AN ANALYSIS OF TECHNIQUES TO PRESERVE AGRICULTURAL LAND

by

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ABSTRACT

Competition for alternative uses of agricultural land has increased considerably over the past 20 years. This competition has created demand for public action of some kind. The appropriate government intervention necessary for the preservation of agricultural land varies between communities due to their different needs and desires to control the growth process. In this regard, the thesis analyzes and compares various techniques which are being used to maintain agricultural land.

Methods using the concept of regulation to preserve agricultural land are examined in Section II. Section III studies methods utilizing the concept of compensation. Section IV compares the California Land Conservation Act which utilizes compensation and the British Columbia Agricultural Land Commission Act which relies on land regulations.

The British Columbia Act was found to be more efficient in the preservation of agricultural land than its California counterpart, a difference due mainly to the mandatory structure of the B.C. Act as opposed to the voluntary nature of the California Act as well as to the different procedures used to implement the Acts. Comparison of the methods analyzed in the study and recommendations for improving the efficiency of the B.C. Act are presented in the Conclusions.
Durant les 20 dernières années, il y a eu de nombreuses tentatives pour une utilisation des terres agricoles à d'autres fins. Ceci a créé une demande pour que le gouvernement intervienne dans le processus afin de préserver ces terres agricoles. Puisque les besoins et désirs des communautés diffèrent au sujet de telle préservation, il en est de même des méthodes qui l'encouragent. Le but de cette thèse est donc d'analyser et de comparer ces différentes méthodes.

Les méthodes qui utilisent le concept de réglementation sont analysées dans le deuxième chapitre, alors que le troisième chapitre étudie les méthodes qui indemnisent les propriétaires dont les droits sont affaiblis par la présence de mesures restrictives. Le California Land Conservation Act et le B.C. Agricultural Land Commission Act sont comparés dans le quatrième chapitre. La loi californienne utilise une des méthodes décrites dans le troisième chapitre, tandis que la loi de la Colombie Britannique a les propriétés d'une de celles décrites dans le deuxième chapitre.

La loi de la Colombie Britannique est celle qui a le plus répondu à son objectif de préserver les terres agricoles. Les principales causes de cette supériorité sont l'obligation qu'a la propriétaire de la Colombie Britannique de se conformer à la loi tandis que celui de la Californie en a le choix ainsi que les différentes procédures employées dans la mise en opération des deux lois. Finalement, la conclusion recommande certaines
améliorations à apporter à la loi de la Colombie Britannique et compare les différentes méthodes analysées dans cette thèse.
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A land ethic reflects the existence of an ecological conscience, and this in turn reflects a conviction of individual responsibility for the health of land. Health is the capacity of the land for self-renewal. Conservation is our effort to understand and preserve this capacity. 

Aldo Leopold.

A. Problem Statement

Competition for alternative uses of agricultural land has increased considerably over the past 20 years. This stems from several related factors which have a strong impact on land use. Indeed population growth, increase in per capita income, technological changes in agriculture, increase in leisure time and the process of urbanization have provoked an ever-growing conversion of land from agricultural to urban uses. Urbanization has several types of effect on farmland: first, it can directly convert agricultural land to urban use; secondly, it can lead to idling of agricultural land in anticipation of future conversion to urban uses either through land speculation or through the spill-over effects that it generates; and thirdly, urbanization can bring about a change in agricultural activities such as land subdivision, switch-over to less capital intensive activities, or the like.

Attention has also to be drawn to the fact that land has two underlying characteristics, namely: that its total acreage is generally limited
and its location is completely fixed. Because of its very nature which produces irreversible land uses through the construction of durable and capital improvements on the land and because most of this activity takes place on land prime for agricultural purposes, urbanization has caused the depletion of agricultural land at alarming rates. For instance, it was calculated that, prior to the passage of the Land Commission Act in April, 1973, the erosion of British Columbia's prime agricultural land by urban sprawl had reached 15,000 acres per year (B.C. Land Commission, 1975).

