product. The position of rubber in relation to automobiles is indeed analogous. Price elasticity of the demand for

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80. See for example the propaganda of the Tin Producers Assn. "International Tin Control & Buffer Stocks, London, 1944, and the criticisms of: Eastham; "Rationalization in the Tin Industry", "Review of Economic Studies, 1936-37, IV (London School of Economics);
Meyers: "The International Tin Control Scheme", Journal of Business of the University of Chicago, April 1937, X;
tin is therefore very low, though shifts of the demand in response to fluctuations in business activity, make prices very volatile.

Tin consumption has been seriously restricted by the activities of international regulation, and the industry is obviously subject to a considerable degree of monopolistic control because of the high degree of concentration of British financial interests in the smelting and refining facilities within the industry.

The post-war boom of 1920 showed that tin shared with many other raw materials producing industries a strong tendency towards over-compensation in the matter of price-induced capacity adjustment. Excess capacity led therefore to acute distress in the industry, when the crash came in 1929, and international control was an outcome of the depression, as has been the case in many of the other commodities studies. That government support was readily obtained emphasized the fact that tin was mainly produced by economically backward countries which were heavily dependent on that industry. The comparative success of control can be attributed in part to the sharp political separation between producer and consuming interests. This history of tin control is additionally interesting because from time to time buffer stocks or tin pools were formed, ostensibly with the object of stabilizing prices. In effect, they became price raising devices for the benefit of consumers to reduce their tin stocks whenever the Control scheme created a reserve pool, in order to maintain prices and limit their liabilities. Whenever the volume of demand expanded, the buffer stocks were not adequate to prevent substantial price rises.
Knorr in his study of tin under the auspices of the Food Research Institute, has pointed out that there is room for co-operation between tin producing and tin consuming countries with a view to planning dis-investment in the industry, and moderating excessive price fluctuations by an intelligent buffer stock scheme. However, he raises doubts as to the political possibilities of the former and the ability of the latter to function in the presence of such concentrated and powerful financial interests. He concluded, therefore, that a free tin market is probably the best solution, even if favoured by default. The readjustment of productive capacity "by the way of unhampered competition will be a harsh and cruel and lengthy process, but it will work", he concludes.

(viii) Miscellaneous Agreements

In addition to the ICA's for the seven important staples already discussed, a variety of others have dealt with less important commodities, frequently on a technical or moral, rather than economical basis. Four such agreements concerning marine resources may be summarized as technological in nature, with objectives of curbing depletion and promoting replenishment. The longest lived of such agreements concerned the preservation of fur seals in the Northern Pacific and was between the United States, Britain, Russia and Japan.

81 Knorr, K.E.: Tin under Control (Food Research Institute), Stanford University, California, 1944, p. 314.
83 For a very comprehensive description and analysis of these agreements, see Tomasevich, Jozo: International agreements on conservation of Marine resources. Food Research Institute, Stanford University, 1944 297 pages.
A second, of much greater economic significance concerns the agreement between the U.S.A. and Canada for the conservation of Pacific halibut. There have also been similar agreements covering the Fraser River Sockeye Salmon fishing, and on a much broader international scale, attempts to regulate the whaling industry.

On a moral plane there have been international conventions and agreements aimed at restricting and regulating the international trade in narcotics to prevent the serious abuses to which these commodities are subject.

We might conclude this chapter by mentioning that there has been a record of successful international co-operation in the world's wool market, particularly in terms of allocating supplies between the Allies during the war, and in the post-war dispersal of accumulated stocks.

World cotton problems are also very similar to those of coffee, with expanded production in other countries stimulated by and at the expense of the United States, which is the world's foremost producer and the nation which has taken active regulatory measures. Despite the formation of an International Cotton Advisory Committee in 1939 which meets for annual reviews to discuss world cotton problems, no agreement has ever been produced, though several member nations have advocated the desirability of such an agreement. It would be inter-

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esting to expatiate on the similarity of problems between the cotton and other industries, arising from the development of synthetic substitutes. And also to expand the theme of the repercussionary effects of national unilateral policies when the commodity concerned is one of the basic staples in international trade. However the material already presented should obviate the necessity for such further examination.

More positive conclusions will be derived in a subsequent chapter. We shall content ourselves here with observing that there is a characteristic pattern of disturbances and great hardship in the primary industries. That each commodity has unique properties and problems, which have led to a variation both in the emphasis and the success of attempts at international regulation. That the successful ICA's studied appear in danger of fostering sectional interests which become synonymous with their persistence on a semi-permanent basis. The most unsuccessful ICA's have appeared to have foundered on the rocks of national sovereignty since they involved a substantial proportion of consumer and importer interests and were unable to attain international collaboration for the fairly severe remedial measures required.
CHAPTER IV

THE POSITION TODAY: Opinion of international bodies and current thinking as to the potential contribution of I C A's.

(i) Opinions of International Bodies

The first continuous impression of international economic policy and objectives may be gained from a study of the several international conferences called by the League of Nations during the 1920's. Details of these conferences show that while they were able to make little positive contribution, they were aimed at freeing international trade from the growing shackles of restriction, tariffs, quotas and subsidies, which became increasingly evident during that period. They were accordingly based on a philosophy of liberal capitalism, and did not consider increased governmental control a desirable solution.

The World Monetary & Economic Conference held in 1933, however, showed a considerable change of emphasis. It has already been noticed that the conference, which was convened with the object of limiting governmental restrictions and liberalizing trade, considered that the special difficulties of international trade in primary commodities did justify governmental interference. The conference advocated joint action in the following words:

"Some of us (the Preparatory Commission of Experts) have felt that a greater freedom of international trade is not the sole remedy for the present crisis, that the crisis has revealed profound disorganization of production and distribution and that, on this point also, joint action by governments is necessary."²

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¹See for example the account given by McClure, Wallace, World Prosperity, MacMillan Co., New York.

²League of Nations "Monetary & Economic Conference". Draft Annotated Agenda, Geneva, 1933, p.31
Besides being directly responsible for recommending ICA's and convening conferences which produced such agreements for wheat and sugar, the 1933 World Conference approved the existing tea and tin control schemes. Their approval of tin control was couched in the following terms:

"The Sub-Committee considers that the existing scheme of control is framed upon sound lines; that it is in accord with the principles which have been accepted by this conference as those which should govern the framing of plans for the co-ordination of production and consumption; that it has worked smoothly in actual practice for a period of over two years; and that it has been largely successful in achieving its main objectives."

One can only infer that this committee was heavily influenced by the propaganda of the Tin Producers' Association.

At the instance of Sir Philip Cunliffe-Lister a set of conditions were laid down to govern the formation of ICA's and to guide the producers who sponsored such agreements. These

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4 Quoted from Lawrence, Oliver "The International Control of Rubber" Commodity Control in the Pacific Area, edit. W.L.Holland, Stanford Univ. Press, pp.423-24.
conditions are included in Appendix A, for comparison along with the 
criteria and conditions laid down in the Food and Agriculture and 

In summarizing the position of the 1933 Conference we 
should recognize that it was held at a time when severe world-wide 
deforestation was an overwhelming problem, and when inter-governmental 
restrictive measures were eagerly pounced upon as a positive means of 
meeting the difficulty. It is interesting to notice also, how the 
emphasis was placed on the producers' needs and interests, and that 
consumer representation, and provision for expanding production and 
lowering prices were given only perfunctory consideration in outlining 
a desirable form for such ICA's.

We may follow the thread by considering again the findings 
of the League of Nations' special study of raw materials problems which 
was completed in 1937. In the report which consummated this study, the 
special committee advocated inter-governmental regulatory agreements 
for solving the raw materials problem. But some recognition of the 
dangers of dominating producers' interests was made by the special 
emphasis which was given to government control and regulation. A sort 
of sublime faith in the foresight and integrity of governments is 
manifested in their statement that:

"the power of determining the degree of restriction is placed in the 
hands of authorities who can look beyond the immediate interests of the 
producers to their ultimate interests, and also to those of the world 
at large." 5

5 Report of the Committee for the Study of the Problem of Raw Materials, 
League of Nations, A.27.1937.IIB, Geneva 1937, pp. 18-19
The International Labour Organization of the United Nations has given considerable attention to the problem of raw materials as it affects employment of human resources. As this organization is one of the few functional surviving bodies which the United Nations inherited from the League of Nations, we might logically consider next the viewpoint of this international body. The problems of underemployment in the primary industries was considered so important by the ILO that it made a special study of ICA's. Their report, published in 1943, has been an invaluable reference to students of ICA's since it contains the full text of every important agreement up to that time. Like most international publications, it is however largely factual and makes no very extensive criticisms of these agreements. Perhaps the outstanding fact about this report is its definite advocacy of a buffer stock scheme to mitigate the effects of price instability, which will be examined in greater detail at the end of the chapter. The ILO in 1943 set up the following criteria for ICA's.