On the other hand, there has been an ever-increasing support for the view that farms and farmland ought to be preserved. Behind this support lie several factors which are noteworthy: sustaining of the present level of food production, keeping up with the growing population, the prohibitive cost of restoring such a resource, physical damage to the resource, the contribution of agriculture to the economy, the provision of open space with all its aesthetic values and the social costs attached to the displacement of agriculture onto less fertile land engendering an increase in production costs, and hence in prices of foodstuffs. Needless to mention the maintenance of rural lifestyle and the retaining of an ecological balance also seem to be of importance in this respect.

B. Thesis Objectives

In recent years, a number of methods and strategies for land use controls has emerged to deal with the conflicts between agricultural activities and urbanization. These land use controls have been imposed as a result of the fear that these conflicts would have advanced to such a degree that the irreversibilities involved would lead to total disorder unless there was government intervention of some kind. The type of government intervention which is appropriate with respect to the preservation of
agricultural land varies between communities as to their needs and desires to control some of the growth process. One of the main objectives of this thesis is to enable policy decision-makers, planners and communities to get an overview of available tools designed to implement a land use policy and then to be more readily disposed to deal with their own situations. It also allows any level of government which has the legal power for so doing, to know the relative strengths and weaknesses of each technique and the stage of urban development most appropriate for application. Finally, the study demonstrates that a more desired pattern of land use might be attained by a better utilization of the taxation system along with a combination of methods analyzed in the study.

C. Methodology

These objectives will be achieved by describing, analyzing, and comparing the various tools which are being used to maintain agricultural land, and by evaluating them in terms of their relative inputs and implications on agricultural land use policy as a whole, along with their effects on long-run agricultural conservation policy.

This study is divided into four sections. The first examines methods which use the concept of regulation to maintain agricultural land. In this context, the term regulation can be defined as the power of one or another level of government to restrict, in a direct way, the allocation of land to a particular use. This power, often called the police power, includes either prohibition of certain uses or prescription of protective measures, and is used to control the patterns and quality of land development.

The second section is devoted to methods utilizing the concept of compensation, which implies that a landowner must be compensated for any
losses incurred through the limitation of his rights in land. It also includes economic or financial inducements provided by government, by means of subsidies and taxation which encourage agricultural landholders to use their land as agricultural land, but leave them free to decide on how to respond to the inducements.

In the third section, a case study compares two states where those concepts are being used. The State of California represents the compensatory case. Through the California Land Conservation Act of 1965, the legislature of California has permitted counties and cities to designate agricultural preserves, and has offered preferential or use value taxation to owners of such lands. On the other hand, the Province of British Columbia constitutes the example of the regulatory body. By establishing a Provincial Land Commission which was given zoning powers to preserve agricultural land for farm use, the government of British Columbia has forced the implementation of mandatory agricultural districts which thus gives us a model of land use regulations. The strengths and weaknesses of both concepts are spelled out.

In the last section, the positive and negative features of the compensatory system and of the regulatory system are discussed. Moreover, the characteristics of each method are compared with each other in terms of financial cost per unit served, their ease and term of implementation as well as their appropriateness to the level of urbanization experienced in a particular region. Finally, several recommendations are made with respect to the British Columbia's agricultural land use control in an attempt to improve its effectiveness. But before getting into the mechanics of each method, it is useful to shed light on governments and their influence on land use control.
D. Governments and Land Use Controls

In Canada, there are four levels of governing bodies which can exercise power with respect to land use control: the federal, provincial, regional and local governments. However, the degree of involvement differs depending upon the constitutional rights which have been given each level by the British North America Act. The BNA Act indeed sets the basic rules concerning land use control. Section 95 of the Act allows the legislature of each province to make laws in relation to agriculture, and Section 92 permits the legislature of each province to make laws exclusively in relation to property rights in the province. However, the Parliament of Canada may, from time to time, make laws in relation to agriculture in all or any of the provinces. With regard to lower levels of government, namely the regional and local bodies, their powers arise from the fact that the legislature of each province may make laws in relation to municipal institutions therein. Provincial legislatures can then delegate their authority and powers to these bodies of their own creation.

The basic point to be made here is what level of government best exercises the public interest in land. It has been argued that it should be the level which most effectively represents the people affected by the decision. Thus, in principle, land use control may be shared among the different levels of governing bodies according to the interests which are affected (Parker, 1972). For example, it would be inappropriate for municipal government to make decisions about land use where people outside the municipal jurisdiction could be affected by such decisions.

The management of renewable resources and the ultimate responsibility for the actions of municipalities (which are creatures of the province) lie with the provincial government and it cannot legally or morally abrogate those responsibilities (Krueger and Mitchell, 1977, p. 144).
Likewise, national and/or provincial intervention might be desirable where local needs are conflicting with spatially broader needs. For instance, the increase in local property tax base might fail to meet provincial needs such as an increase in agricultural productivity. But some problems exist as stated by Ellickson (1972, p. 706):

Shifting land use planning power to state or regional units would reduce the present evils of parochialism and balkanization, but larger units are less responsible and less locally knowledgeable than smaller ones and may draft cruder ordinances. A tiered system with the state handling statewide issues and localities handling local issues, is possible, but increased costs of defining and policing jurisdictional limits would result.

On the whole, provincial involvement in land use control appears to be of paramount importance in order to rationalize the urban and non-urban competition for agricultural land. Since it could be easily assumed that encouraging more stable agricultural land use will require some financial inducement, the provincial level is well suited to meet this need.
II. REGULATORY METHODS FOR PRESERVING AGRICULTURAL LAND

This section does not pretend, by any means, to cover in depth each method available to control agricultural land use. It does attempt however, to look at those methods which have been somewhat successful in the past and/or have an impact, whatever the degree, upon preserving agricultural land. At this point, a warning must be enunciated. The study has tended to focus upon those methods which, in our opinion, have the best possibilities of gaining success in the future with respect to the preservation of agricultural land.

The most familiar form of land use control is traditional zoning. In this context, zoning aims at reducing non-farm development in an economically and socially important farm area to the point at which it produces no significant negative effect on the future of that agricultural land (Stockman, 1978).

A. Minimum Lot Zoning

Minimum lot zoning or large lot zoning is a method whereby minimum acre requirements are imposed. It tends to increase housing unit costs and thus to discourage single family home development. On the other hand, requiring a lot to be at least 20 acres, for instance, may reduce the number of lots developed, but also greatly increase the total farm area used up by such lots (Stockman, 1978). By forcing developers to use large lots for single family or low density housing, the regulation forces them to chew up
much more of the landscape than they have to (Whyte, 1968). It also has to be mentioned that in many cases the main effect of large lot zoning is to keep people away from any potential development, especially poor people and racial minorities (Lapping, 1977).

This method of zoning has however been held valid in predominantly rural areas where development is not reasonably expected for 15 to 20 years. It allows the farmer to retain an economic rural use for the land at the time when there is no urban use for his land. In such cases there is no loss of value to the farmer through the exercise of this zoning method.

On the whole, minimum lot zoning does not aim at permanent exclusion of urban use but rather at buying time and hindering premature development while other controls are being considered for the best possible future use of the areas of concern. This method has therefore to be carefully applied to specific areas of land since it tends to accentuate scatteration rather than diminish it.

B. Exclusive Agricultural Zoning

This form of zoning allows only for agricultural uses within the region or locality that is being taken into consideration. Exclusive agricultural zoning is justified on the basis that agricultural land, especially prime farmland, must be protected as a unique and valuable resource - or on the basis of the preservation of agricultural character in a community. There are advantages to this technique. Since the value of the land is exclusively derived from its potential for farming, the problems of assessment based on non-farm use are eliminated (Lapping, 1977). It also makes sure that a sufficient stock of agricultural land is being held to meet future consumers' demands and needs. Moreover, it helps keep the social structure of rural communities and maintain the farmer's status within the
society as a whole since the continuance of agriculture may be assured for the foreseeable future.