"Commodity control policy should promote the constant availability of adequate supplies at prices which give a reasonable return to the efficient producer and are held sufficiently stable to afford him protection against erratic swings of major dimensions, but do not involve the exaction from the consumer of monopoly profits, or the payment by him of prices held at unduly high levels to maintain the profitability of high-cost capacity".


7. Ibid, page
The Conference considers that the United Nations should initiate concerted action designed to ensure the constant availability to all purchasers of adequate supplies of such commodities at prices which give a reasonable return to the efficient producer and are held sufficiently stable to afford protection against major short-term fluctuations in supply or demand; and that such international agreement (a) should provide for adequate representation of consumers as well as producers, representing both importing and exporting countries, in all authorities responsible for the determination and application of policy, and (b) should aim to assure to all workers, including the self-employed, engaged in the production of the commodities concerned, fair remuneration, satisfactory working conditions and adequate social security protection, having regard to the general standards in the countries concerned.8

The support of the International Labour Organization of such government agreements has been consistent throughout. One might venture to say that collective action and government or state regulation are the primary tools of all forms of labour organization. However, an honest attempt has been made to consider economic criteria, and the above quotations while revealing the very comprehensive yet nebulous objectives which such organizations tend to set up, demonstrates also a positive advance in thinking from the simple emphasis of earlier international pronouncements.

The Food and Agriculture Organization (hereinafter referred to as FAO) of the United Nations is a special International Agency, more directly concerned with the problems of primary producers. Ever since the preliminary conferences between nations, which led to the final creation of FAO considerable attention has been given to the particular problems of excessive price gyrations and chronic surpluses.

8International Labour Office, Official Bulletin, June 1st, 1944, p. 96
and ICA's have been considered as a desirable means of counteracting these difficulties. The full text of the relevant ideas and desirable criteria set up by the FAO in relation to this problem, is given in Appendix A. These resolutions represent the acme of present international direction and purpose, and their emphasis of the inherent dangers of such regulatory agreements is well demonstrated in their provision for adequate publicity, consumers' representation, and for recognition of desirable long run objectives. These latter include the expansion of consumption levels, and freedom between nations for production of these vital commodities to be developed in those regions which are more fitted for cheap and efficient production.

The objectives and viewpoint of the FAO have not, however, escaped criticism, and there are grounds for believing that there has been considerable conflict between the viewpoint of the FAO and other international bodies, and that the former, because of its humanitarian bias, has been inclined to overlook the essential economic goals of ICA's. An understanding of these differences can be achieved by a brief consideration of the high ideals and aims of the FAO. Born in part out of President Roosevelt's four freedoms, and with a legacy of ideas from the League of Nations' International Food Program, launched in 1935, the FAO has considered primarily "Freedom from Want" and the "Marriage of health and agriculture". Consequently, the historic Hot Springs Conference of the FAO in 1943 had the impressive aims of

United National Conference on Food & Agriculture -
International Conciliation, Sept. 1943, Carnegie Endowment
for International Peace, New York.
searching for the ways of supplying sufficient food of the right kind for all peoples while simultaneously providing producers with a stable and satisfactory reward. It is not altogether surprising, therefore, that one critic has written that:

"The United Nations' Conference on Food and Agriculture was convoked with diverse and somewhat contradictory purposes and insufficient preparation ...... the conference turned out to be little more than a shuffling about of ideals; an attempt to put them in order." 10

The FAO has advocated ICA's but endeavoured to widen their role by envisaging them as permanent bodies with the additional function of supervising or conducting special "nutritional sales" of surplus foodstuffs to needy countries at concessional prices. Gilpin points out that to talk of the 'planned disposal' of surpluses over a number of years is, however, unrealistic, since surpluses are short run phenomena and undesirable. The FAO is in effect confusing the problem of ineffective demand in these needy countries with surplus production, and Professor Gilpin feels that the FAO could make a more realistic approach by the open advocacy of a two-price system for the undernourished "backward" countries. 11

Mention should also be made of producers' organizations and, in particular, the International Federation of Agricultural Producers, which represents the interests of farmers, and functions as a medium for international co-operation and liaison. The International Federation, hereinafter referred to as IFAP, was formed


11 Gilpin, A.C. "The Place of State Buying and Selling in Free World Trading" Proceedings of Sixth International Conference of Agricultural Economists, Oxford University Press 1948, p.175
in 1945 subsequent to a goodwill tour of the British National Farmers' Union, when its president, Sir James Turner, visited the United States and the Dominions and proposed the formation of an International Body. The IFAP has always advocated producer regulation of the marketing of primary products and has been a firm supporter of ICA's. It can claim credit for being largely responsible for nursing the present wheat agreement into existence and for giving continual publicity to the problems of potential food surpluses. There is ample evidence that the IFAP is concerned only with the producers' interests, however, and dominated as it is by farmers' organizations in the United States, and to a lesser extent Canada and Britain, this bias is revealed at times in a tragically provincial outlook. Mr. Davis, in representing the National Council of Farmer Cooperatives has said:

"There has been a growing concern on the part of the American farm organizations regarding the attitude of the United States Government, particularly the State Department, on matters affecting foreign trade of farm products. This is particularly true with respect to the activities of the State Department in planning (sic) the FAO and the ITO."14


15 See for example the report of the 3rd Annual Conference of the IFAP in Guelph, Ontario, as given in the Farmer & Stock Breeder, June 7th, 1949, p.1427

The United Nations International Trade Organizations (hereinafter referred to as ITO), though not yet a functional body, is universally regarded as the final international authority on problems relating to foreign trade, and particularly ICA's. The purpose and direction of the ITO can be appreciated from a consideration of some of the ideals laid down in 1941 in the Atlantic Charter which epitomized the objectives of the Allies when the opportunity came to rebuild a better world. Some of the economic goals included, in the words of the Charter, are as follows:

"The enjoyment in all States ...... of access, on equal terms to the trade and to the raw materials of the world which are needed for their economic prosperity; the fullest collaboration between all nations in the economic field with the object of securing, for all, improved labour standards, economic adjustment and social security."

The ITO Charter is itself built upon an underlying philosophy of liberal capitalism. It does, however, make allowance of almost every type of government control and intervention in the field of international trade in its efforts to recognize the profoundly disturbed conditions in the world today and to provide a framework of rules which would not be completely anachronistic. Amongst the concessions to a doctrine of free trade and private enterprise, the ITO Havana Charter advocates ICA's. The actual relevant text of the ITO Charter is presented in Appendix A, and is also examined more

15 See for example, Brown, William A. The United States and the Restoration of World Trade, Brookings Institute, p.54

16 For a discussion of this problem, see Viner, Jacob "Conflicts of Principle in Drafting a Trade Charter" Foreign Affairs, July 1947, pp. 612-28
critically in Chapter V. The statement of objectives, and the provisions given, do merit the closest scrutiny. Though seemingly brief and lacking in precision, it will be found that the Charter has concisely recognized the inherent difficulties amongst primary producers, and defined the conditions under which ICA’s might be helpful. The possible dangers of such regulation are protected by provisions for full publicity at all stages of inter-governmental consultation and for full consumer representation, and provision of very strict economic criteria before agreements of a restrictive nature are allowed. Such agreements which presumably might involve production restriction and the use of export quotas, are described as "control agreements" and may be used only when there is evidence of existing or potential "burdensome surpluses" causing acute distress to small producers, or when there are conditions of chronic unemployment or under-employment amongst the producers in such industries. The charter makes allowance for economic goals by providing for expansion of consumption and production, and optimum resource allocation.

In summary, the provisions of the ITO charter with regard to ICA’s would indicate that they are regarded as emergency measures to deal with special difficulties, their aim being to remove the difficulties, if possible, and then go out of existence. This is in contrast to the FAO which seems to regard ICA's as a desirable permanent feature of international trade.

This section might fittingly be concluded by a brief consideration of present international activities. The Interim Co-ordinating Committee for International Commodity Arrangements, (hereinafter referred to as ICCICA), has been set up at the request of both the ITO and the FAO pending the establishment of the ITO as a functional body. ICCICA acts therefore as a co-ordinating and supervisory body for international commodity agreements, and it has served to facilitate inter-governmental consultation, since its formation in 1947. The principles laid down in the Havana Charter of the ITO are accepted as the guiding rules for ICCICA, which is consequently concerned with ensuring the proper procedure before any ICA is brought into being. This is achieved by emphasis on the following five provisions.