On the other hand, many shortcomings have to be considered. First of all, there will almost inevitably be parcels of land in the zoning area not suitable for agriculture, and these parcels will be relegated into relative uselessness (Lapping, 1977). Secondly, the farming community adjacent to urbanized areas will not be able to sell their estate at market value (the use value of the land as agricultural land plus the incremental value caused by the possibility of developing the land when there is no such regulation), when they want to retire. Thirdly, political pressures from developing speculators, and farmers can become too intense to effectively implement exclusive agricultural zones (Citizens' Advisory Committee, 1976).

C. Agricultural Districting

There are two ways of districting agricultural land. The first is completely mandatory while the second starts on a voluntary basis but becomes mandatory when the initial requirements are being met. In the former, the province of state requires each municipality or regional board to create an agricultural district within its jurisdiction. The province, in this instance, has the role of advisor, as well as the role of establishing criteria and limitations. Each municipality or region is then required to designate an agricultural reserve containing a minimum percentage of its prime land specified by the province. This agricultural reserve becomes part of the local government's master plan, and only agricultural pursuit is allowed there (Miner, 1975).

The second form of agricultural districting starts at the grassroots level where the state or the county is being asked by farmers to create an agricultural district when a minimum acreage size has been
obtained. After the initial step has been completed, a series of further steps and requirements have to be fulfilled before getting approval from the state. The agricultural district does not necessarily last forever and it must be reexamined by the state at certain time intervals.

The advantages and weaknesses of this method resemble to a large extent, those of exclusive agricultural zoning with the exception that the parcels of land not suitable for agriculture can be left out of the agricultural district, and urban land uses can, in turn, be channelized onto the land less favorable for agriculture. With regard to the second form, another advantage can be mentioned as it is put by Lapping (1977, pp. 280-281):

The agricultural district program [in New York] won wide-based support, as well as legislative approval, because it put emphasis on initiation of control on the local level ... With this heavy emphasis on the local initiation of the program, much of the hostility created in rural areas by the word "zoning" and the term "land use controls" has been eliminated.

In short, agricultural districting provides a protection for investment in farm undertakings as well as for agribusinesses which can rely on a stable market in the area.

D. Maximum Density Zoning

This type of zoning places a limit on non-farm development per designated parcel of land. This technique has several advantages. It prevents a developer from plotting 100 lots consisting of five acres each, thereby removing a large amount of agricultural land from production (a distinct disadvantage in minimum lot zoning, see II.A). It allows the farmer to have the opportunity to sell off a lot or two, in order to relieve his cash flow problem or accommodate a relative. Finally, it can hinder the conversion of good farmland into other uses by permitting building sites on those tracts of land which are not agricultural land, such as wooded areas or waste land.
As in all techniques, this method has some imperfections built into it. One arises when only one non-farm lot is allowed in a given parcel of land. Who will be the one to build on it? The first one who does so will prohibit anyone else owning land in this parcel from doing it (Stockman, 1978). Another problem is related to the density which would be appropriate to maintain a given agricultural area on a fairly permanent basis, yet allow for a degree of non-farm development desired by the local inhabitants.

This technique works best and is most appropriate in areas identified as having prime land and beginning to experience non-farm development pressures.

E. Utility Extension Regulation

This regulation states that no development should be allowed unless connected to municipal utilities. The local government could in effect control development through utility extensions (Citizens' Advisory Committee, 1976). The purpose of this regulation is to discourage development in the rural areas until all of the areas within the existing municipalities have been developed. This regulation may be effective in controlling growth in the urban fringe if it is strictly enforced by the community concerned. However, this technique does not help areas which are losing agricultural land beyond the immediate fringe area. But this could be avoided by giving regional districts or counties power to insist on utility connections prior to development.

F. Easements

There are two classes of easements. One class is positive easement: that is, the provincial, regional or local government acquires the right to do something with part of the farmer's land such as public access, water
rights, rights of way, and the like. The other category is negative easements. In this case, the government buys from the landowner his right to develop the land. This concept lies behind the fact that land ownership contains a bundle of rights from which each right can be separated without altering ownership to any great extent. This form of regulation is often called purchase of development rights. Through this scheme, the farmer continues to farm or use the land just as he has done before; one of the main aims of the easements, indeed, is to encourage him to do just that (Whyte, 1968).

In short, this technique allows the government to acquire, either on a voluntary or mandatory basis, the less-than-fee-simple development right to land which the government wants left undeveloped for the public interest in exchange for the difference between the market value and the agricultural use value. Therefore, by prohibiting certain uses, agricultural land can be preserved. Also since easements run with the land, their conditions apply in perpetuity to subsequent owners of the property.

There are several advantages with respect to this technique for both the government and the landowner. On the one hand, since the landowner can continue to put the land to productive, though limited, use, the government does not have to assume the burden of maintaining the property (Lapping, 1977). On the other hand, the landowner gets a decrease in his property tax base because the encumbrance causes the assessment to decrease. Another benefit to the owner is that he keeps his land and gets a certain amount of money for the right he has given up, and the proceeds can be used to enhance farm business as operating and/or investment capital. Most importantly, the pride of ownership is maintained and the farmer has not been reduced to being a tenant on the land he cherishes. To a lesser extent, another benefit is the flank protection that landowners get. They do not
have to worry about the loss of the aesthetic role of their surroundings since the easement can also be tailored to the natural features which are present in the area (Whyte, 1968). This last advantage leads us to the specificity of easement regulation. Land use prohibitions, through the use of negative easements, can be adapted to the agricultural values to be protected. An acquisition plan by the government or its agency could specify particular characteristics of land which it sought to protect, depending on a classification system determined by public will. Thus easements are very flexible legal agreements which may be tailored to both the interests of the landowner and the special characteristics of the property in order to protect the natural value of the property (Roe, 1976). Finally, the acquisition of development easements is not expensive when it is being used in rural areas rather than in urbanized areas but still costly if compared to preferential assessment techniques.

There are however several limitations to public acquisition of conservation easements. First of all, acquisition cost in urbanized regions can be very expensive. Since the value of the easement is the difference between what the property is worth without the restrictions, and what it is worth with them, the cost of acquiring development rights on a piece of prime land in an area which is suitable for development might be quite immodest. The owner is giving up a major part of the value of his property and he wants a fair price for this taking (Whyte, 1968). Secondly, another limitation is the carrying charges related to public acquisition of conservation easements. As stated by Roe, (1976) p. 436:

Large scale public acquisition carries considerable costs for purchase, administration, and enforcement. The most logical source of financing is the state because reliance on local financing would severely limit the scope of any development rights acquisition program to the protection of only small tracts at best of crucially important lands.
Thirdly, governmental acquisition of conservation easements reduces the tax base of local governments which are heavily dependent on property taxes. While agricultural landowners will pay taxes on the assessed value of their land, the piece of property encumbered by an easement will benefit from reduced tax rates according to the degree of use restriction.

G. Compensable Regulation

The compensable regulation method has borrowed its main features from both zoning regulation and conservation easement methods. As stated by Roe, (1976, p. 427): "it is a method of exercising strict public control over land use by providing compensation for property value losses (sometimes termed wipeouts) due to regulation." Under this scheme, before land is regulated, each parcel is assessed and a guaranteed value established. After the regulation has been made effective, the landowner is immediately compensated if, and to the extent that, the regulation reduces the value of the land for uses being performed at the time the regulation is applied. In the event that it does not occur, the landowner is still compensated for the loss of the right to develop his property but compensation is not made until the property is sold. When the property is sold, the landholder can put in a claim to recover the loss in market value because of the restrictions imposed on such land. The rationale is that he has incurred no loss before he sells.

A major distinguishing feature of the compensable regulation method is that its costs may not be incurred as soon as are those of a conservation easements acquisition program. On the other hand, compensation regulation like any zoning regulation is subject to zoning variances, political dealing, and misuse while easements are normally acquired in perpetuity (Lapping, 1977).
The compensable regulation approach is somewhat effective in preserving agricultural land in urban fringes and in more rural areas. But, if the area is ripe for development, it may not be more expensive for a province or a municipality to acquire property interests than to compensate for regulations (Roe, 1976).