1. Adequate study of the commodity before action.

2. Protection of the interests of all countries.

3. Adequate representation of consumer interests.

4. Expansionist approach. Agreements of a restrictive nature are limited to quite rigid conditions.

5. Provision for adequate publicity of commodity problems.

The actual mechanics of commodity regulation will consist in the future of the following three phases:

1. Formation of a study group of interested countries to investigate the commodity.

2. Calling of a Commodity Conference comprising all the interested governments, before any ICA can be formulated.

3. Setting up of a Commodity Council to be responsible for administrating the ICA

ICCICA has supported and co-ordinated the activities of wool, rubber and tin study groups which have been formed within the past several years and it has also considered the reports and activities of the International Wheat Council, the International Cotton Advisory Committee, and the International Tea Committee. It is interesting to note, also, that the recent acute raw material shortages, occasioned by the war in Korea, and various government policies of stock-piling, led to an international materials conference being held early in 1951. The United States, United Kingdom and French Governments announced that they would invite other governments of producing and consuming countries to join in creating "Standing International Commodity Groups". Initially six such commodity committees have been created, mainly concerned with base metals, and the staple natural fibres. The purpose of these committees is to consider and recommend to governments "the specific action which should be taken, in the case of each commodity, in order to expand production, increase availability, conserve supplies, and assure the most effective distribution.

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21Ibid., p.1005
National Attitudes and Opinions of Various Experts

One might next consider the problem of ICA's from a different angle, by attempting to reveal something of national attitudes and viewpoints. In doing so one must recognize the problem of international cartels in general, since the issue on a national basis becomes essentially one of all forms of control, versus private enterprise.

This is perhaps best revealed in a contrast between the thinking and economic philosophies of the two great English-speaking countries, the United States and Britain, which between them dominate both world trade and a large part of international policy. Eric Johnston has drawn the following contrast:

"Americans are opposed to a monopolized country or a cartelized world, whether the control is exercised by private or by official bureaucrats. In Britain, both extreme right and extreme left, look forward complacently to extensive nationalization of industries, large and often controlling government participation in private business, increased public planning and financing, and cartel arrangements for dividing and sharing world markets." 22

The official British viewpoint is well presented in the PEP Broadsheet on postwar planning, which envisages a whole network of ICA's in the future. It is hoped that such agreements would raise consumption levels generally, ensure free access to raw materials, facilitate international trade, reduce economic fluctuations, and promote full employment. This unduly optimistic British viewpoint is reflected in other quarters of which such a leading scientific journal as Nature might be cited. An editorial

22 Johnston, Eric, America Unlimited, Garden City, 1944 pp. 212-13

suggests that provision for substantial consumer representation and public supervision of ICA's should in the future remove the two main past criticisms, viz, that prices were maintained at an unreasonably high level, whilst inefficient production was allowed to persist. It is further suggested that because of the need for such ICA's after the war an international "raw materials union" be set up as a co-ordinating body.

Representatives of the United States reveal quite a striking evolutionary pattern of thinking from indifference and mistrust, to intense enthusiasm for such controls in some quarters. It has already been indicated in the study of wheat, that the United States Department of Agriculture was strongly in favour of ICA's in certain commodities. Statements by such representatives as L.A. Wheeler show that a definite role for ICA's was envisaged in the post-war world. In an article on agricultural surpluses in the post-war period, he advocates individual commodity agreements extended even to operate as international buying and selling corporations. Another commentator on U.S. agricultural policy notes that the Department of Agriculture advocated buffer stocks in conjunction

NATURE, Vol. 148, No. 3758, Nov. 8, 1941.

Ibid. p. 543


with commodity agreements. Yet in 1933 when the World Monetary and Economic Conference appointed a special committee to consider the problem of raw materials supplies and fluctuating prices, the United States did not even consider it worth while to appoint a representative to sit on this committee. Chapter six of the ITO Charter dealing with ICA's was, however, "inserted and ardently defended" by the U.S. Government.

These apparent contradictions can be readily understood in the light of United States experience with foreign control of two of her vital raw materials, tin and rubber. The excessive price fluctuations and occasional very high prices which accompanied the control of these two commodities, caused much resentment amongst manufacturers. Federal policy with respect to domestic cartels and industrial combinations indicates the high degree of public feeling against possible monopolistic extortion. The revelation made during the last war of the activities of cartels involving American corporations, also revealed the way in which such combinations had been used to further Nazi Germany's war aims. Public feeling, therefore, still runs very high in the matter of international cartels. Hexner points out, however, that cartels are actually essentially business agreements. They are not based on any underlying philosophy, collective psychic structure, or political volition. What looks like

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volition is actually the resultant compromise of essentially separate (frequently basically conflicting) interests and ends. He also states that Nazi Germany in ultimately condemning cartels rightly judged that they were not dominated by political volition of any sort. One might tentatively state at this stage that the United States government is probably making a false distinction in condemning cartels and supporting ICA's so strongly. The distinction between the two may not be so profound, and certainly consumer representation appears often ineffective in governmental agreements, and the comprises which are necessitated in their creation often divorces the final agreement from any recognizable political or economic doctrines. There might therefore be some justification for the aphorism that "Cartels are commodity agreements the United States does not like: commodity agreements are cartels the United States approves", which was made by one critic during the negotiations for the drafting of an ITO Charter.

We might logically proceed to consider the views of some of the leading experts and critics of ICA's. Black argues that

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31 Ibid. p.148

producers' cartels will inevitably recur because of powerful group interests amongst private business. He therefore thinks that such forces which lead to international collaboration, should be brought out into the open and forged into visible links by government control and regulation. He also believes that such ICA's should be continuously functioning organizations and not temporary expedients since "the most effective treatment of chronic surpluses is preventative and anticipatory."  

A number of writers consider that ICA's are a desirable solution to raw materials problems, by default, since in their absence, economic anarchy reigns. Such may be considered an extreme view in normal times, but no doubt explains the underlying philosophy of a good many proponents of ICA's during the depths of the depression. Sir Daniel Hall in discussing international commodity control, suggested that "the increasing extent of state control and intervention is merely a manifestation of the only means of applying the brakes to the disruptions caused by rapid technological advances."  

In a not unlike manner, Rowe seems to regard ICA's as an inevitable evolutionary outgrowth of human progress and conscious effort to counteract the disturbing effects of wars and depressions.  

34 Ibid, p.549  
36 Rowe, J.W.F., Markets and Men, Cambridge University Press, 1935
On the other side, there are a number of writers who view past experience with ICA's and consider them to be inherently evil, and believe that new attempts to form commodity agreements will revert only to the bad traditional patterns of the inter-war years. Wallace in reviewing certain commodity studies makes the analogy of ICA's to a new Magna Carta which sets up instead of an absolute monarch, a feudal rule by barons. Thus, ICA's enlist the support of governments, but the result is still "government for the producer, by the producer and of the producer;" there remains no effective consideration of the ultimate consumer's interests.

Writers such as Elliot and Schwenger advocate the formation of ICA's in the postwar period as a necessary means of controlling surpluses and rebuilding international trade. Elliot considers international agreements as a valuable adjunct to the policy of the FAO and believes that by concentrating upon individual commodity problems and drawing up relatively simple agreements based on agreed import and export quotas, the conflict between national sovereignty and the delegation of international power might be solved.

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Schwenger is able to show how an overall policy of liberalizing trade and removing trade barriers, can still be consistent with and complementary to, international intervention in a limited sphere. He further points out that if the world could be maintained in a state of full employment, and that if national self-sufficiency did not continually replace economic goals, there would then be no need for the "interventionist" approach. ICA's he feels, should be regarded as temporary measures and care should be taken that they are designed only to terminate the maladjustments which made them necessary and that they should be withdrawn as soon as this has been done. Mason similarly emphasizes the probable surpluses that will arise when conditions return to normal after the disruptive effects of the war. Though he believes in a liberal trade policy and a minimum of government intervention, he considers that the surplus problem will necessitate international commodity action and cannot be left to the harsh forces of laissez-faire.