H. Expropriation

This method is not often used with respect to agricultural land. It is, nevertheless, a tool available to any level of government and within its sphere of powers since there is in Canada no constitutional principle that private property cannot be taken without due process of law.

As to the question whether Parliament has the power to expropriate land for public purposes without compensation, there cannot be any doubt. The Legislatures have the same powers as Parliament, and there would be no necessity for compensation to be given. (Challies, 1973, p. 75).

However, the general rule of law in expropriation cases is and has long been that compensation is given, and any statute providing for expropriation must be expressed in the clearest and most unequivocal terms (Challies, 1973, p. 77).

In the matter of expropriation, no landowner can be entitled to compensation for the value of the land taken. Since the power to expropriate land without compensation is not exercised, we then assume that the landowner is compensated for the taking of his land.

Although this method is very efficient in preserving agricultural land from any non-compatible use, some problems are inherent to its use. First, outright purchase is a very expensive method to protect large tracts of agricultural land. It implies an opportunity cost which has to be heavily considered. Secondly, since much of the rural land is agriculturally productive, it should be retained, for the most part, in private use (Roe, 1976). Thirdly, publicly owned agricultural land may be
vulnerable to some interest groups who favor policies inconsistent with farming practices (Lapping, 1977). Finally, the administration of the scheme along with the maintenance of public properties where these are not leased back to farmers for farming, could be very prohibitive.

I. Stewardship

The concept of stewardship or minimum maintenance requirements has been included in the analysis not because it directly preserves agricultural land, but because it is a regulatory means to exert pressure toward proper land use and also because it is a reminder of the collective interest in the use and husbandry of the land (Beaubien, 1977). This is a concept whereby an annual maintenance fee, payable in cash or worked off in management, is levied upon any landholder who owns land suitable for agricultural use. The purpose of establishing minimum management standards for agricultural land is to raise basic levels of maintenance. This requirement should stimulate a more productive use of land with positive benefits to the community and the landscape of the region.

Good land management might include crop rotation, weed control, fertility maintenance, and the like. But how much, and what use will depend upon the capability of the land.

In order to set standards for minimum maintenance, the essential productivity of the land is to be determined. A simple system could be worked out to make it expensive to hold good agricultural land in low productivity, which would pressure poor users or non-users to improve their performance or to lease their land to somebody who is able to improve the land use (Beaubien, 1977, p. 76).

This regulation can be phased in by partial application either in terms of level of enforcement, categories of owners, classes of land use, or some combination of partial application (Royal Commission on Land Ownership and Land Use, 1973).
J. Other Methods

There are a number of other methods which might be instrumental in the preservation of agricultural land. Since they are variations of those already discussed, or are fairly minor in achieving agricultural land preservation, it is not worth doing more than mentioning them. Among these are: inverse parcel size or sliding scale method permitting a given number of non-farm developments based on the size of the farmland; special zoning regulations such as control on lot depth and/or width; interim zoning controls whereby development is prohibited for a relatively short period of time; and bonus and incentives zoning in which the local government allows the developer to increase density in return for preservation of small agricultural areas.
III. COMPENSATORY METHODS FOR PRESERVING AGRICULTURAL LAND

A. Taxation Methods

Historically, taxation schemes have been implemented to make it less costly to use land for agricultural purposes in the urban fringe areas. The rationale was twofold: first, as a result of urban development regardless of the activity currently being carried out on the parcel of land, the assessed value of the land was increased to consider its potential development value. Then facing an increase in property tax which, in many cases, shrank his income extensively, the farmer was forced to sell his land because it was no longer profitable for him to devote his land to an agricultural activity. Secondly, it was argued that it was inequitable for the farming community to pay for services such as roads, schools and municipal services from which it did not benefit. Therefore, by relieving the farmer of tax burdens and then allowing him to continue farming, it was believed that significant quantities of land would be kept in agricultural use which would otherwise be shifted.