Most of the best-known writers in the field of agricultural economics are sceptical about the ability of ICA's to overcome the many inherent pitfalls, and while admitting that they might play a very useful role, they sound a note of caution. T.W. Schultz does not think individual commodity agreements either desirable or necessary if some effective countercyclical policy could be devised. Though this would probably be so, it seems to be begging


the issue. Both Schultz and Johnson pay considerable attention to the problem of price instability and the possibility of buffer stock schemes, or other counter-cyclical measures. Johnson, like Schultz, does not favour individual commodity agreements, since his emphasis is upon stabilization. Both writers are attracted by a proposal of Viner, for an "International Employment Stabilization Fund." They reason that such a counter-cyclical measure would be far more effective than the present World Bank or the International Monetary Fund. Johnson's analysis of buffer stock schemes will be considered in the latter part of this chapter.

One might conclude this review of different critics by considering finally some of the observations of Joseph Davis who has studied such problems for several decades. In the main, his viewpoint is one of doubt and scepticism. He feels that ICA's in the past have often been over-ambitious in scope and objectives. In practice, he states "stabilization of prices" has commonly meant boosting of prices above equilibrium levels. "Production control" has meant attempted restrictions of acreage or output, and "fair shares in world trade" have resulted from bargaining with historical averages, rather than with respect to current ability and willingness to compete. Davis has even questioned the premises upon which the


need for ICA's are commonly based. He considers that much more needs to be known about the basic productive conditions surrounding individual commodities and the actual extent of their inelasticity. He does consider, however, that there might be an important role for ICA's to play in the future as is demonstrated by the concluding statement in one of his articles.

"I regard as hopeful the search for methods of international co-operation, agreement, and even regulation that will genuinely promote peaceful progress of the world economy. But in this realm, as in others, we should avoid the temptation to premature commitments for the period following the post-war transition period. A proper field for ICA's in a world of peace can presumably be found. Yet too much of current thinking is vitiated by carryovers from the decade of the 1930's, when desperate efforts to combat depression were accompanied by widespread economic measures in preparation for war."

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(iii) **Buffer Stock Proposals**

Mention has already been made in different parts of this study, of the problem of yield variability, and the resultant price instability, which produces great hardship among primary producers from time to time. Price instability also makes production planning and demand forecasting a difficult if not impossible task. It is therefore one of the contributory factors to producers production cycles which are described in the opening chapter. It is also obvious that price uncertainty militates against the fullest and most efficient utilization of productive factors. The idea of accumulating physical stocks of a commodity, as a stabilization reserve, consequently has considerable theoretical validity.

It has already been seen that the United States and Brazilian crop stabilization policies were in effect intended as buffer stock schemes. The terms ever normal-granary and valorization are both essentially embodiments of the same objective and mechanisms. The last part of this chapter is devoted to a consideration of this problem and some of the proposals which have been made to remedy the causes of price instability.

The idea of using a buffer stock or equalization reserve stocks to mitigate the effects of unpredictable fluctuations in supply or demand is by no means new. It may have its origins in wartime experiences, when the consequences of scarcity became particularly significant. As early as 1780 an ever-normal granary

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proposal was made by Sir James Steuart in his "Dissertation on the Policy of Grain, with view to a plan for preventing scarcity or exorbitant prices in the common markets of England". On an international scale, various special studies and investigations under the aegis of the League of Nations, have also proposed buffer stock schemes as a partial solution to general economic instability and problems in the field of raw materials, in particular. Thus a special committee for the study of raw materials published the details of a buffer stock scheme in its report which came out in 1937. About the same time one of the first theoretical discussions of such a proposal was published by Benjamin Graham. An ardent proponent of such international stabilization schemes, Graham's more mature proposals will be considered subsequently.

Lord Keynes may also be considered as one of the original thinkers in this sphere. His studies of short-run disequilibria, led him to consider the potential anti-cyclical effect of such commodity-storage schemes. It can readily be appreciated that stabilization operations amongst a number of different basic commodities; if conducted on an international scale and in a closely related manner, could have the effect of creating a commodity currency stabilizer. In his Treatise on Money, Keynes develops the idea of commodity money. He defines such as being "composed of actual units


49 Graham, Benjamin, Storage and Stability, 1937.

of a particular freely obtainable, non-monopolized commodity (or of warehouse warrants for actually existing units of the commodity; e.g., U.S. gold certificates) which happens to have been chosen for the familiar purposes of money, but the supply of which is governed, like that of any other commodity, by scarcity and cost of production."  

In 1938 Keynes contributed an article to the Economic Journal proposing a storage policy of foodstuffs and raw materials for the British Empire, with combined defense and price stabilizing objectives. In this article he develops the thesis that under freely competitive conditions there is an inherent tendency for individual entrepreneurs not to hold sufficient stocks of raw materials, to be able effectively to counteract supply and demand fluctuations. "The competitive system", he says, "abhors the existence of stocks, with as strong a reflex as nature abhors a vacuum, because stocks yield a negative return in themselves." He regards it "as an outstanding fault of the competitive system, that there is not sufficient incentive to the individual enterprise to store surplus stocks and materials, so as to maintain continuity of output and to average, as far as possible, periods of high and low demand."

From 1938 to 1945 a special investigation of business cycles was conducted under the original sponsorship of the League of Nations. In its final comprehensive report which outlines the

51 Ibid., p.7.


unsolved difficulties, rather than drawing any definite conclusions, suggestion is again made for establishing a buffer stock scheme to stabilize raw material prices.\textsuperscript{53} This proposal envisages an essentially counter-cyclical scheme, largely automatic in operation. The plan was to be financed by quota subscriptions from member nations, plus borrowing. Specifically, it was suggested that such an agency might "take as its standard the average price for the proceeding eight to ten years and announce that it is prepared:

(1) To buy any quantity when the market falls to, say, 20 percent below the standard price, and (2) to sell when the price rises to 20 percent above the standard; under such an arrangement prices might fluctuate 20 percent above or below a given level but not more. If that level were a moving average it would tend to adjust itself to long-run changes in demand and supply. Even so wide a margin would represent a great advance towards stability over past experience."

Though there is no mention of any buffer stock proposals in the ITO Charter, both the ILO and FAO have proposed such a scheme. In its 1943 report on Intergovernmental Commodity Agreements,\textsuperscript{54} the ILO proposed an international agency to buy and sell raw products that are prominent in international trade, with the objective of reducing short-term fluctuations in prices. This report also implies that such commodity stocks would play a valuable contributory role in defense programs.

The FAO has concerned itself with such stabilizing

\textsuperscript{54}International Labour Office, "Intergovernmental Commodity Control Agreements, Montreal, 1943, pp.xiii-xiv.
schemes since its origins. Thus a buffer stock proposal was made at the United Nations Conference on Food and Agriculture at Hot Springs in 1943, when a Charter for the FAO was drawn up. The idea, largely under the inspiration of Lord Keynes, was proposed by the Chairman of the British Delegation, who explained its objectives in the following words:

"It should aim at combining a short period stabilization of prices with a long period price policy which balances supply and demand and allows a steady rate of expansion to the most efficient producers. It should be possible to achieve these aims through variation in the price at which the authority controlling the buffer stock is a buyer and seller."\(^5\)

The proposals later became elaborated under the direction of Lord Boyd Orr so that by 1946 a detailed plan for a World Food Board was presented.\(^6\) It was suggested that this board conduct a series of price stabilizing operations by buying and selling a number of commodities for which buffer stocks would be held. It was also suggested that it would be able to pass into consumption any possible over-accumulation of the stockpile (such as would jeopardize price maintenance), by sales at sub-standard prices with financial loss to contributors to the enabling fund.\(^7\)

"Orr's Plan", as it came to be called, was rejected, but the idea was retained and the FAO subsequently produced its most elaborate plan for an International Commodity Clearing House. The central theme was retained throughout, that of an operating fund contributed on a quota basis by


member nations, and used to buy and sell commodities in international trade with the objective of stabilizing prices. The World Food Board was also intended to establish a food reserve adequate for any emergency that might arise through failure of crops in any part of the world. The plan for a commodity clearing house included provision that the buying and selling corporation should make special sales and long-term loans to needy nations out of stocks which were to be considered surplus. The FAO's 1949 proposals were universally rejected by member nations at the fifth annual conference held in November, 1949. Though the opposition to this scheme might point out the conflict between national sovereignty and international delegation of authority, the FAO proposals might also be criticized on theoretical grounds, for being altogether too embracing in their objective, and for obscuring the essential function of such an international agency, with supererogatory directives.

During this period a number of individual authorities, in considering and discussing post war plans, suggested buffer stock operations. Most of such proposals were, however, not detailed and did not go further than suggesting that such operations should be regarded as supplementary to other international counter-cyclical measures, and could be best conducted by some form of international commodity or World Trade Board. The French Banker, André Istel also proposed the organization of separate corporations which would conduct buying and selling of strategic raw materials. He develops an interesting thesis, that

concentration in the manufacturing industries, with increased govern­
mental control and taxation, has made industrial production costs more
rigid and caused price fluctuations in raw materials to be much more
disruptive in effect upon the entire economy. This article, however,
only tentatively suggests that an international commodity corporation
might be formed.

The first really detailed proposal was made by W. Riefler who was
actually a prominent member of the special League of Nations Committee which
investigated economic stability in the post-war world. A year after the
publication of this report, Riefler published his own proposals together
with some interesting arguments in support of the need for stabilization
operations, and a rebuttal of previous tentative criticisms. Riefler
defines buffer stocks as:

"publicly directed agencies organized and equipped to purchase,
store, and sell durable, storable commodities in recurrent
demand in such a way as to mitigate fluctuations in their
prices, in the employment and income of their producers,
and in their costs to fabricators, dealers and distribu-
tors."

He envisions a scheme with greater financial backing than the
world bank, operating only in the markets for durable, homogenous and cheaply
storable commodities, and able to be self-supporting. Such an international
agency would have to be safeguarded from excessive stock accumulation,
by powers to enter into negotiations with member nations to help them
organize production control. It would not be compelled to continue purchasing
operations if stocks of any one commodity exceeded, say, a three years average
movement of that commodity in international trade.
Perhaps the most refined proposals for an international buffer stock, are contained in Benjamin Graham's suggestions for commodity stockpiling as an economic stabilizer. As his ideas have been subject to an exhaustive critical analysis by the Food Research Institute, it is not necessary in this study to do more than summarize the principal issues.

Graham's idea is essentially that of conducting operations that would affect the price of a group of commodities rather than each commodity separately. He develops the concept of a commodity Unit comprised of fifteen or more of those basic commodities most important in international trade which are relatively durable and convenient to store. The contents or proportions of the various commodities in the unit would remain fixed over considerable periods of time. Actual products would not be bought, the transaction being either in warehouse receipts or 'futures'. National currencies would be issued in exchange for these warehouse receipts representing a fixed quantity of specified storable commodities. Currencies would be redeemable in the same commodity unit, so that the plan is analogous to the operation of the gold standard in pre-1914 overseas trade. With such a commodity reserve in operation, an increase in the demand for money would express itself in an accumulation of raw materials. The scheme also contemplates special price support in the form of individual ICA's for any particular commodity which is in chronic over-supply or in an especially weak position. Purchases and sales

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64 Graham, Benjamin, World Commodities and World Currency, New York and London, 1944.

by the international agency, except as modified by operations under international commodity agreements, would be of commodity units, i.e., of a succession of 'baskets' of the included commodities, predetermined with respect to the quantities of each within the basket. The scheme was to be relatively automatic so that purchases for the stockpile would occur whenever the crucial international price index (or, to express it in another way, the price of the commodity unit) touched any numerical value below 95 and would continue until that index numerically exceeded 95. Sales would become obligatory whenever the index had risen above 105 and would continue until the index fell below 105. Graham emphasizes that the plan involves no specific limitations upon the price fluctuations of individual items within the commodity unit.

In his proposals, he tentatively suggests that wheat, corn, cotton, wool, rubber, coffee, tea, sugar, tobacco, petroleum, coal, wood pulp, pig iron, copper and tin, be included in the commodity basket. He also estimates that the capital requirements of such an agency could easily be twenty billion dollars. The average storage expenses are estimated to amount to a yearly cost of 100 to 150 million dollars (at 2 per cent per annum). These costs could, however, be covered in whole or in part by the difference in prices between which the agency bought and sold from the stockpile.

The scheme is, of course, not designed simply to hold within specified limits, the fluctuations of a particular composite international price of a basket of selected raw materials. Graham
intends that it should ultimately contribute to the economic welfare of the world through stabilizing foreign exchange, stabilizing prices and helping towards a balanced expansion of the world's output and consumption of useful goods.

The Food Research Institute cautiously endorses Graham's proposals with a few modifications. Shaw contributes a critical analysis of the plan of finance embodied in the scheme, and concludes that Graham's emphasis upon the monetary stabilizing effects of the scheme detracts from the validity of its original intention. He states the following main objections.

1. The implication that change in the world aggregate of monetary reserves is always a sound antidote for economic instability is not acceptable.

2. Insofar as redistribution of monetary reserves and money balances corrects economic instability, the proposed technique appears to be too specialized for incorporation in the existing monetary structure.

The Institute's study also questions the feasibility of dealing in 'futures' on an international scale. It is also pointed


67 Ibid., pp 43-44

out that stockpiling for defense purposes is not compatible with the real objectives of the proposal. Because of high storage costs it is also suggested that coal, petroleum and pig iron be excluded from the commodity unit. In conclusion, this study warns that such an international agency "would not be an appropriate device for inauguration during periods of international tension or of adjustment from wartime disruption." However, it is considered that the plan could make an effective contribution to counter-cyclical policy, if operated in conjunction with other devices such as monetary and fiscal manipulations.

Johnson also examines Benjamin Graham's proposals. He recognizes the value of their potential contribution in stabilizing the absolute fall in the average price of raw materials during a depression. In the past raw material prices have tended, on the average, to fall by at least 50 per cent during a depression. However, Johnson points out that such a scheme would not mitigate the effects of erratic unpredictable changes in supply and demand during periods when the price level is reasonably stable. Short run instability peculiar to individual products, will have to be reduced by other techniques such as crop insurance or compensatory price payments. He also notes that if the plan is to achieve price stabilization, it will tend to restrict

69 Ibid., p. 103.
70 Ibid., p. 150 following
consumption during depressions and expand it during periods of prosperity.

There is a wide divergence of opinion as yet on the subject of buffer stocks, which is not surprising when it is remembered that the concept is only recently developed and as yet largely untried. There are those who question the feasibility of such schemes. Wickizer and Feis, who have both been quoted in this study might be classified as belonging to this group. Feis questions, specifically, individual buffer stock schemes, pointing out that any such agency would inevitably be criticized whenever it released (sold stocks) and caused prices to decline. He feels that there would be "continuous pressure for maintenance of a price protractedly higher than that which would clear the market." He also thinks that national price support schemes would upset buffer stock operations, and that great difficulties would be encountered with those raw materials for which there is a synthetic substitute.

Wickizer, in his studies of tea and coffee, doubts the feasibility of individual buffer stock operations, and points out the

**Footnotes:**

72 Ibid., p. 147.


74 Wickizer, V. D., *The World Coffee Economy,* with special reference to Control Schemes, Food Research Institute, Stanford and *Tea under International Regulation,* Food Research Institute, Stanford.
great practical difficulties where the product is not homogenous and not easily definable into grades. He quotes the International Tea Committee's "Review of the Tea Regulation Scheme, 1933-1943" as stating: "As a means of controlling prices a 'buffer pool' is regarded as an instrument liable to much abuse".

There are again those who want to make buffer stocks the principal or even the only instrument for equilibrating production and consumption of raw products. T.W. Schultz and Johnson seem to incline to this view.

Again, there are those who, though favouring buffer-stock operations as a means of mitigating short-term fluctuations in raw-product prices, claim that, at least in regard to the so-called surplus products, such operations would not suffice to ward off widespread distress among producers in exporting countries. They accordingly feel that individual commodity agreements would be a valuable adjunct. The League of Nations and the International Labour Organization have expressed such opinions, also W. Riefler, Benjamin Graham and K.E. Knorr seem to support such views. The great body of opinion is, however, undecided and many economists have pointed out the inherent difficulties as well as the possible shortcomings of buffer stock schemes.

In recapitulation and summary of the above discussion, there is solid theoretical support for the concept of a buffer stock scheme to diminish price fluctuations, by holding a reserve against sudden increases in demand or constrictions in supply. Purchase and

Knorr K.E., World Rubber & its Regulation, pp. 150-151.
storage operations can also serve to prevent sudden price declines when the supply cannot otherwise be regulated.

However, there are numerous practical difficulties arising from such schemes. Because the operation of a buffer stock would affect the price relationship as between raw materials and manufactured products, we should see these effects during a business cycle. During a "boom" producers' real income would be reduced, but during a depression they would be over compensated. Processors, on the other hand, would make windfall profits during a boom, but would see their difficulties increased during a depression. There would consequently be a tendency towards shifts in production of these buffer controlled commodities during a depression; and during booms, shifts away to products not so controlled would be even greater.

The extent to which buffer stock operation succeeded in stabilizing farm prices would also exaggerate the degree to which the income of individual farmers would fluctuate as a result of variations in yields. This difficulty can, however, be overcome in part by having a fairly wide margin between the price level at which buying and selling operations are conducted.

In conclusion, it seems that there is room for a storage policy to even out supply variations and as an addition to counter

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cyclical measures. But such a policy should preferably be one based on individual commodities and supplemented by individual ICA's. The proponents of a commodity currency seem to lay too much emphasis on the solid backing of this type of currency, a factor of purely psychological import. There is danger of trying to achieve too much through one mechanism. The demand for consumption raw materials can be stabilized only if industrial activity is stabilized. It would be dangerous in the present state of our knowledge to think that industrial fluctuations are always initiated by movements in raw materials prices.

Those who put all their emphasis on stabilizing farmers' incomes and advocate comprehensive commodity unit operations, seem not very far removed from agricultural fundamentalists in their approach, believing that such will solve the world's trade and depression problems.

Similarly those who do not think that individual commodity control agreements will be needed with an effective buffer stock agency, fail to consider the long run effects of a downward price trend in the face of an inelastic supply, and the extent of government intervention, especially in the case of those commodities in "chronic oversupply".

(iv) Summary and Conclusions

We have seen that the potential role of international commodity agreements has come to receive growing attention amongst international bodies. The inherent difficulties as borne out by past experience, have been well considered and a careful attempt has been

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made in formulating guiding principles for the future operation of such ICA's to guard against such difficulties.

The extent of political implications and differences in the operation of such agreements is also apparent. The problems of ICA's are not confined to the realm of economics but raise political issues of liberalism versus socialism and state control. Issues of economic and political significance cannot easily be discussed according to the "either-or" pattern of reasoning. The choice is not between the "impersonal discipline of the market" or the arbitrary direction of a few individuals. It is necessary to bridge the gap between the desirable results of laissez faire in an unimpeding society and state control or unilateral national actions. International collaboration is the best bridge that has yet been devised.

Such international collaboration has come without conscious support or intervention of governments in many of the cartels that were formed before the second World War. Such agreements are not inherently evil, and experience also shows us that government regulation is just as likely to suffer from the same faults as international cartels. The history of ICA's in the inter-war period demonstrates clearly that even government control does not prevent high cost producers from being sheltered, prices from being raised, or the interests of consuming countries from receiving scant attention. Moreover, political factors outside the realm of international control might still be an inhibiting force. Restricted sugar and tea consumption in the chief consuming countries, due to national fiscal and defence policies, are outside the control of ICA's. Similarly, we have seen in the study of coffee, that political considerations may override the interests of the
general consumer, even where the importing nation is in a controlling position.

An examination of the opinions of a number of different experts effectively exposes the fallacy of the "black or white" reasoning of antagonists and apologists. The issues are not clearly defined. Agreements in the past have not all been entirely evil, and failure has often been due to circumstances beyond the power of present international co-operation. Neither can we safely regard ICA's as a panacea for future world harmony and the betterment of mankind. The possible value to such agreements has yet to be decided, and they will not be able to play a significant role until more knowledge and understanding is obtained of the problems underlying raw materials production. Desirable economic and social goals can only be realized through such agreements if optimum allocation of resources is the central objective and if the inviolable economic laws which would ultimately realize such a goal are not denied.
CHAPTER V.

THE PLACE FOR COMMODITY AGREEMENTS IN WORLD TRADE

(i) Existence of Real Problems in Certain Primary Industries.

International planning can have such widespread repercussionary effects that no proposals may safely be formulated without a very conscious awareness of ultimate objectives. Private entrepreneurs may rightly be questioned as to whether they are remaining within the law of their country in the policies that they follow. Governments, however, irrespective of their constitution, may be justly challenged as to what extent they are following ideals (and policies) related to the welfare of the international community as a whole.

It is accordingly necessary at this juncture to reconsider desirable economic goals and objectives in order to be able to assess the compatibility and possible utility of I. C. A's.

The ultimate goal in the material sense should be to increase world prosperity in terms of increased income per capita. More specifically, the goal embraces a desire to increase the volume of trade and consumption of raw materials. This can only be achieved by giving productive resources the full opportunity to develop and expand in the most profitable areas, and by endeavouring to lower the price of the products they produce at every available opportunity.

In chapter I, it was shown that certain inherent characteristics in the production and trade in primary products leads to difficulties in production adjustments in response to changes in market conditions. The most serious manifestation of these difficulties lies in the two phenomena of excessive price instability and chronic surplus productive capacity. Both conditions are detrimental to the realization of the economic goals stated above. Fluctuating prices prevent entrepreneurs
from being able to plan production intelligently and lead to over and under production which perpetuates the price instability. Surplus productive capacity often results in under-employment, inefficient use of productive resources, and a resistance to improvements brought by technological change.

There can, therefore, be a definite role for ICA's to play in the realization of our desirable economic goal, in so far as such areements can be effective in lessening price instability, eliminating redundant capacity, and in facilitating production adjustments as market conditions change.

(ii) Weakness of Past Agreements.

Having established that there is a real need for ICA's it is possible to examine the efficacy of past agreements in the light of these needs and our ultimate objectives. It should be evident from the case studies in chapters 2 and 3 that such agreements in the past have been subject to many weaknesses, and that each differs in some respect with regard to the manner in which it has influenced the industries concerned. Past agreements have shown a tendency to foster sectional interests, and to persist even when their need is no longer vital. Both these faults can be easily remedied by specific provisions in the constitution of future ICA's. This will become apparent in our subsequent consideration of the ITO provisions for future ICA's. There are, however, two other weaknesses which become apparent in the study of past commodity agreements which are much more significant. These are (i) the use of export quotas, and (ii) high price objectives.

(iii) Use of Export Quotas.

In every single commodity examined, export quotas have been the most important or even the only device used to regulate the primary
industries for which agreements have been evolved. They have, in effect, been a means of distributing the hardship amongst producers, which arises when markets are artificially restricted or when productive capacity outstrips effective demand.

An export quota is patently a device to prevent production from responding to a price rise rather than by an increase in output. As such, it nullifies a major function of prices and can be effective as a mechanism for the realization of higher prices. An export quota likewise shelters the less efficient producers when the demand declines since they retain a fixed share of the market which would otherwise be encroached upon by lower cost and more efficient producers.

Export quotas have served to maintain in operation many of the higher cost rubber plantations, tin mines and tea gardens. They have thereby fostered the continued existence of redundant productive capacity. It is also apparent, however, that such quotas have afforded the only protection for low cost efficient producers in the face of imperialistic and nationalistic policies. This has been so on the case of both sugar and beef.

(iv) High Price Objectives.

Though in many instances ICA's have contained no explicit price goals or provisions, in almost every case the raising of price levels has been an implied objective. This is understandable in view of the very low price levels which have commonly prevailed during the depression when many of these industries adopted ICA's.

However, such objectives are incompatible with our ultimate economic goals of expanding consumption of raw materials and raising the level of real incomes, since high prices tend to restrict consumption, upset the balance of trade, and stimulate excess productive capacity.

It has been argued that high prices will stabilize agricultural
incomes, and that low prices have forced importing countries to impose trade barriers and to subsidize home production. It has in fact been high prices which have stimulated production to artificial levels, and which aggravated the situations of surpluses in certain primary products.

In chapter 1, the low income elasticity of many of the basic food staples was described. This characteristic adds further support to the argument against high price objectives since such will reduce the level of real incomes. Expanded consumption of primary products can, moreover, only be brought about by keeping price levels low, since the demand is heaviest in the lowest income groups whenever the income elasticity of the product is less than unity. Similarly, the development of synthetic substitutes for rubber and the natural fibres supports the arguments in favour of low price levels. High prices or restricted supplies have stimulated the original development of such products. In many cases synthetic products are taking an increasing share of the market because of the continued high price levels which have prevailed for the natural products. The decline of the silk industry has presaged the possibility of a similar decline in the cotton textile industry as the cost of rayon and nylon fibres comes closer into line with that of natural cotton. Competition for the natural products will in future, tend to rest on a price basis rather than on any inherent, unique qualities. The possibilities of expanded consumption of certain food staples for livestock feed and, to a lesser extent, industrial manufacture, also only becomes feasible when price levels are kept low.

The record of regulation in the rubber, tea and coffee industries shows how high price levels have tended to be fostered by the careful regulation of quotas, and how the problem of surplus capacity, instead of being remedied through international agreement, has tended to be aggravated.
Should ICA's be condemned in the light of these goals, in realization of their inherent price raising objectives and almost invariable utilization of export quotas? From the evidence, it seems that ICA's can be compatible with our economic objectives, provided certain specific provisions are made, and the inherent weakness of regulation is kept in mind.

Export quotas can be acceptable as transitory aides as long as they are viewed strictly as short run expedients to facilitate necessary production adjustments. If positive provisions are made to favour the more efficient producers and to eliminate excess capacity, export quotas would be less likely to persist, and can be seen in a useful role as a means of mitigating the harsh effects of too rapid market adjustments.


The next question is whether the criteria for commodity controls laid down in the ITO Charter, are adequate guides for the future formation of international agreements. These ITO provisions may be examined under three headings: (1) Rules governing the procedure leading up to the creation of ICA's; (2) Rules governing their operation, once such agreements are established; and (3) miscellaneous other provisions.

These Rules governing the procedure leading up to the creation of international agreements are all desirable, in that ample provision may be made for a thorough preliminary examination of the commodity, in which all the governments concerned may participate. The exact conditions under which a control agreement might be instituted seem clear and reasonable provided that governments are neither premature in considering a "burdensome"

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1 See Appendix A - provisions of the ITO Charter relating to International Commodity Control Agreements.
"surplus" to exist or too tardy in recognizing "widespread distress to small producers." The condition of widespread unemployment within any particular industry, as defined in these preliminary provisions, should also be unrelated to general business conditions, as ICA's would otherwise tend to become universal and inevitable in times of depression. 2

The provision that any agreement must include some concrete plan to solve the problem, is also a very realistic one. However, it should be recognized that such problems often have their roots sunk deep in the past (World War I and the depression of the 1930's) and that it would be unwise to expect them to be solved always within the five year span within which it is recommended that such agreements should stay. The provision that the program of adjustment should be believed adequate "to ensure substantial progress toward solution of the problem within the time limits of the agreement" must, therefore, be subject to liberal interpretation. In view of earlier experiences in the world's wheat trade, it is unfortunate that these ITO provisions do not state more explicitly that no nation should be encouraged to expect that, by the use of unilateral policies (such as export subsidies) as a sort of club, that other nations may be compelled to join with it in such ICA's.

The rules governing the operation of such agreements include provision for the accession of new signatory governments and adequate consumer representation. These are good, though experience in the past leads us to doubt the efficacy of the latter. Obviously, in many instances, consumer countries will be in a weaker bargaining position because they do not possess cost and production data. Governments of largely consuming nations such as Britain and Holland have in the past shown a

3. Ibid., page 722.
constant tendency to exert their influence in favour of their colonial producers, despite the interests of the majority.

Miscellaneous provisions which are highly desirable, include provision for adequate publicity, renewal of agreements after five years and compulsory review after every three years of operation. It might be suggested that these provisions in the aggregate will make the formation of ICA's almost impossible. However, omission of any one does not seem rational, and if a new tin agreement is soon formed there will be evidence that the conditions are not insuperable.

The ITO provisions make no reference to the problem of price instability or any buffer stock proposal. However, it is felt that international agreements could be drawn up which would successfully achieve the ends of price stabilization.

(vi) Suggested Form of International Regulation in the Future.

We have seen that inherent problems in the production of certain primary commodities, besides causing distress to producers, prevents the rapid attainment of the goals of increased real incomes and expanded consumption. A survey of experience with past agreements indicates that they have largely failed to overcome the basic difficulties of adjusting productive capacity to demand and mitigating the harshness of price fluctuations. Their high price objectives have tended to shelter the former, and the use of quotas has tended to maintain the status quo in the industry as well as promoting price instability where the quotas have been too rapid.

Short term commodity control agreements with permanent buffer stock schemes, can, however, be advocated as being wholly consistent with our economic goals, and as a supplement to other desirable economic policies, particularly of an anti-cyclical nature. It is felt that compliance with
the provisions of the ITO Charter will be sufficient to prevent ICA's from fostering sectional interests, tending to persist in the absence of any real need, and constricting trade when the ultimate objective is to expand trade. Emphasis on the short run nature of each regulatory agreement will prevent quotas from being used as a weapon to preserve output capacity or maintain price levels. Provisions must be made, within the terms of any agreement, for gradual elimination of excess capacity and for the promotion of low cost efficient producers.

It is not possible in this study to suggest in detail the ideal form for such individual commodity agreements. It is obvious that the problem of eliminating redundant capacity is likely to raise many political difficulties and that the creation of undue hardship, amongst the producers concerned, will be a constant brake to the adoption of very positive measures.

The conflict between national sovereignty and international collaboration must also be recognized as a very real barrier to the complete success of future ICA's. Such is beyond the field of economics and can presumably only be gradually resolved with the accumulation of experience in international collaboration and the knowledge of past failures. Purely selfish nationalistic interests appear, rather, to be a manifestation of the present day universal feeling of insecurity. Fear of war will always be a barrier to the expansion of international comity.

Emphasis on the short-run operation of ICA's is, moreover, not meant to imply a failure to recognize the persistent tendency of such agreements in the past, to remain in operation for prolonged periods. It is hoped that the provisions of the ITO Charter, if rigidly observed, will be sufficient to ensure that such agreements will not in
future persist in defiance of the general interest.

(vii) Permanent Buffer Stock Schemes.

In order to realize the goals of expanding human consumption and optimum resource allocation, the aim of ICA's should be to keep prices low. Prices should also be sufficiently flexible so as not to force the entire burden of a depression on to other sections of the economy.

This last consideration of price flexibility brings us to an examination of the way in which individual buffer stock schemes could support and complement the operation of such regulatory agreements. The only expedient that may accomplish some measure of price stability and yet satisfy the needs for economic change, seems to be a buffer stock arrangement. The proposal outlined by W. Riefler seems the most appropriate for such a scheme. Such a plan could limit price fluctuations within a certain range by drawing supplies from the market when falling prices reach the minimum of a pre-determined range (say 15 per cent below a pivotal index), and releasing supplies to the market when rising prices approach the maximum of that range (say 15 per cent above the index). It could be financed by contributions from member nations and would be directly responsible for holding storage reserves.

The successful operation of a buffer stock scheme would, however, depend on certain favourable environmental conditions. The following necessary conditions to successful operation are based in part on the recommendations of K. E. Knorr in his study of rubber regulation.

4. KNORR, K. E., World Rubber and its Regulation, (Stanford University Press), Stanford, California, pp. 241-246.
1. There can be no extensive excess capacity in
the industry concerned. The buffer stock
agency would otherwise accumulate stocks indef-
initely or would be forced to lower the basic
price drastically.

2. A buffer stock may be used to cushion the effects
of secular trends, but it should never try to
arrest them, as this would be incompatible with
economic progress. In effect, then, provision
must be made for the judicious adjustment of the
basic price when needed.

3. The manner in which the actual physical commodity
held in such buffer stocks, would ultimately be
disposed, must be determined and made known in
advance. Also, there must be inter-national
agreement providing against sudden and disrupting
stock releases from reserve or war defense stock-
piles.

4. The pivotal price above and below which the
operating agency bought and sold, should be subject
to review and constant change. It should not be
determined by any such mechanical device as a
historical sliding price index or average. The
price range at which the agency should start
operating in the market should be at least fifteen
per cent above and below the pivotal price.

It is also unsafe to speculate as to whether such a scheme could survive
in the face of violent and prolonged depressions or booms. In the former
case there would be a real danger of the agency accumulating such excess-
ive stocks as to exceed its financial resources. Similarly in times of
inflation, it is possible that the agency would ultimately release its
total stocks and so be unable to prevent any further price rise. The
plan is, however, essentially devised to counteract short-run price
fluctuations, and the support of other counter-cyclical measures to limit
major swings in the business cycle, is implied.

The above suggestions for individual buffer stock plans and
short term commodity agreements carry no implication of finality, nor are
they regarded as being complete solutions.
An overall survey of the general problems facing primary producers might reveal that the principal difficulties experienced in these industries can be related to the incidence of the business cycle, and the wide disparity in economic development between the great consuming nations and the majority of primary producing nations.

Undoubtedly any anti-cyclical policies which could be effective in regulating the business cycle would eliminate in large measure the problems which tend to become particularly acute amongst primary producers.

There is every reason to hope that out of current research into the nature and causes of the business cycle effective national and international policies may ultimately be devised which can control and regulate its incidence.

Similarly there are signs that the industrial development of backward nations may make rapid strides in the future. President Truman's "Point Four" programme, together with the Commonwealth Colombo Plan for capital and technical aid to these undeveloped countries, give evidence of the Western Nations' growing sense of responsibility. Similarly, the political emancipation and national metamorphosis of many of these primary producing nations which has recently and is now still taking place, represents the beginning of a new epoch of economic development in these areas which has derived impetus out of revolution.

It is possible, therefore, that with relatively sustained industrial activity and the maintenance of high levels of employment

5. See, for example, the account by HUTCHESON, Harold H., "Government and Capital in Point Four", Foreign Policy Reports, Vol. XXV, No. 6, Midstorn House, New York.

throughout the world, that future primary producers will not suffer the difficulties which have led governments to take special measures to give them support.

Again, the vertical integration of the industries of national economies will diminish the extreme dependence of many primary producing nations on foreign exchange, and equalize the terms of trade between exporting and importing nations. There is no justification for the fear that industrialization of primary producing nations will diminish the volume of international trade. Economic interdependence can be just as extensive but will be on a healthier basis. Severe regulatory commodity agreements will no longer be a desperate necessity for such nations when their economy is no longer almost wholly dependent on the production of one or two staple commodities.

In conclusion, it would not be too strong a statement to make that the problem of equal access to raw materials supplies has been the fundamental ancillary economic cause of recent wars. Any contribution that ICA's or other devices for international co-operation can make, therefore, to improve resource allocation and consumption levels, may be a contribution to world peace as well as prosperity.

APPENDIX
Extracts from International Conferences detailing principles and provisions relating to International Commodity Agreements.

I. 1933 World Monetary and Economic Conference.

At the instance of Sir Philip Cunliffe-Lister it was laid down that producer's agreements designed to raise the price of commodities to reasonable levels and to obtain equilibrium of supply and demand should conform to the following tests:

1. The commodity must be one of world importance where an excess of stocks or productive capacity calls for special action.

2. The agreement should be comprehensive as regards the commodities regulated and should even include related or substitute products.

3. It should be comprehensive as regards producers, commanding a general measure of assent among exporting countries and producers with them, and providing for the co-operation of non-exporting countries with a considerable production.

4. It should be fair to all parties, producers and consumers, and worked with the co-operation of the latter, who are equally concerned with producers in the maintenance of regular supplies at fair and stable prices.

5. It should be administratively practicable as regards machinery and the ability of governments to enforce its operation.

6. It should be of sufficient duration, even if a merely temporary expedient, to give an adequate assurance to all concerned that its object can be achieved.

7. Due regard must be had to the desirability of encouraging efficient production.

SOURCE: Holland, W.L., editor of Commodity Control in the Pacific Area (Stanford University Press, California), quoted from pp. 423-424

II. United Nations Conference on Food and Agriculture

Text of the final act, section XXV, International Commodity Arrangements.

WHEREAS:

1. Excessive short-term movements in the prices of food and agricultural commodities are an obstacle to the orderly conduct of their production and distribution.
2. Extreme fluctuations of the prices of food and agricultural products aggravate general deflationary and inflationary tendencies, which are injurious to producers and consumers alike;

3. The mitigation of these influences would promote the objectives of an expansionist policy;

4. Changes in the scale and character of production to meet more effectively the world's need for food and agricultural products may in certain instances require a period of transition and international co-operation to aid producers in making necessary adjustments in their productive organization;

5. International commodity arrangements may play a useful part in the advancement of these ends but further study is necessary to establish the precise forms which these arrangements should take and whether and to what extent regulation of production may be needed;

RECOMMENDS:

1. That international commodity arrangement should be designed so as to promote the expansion of an orderly world economy;

2. That, to this end, a body of broad principles should, through further international discussion be agreed upon regarding the formulation, the provisions, and the administration of such international commodity arrangements as may be deemed feasible and desirable and should include assurance that:

   (a) Such arrangements will include effective representation of consumers as well as producers;

   (b) Increasing opportunities will be afforded for supplying consumption needs for the most efficient sources of production at prices fair to both consumers and producers and with due regard to such transitional adjustments in production as may be required to prevent serious economic and social dislocations;

   (c) Adequate reserves will be maintained to meet all consumption needs;

   (d) Provision will be made, when applicable, for the orderly disposal of surpluses;

3. That international organization should be created at an early date to study the feasibility and desirability of such arrangements with reference to individual commodities and in appropriate cases, to initiate or review such arrangements to be entered into between governments, and to guide and co-ordinate the operations of such arrangements in accordance with agreed principles, maintaining close
relations with such programs as may be undertaken in other fields of international economic activity to the end that the objective of raising consumption levels of all peoples may be most effectively served.


III. The International Trade Organization

*Text of the Havana Charter – Chapter IV, Inter-Governmental Commodity Agreements.*

The members recognize that the conditions under which some primary commodities are produced, exchanged and consumed are such that international trade in these commodities may be affected by special difficulties such as the tendency towards persistent disequilibrium between production and consumption, the accumulation of burdensome stocks and pronounced fluctuations in prices.

These special difficulties may have serious adverse effects on the interest of producers and consumers, as well as widespread repercussions jeopardising the general policy of economic expansion. The members recognize that such difficulties may, at times, necessitate special treatment of the international trade in such commodities through inter-governmental agreement.

**Objectives of Inter-Governmental Commodity Agreements**

Members recognize that inter-governmental commodity agreements are appropriate for the achievement of the following objectives:

(a) To prevent or alleviate the serious economic difficulties which may arise when adjustments between production and consumption cannot be effected by normal market forces alone as rapidly as the circumstances require.

(b) To provide, during the period which may be necessary, a framework for the consideration and development of measures which have as their purpose economic adjustments designed to promote the expansion of consumption or a shift of resources and man-power out of over-expanded industries into new and productive occupations, including as far as possible in appropriate cases the development of secondary industries based upon domestic production of primary commodities.

(c) To provide for the expansion of the production of a primary commodity where this can be accomplished with advantage to consumers and producers, including in appropriate cases the distribution of basic foods at special rates.
(d) To maintain and develop the natural resources of the world and protect them from unnecessary exhaustion.

(e) To prevent or moderate the pronounced fluctuations in the price of a primary commodity with a view to achieving a reasonable degree of stability on the basis of such prices as are fair to consumers and provide a reasonable return to producers, having regard to the desirability of securing long-term equilibrium between the forces of supply and demand.

(f) To assure the equitable distribution of a primary commodity in short supply.

Circumstances Governing the Use of Commodity Control Agreements

Such agreements may be employed when

(a) A burdensome surplus of a primary commodity has developed or is expected to develop, which, in the absence of specific governmental action, would cause serious hardship to producers among whom are small producers who account for a substantial portion of the total output, and that these conditions could not be corrected by normal market forces in time to prevent such hardship, because, characteristically in the case of the primary commodity concerned, a substantial reduction in price does not readily lead to a significant increase in consumption or to a significant decrease in production; or

(b) Widespread unemployment or underemployment in connection with a primary commodity, arising out of difficulties of the kind referred to in (the first) article, has developed or is expected to develop, which, in the absence of specific governmental action would not be corrected by normal market forces in time to prevent widespread and undue hardship to workers because characteristically in the case of the industry concerned, a substantial reduction of price does not readily lead to a significant increase in consumption but to a reduction of employment, and because areas in which the commodity is produced in substantial quantity do not afford alternative employment opportunities for the workers involved.


Provisions for the Operation of such Agreements - Taken from the Geneva Draft Charter.

The members shall observe the following principles governing the conclusion and operation of all types of inter-governmental commodity agreements.

(a) Such agreements shall be open to participation initially by any member on terms no less favourable than those accorded to any other country and thereafter in accordance with such procedure
and upon such terms as may be established in the agreement subject to the approval by the Organization.

(b) Non-members may be invited by the Organization to participate in such agreements and the provisions of sub para. (a) applying to members shall apply to any non-member so invited;

(c) Under such agreements there shall be equitable treatment as between participating countries and non-participating members, and the treatment accorded by participating countries to non-participating members shall be no less favourable than that accorded to any non-participating non-member, due consideration being given in each case to policies adopted by non-participants in relation to obligations assumed and advantages conferred under the agreement:

(d) Such agreements shall include the provision for adequate participation of countries substantially interested in production or consumption of the commodity.

(e) Full publicity shall be given to any inter-governmental commodity agreement proposed or concluded, to the statements of considerations and objectives advanced by the proposing members, to the nature and development of measures adopted to correct the underlying situation which gave rise to the agreement and, periodically, to the operation of the agreement.

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