1. Preferential Assessment

A preferential assessment taxation scheme is one where land is assessed upon the basis of its value according to its current use rather than its market value. Capitalization of income and soil productivity
ratings are the most commonly accepted approaches used to assess farmland; the former is derived by dividing the farmer's future stream of net income by a percentage representing a fair return on investment.

Since current usage alone does not differentiate between bona fide farmers and speculators who can benefit from the scheme by conducting very minimal farming operations, most states and provinces have tried to incorporate into the program one or several of the following requirements: (i) a minimum number of acres must be farmed; (ii) a minimum gross income must be derived from the land; (iii) a certain portion of the owner's income must be originated from the land; and (iv) land must have been in qualifying use for a minimum number of immediate past years.

Several advantages underlie the preferential assessment tax scheme. The approach encourages farmers to keep their land in the agricultural business and thus decreases development pressures on these lands. Also, as stated by the Central Fraser Valley Regional District Planning Department (1972, p. 64):

It is generally regarded that preferential assessment will help to keep rising food prices down by insuring that food production areas can continue to remain close to metropolitan areas, where they can serve city residents economically with fresh, wholesome, sufficient and high quality products at the lowest prices.

It has also been argued that, because of the tax reduction, people wishing to buy a parcel of land for farming can lessen their potential carrying costs so that they can afford to pay more for the land and compete with developers.

On the other hand, differential assessment is likely to raise other property owners' tax bills if public services have to be maintained at the same level (assuming the area includes a relatively large acreage of farmland) unless there is some kind of financial aid from the upper levels of
government. Secondly, since it is not a compulsory scheme, preferential assessment might not be effective in retaining land in agriculture where farmers have to resist high development pressures as well as a potentially large capital gain; then, under such circumstances, the scheme may prove to be incapable of influencing the pattern of development. Finally, the approach also has weaknesses with respect to administrative matters. The determination of use value can indeed be very difficult in several cases, because of the lack of pertinent information. Further difficulties may arise on the determination of whether or not a particular parcel of land is being used in farming.

2. Deferred Taxation

Deferred taxation can be defined as preferential assessment which features a rollback tax provision. In this case a rollback tax is one which is levied against the tax savings which result from assessing farm land at its use-value rather than at its market value. It is imposed when the land use is converted from agricultural to an unqualified use. As stated by Keene (1977, p. 36), these deferred taxation and conveyance tax provisions have two principal objectives:

(a) they are designed to capture some of the tax revenues lost because of the differential assessment program; and

(b) they are designed to deter owners of land which have received tax benefits from converting their land.

However, it must be pointed out that the inclusion of the rollback provision conflicts with the aforementioned aim of providing tax benefits to farmers. The rollback tax may force the farmers to forgo the benefits derived from the scheme by not enrolling since the mere deferral of property taxes might not be a sufficient motive to enter the
program. On the other hand, for those farmers who do enter the program, the recapture of taxes by municipalities is usually quite small relative to the large capital gains which stem from selling or converting farmland, and thus has a minimal impact on farmer's decision. However, it could be argued that a rollback tax is a necessary provision from the standpoint of equity. Without a rollback provision, preferential assessment might provide a free ride for the speculator (depending on the scheme requirements), at the cost of others whose taxes are increased to make up for the loss in municipal revenue (Keene, 1977).

3. Restrictive Agreements

Since this scheme is discussed in Section IV through the California Land Conservation Act, it is here treated only briefly. Restrictive agreement is a program whereby the state or local government enters into an agreement with an agricultural landowner. The agreement stipulates that the landowner must restrict the use of his land to agriculture for a given period of time, in return for differential assessment. As it is put by Lapping (1977, p. 279): "in effect land owners are transferring their development rights, for a fixed period of time, in exchange for a favorable assessment of taxes." An underlying advantage of the scheme is that it ensures that land is kept in agricultural use for a specific number of years. Since the agreements are generally made for a minimal period of ten years, they tend to differentiate between bona fide farmers and speculators and, hence, increase the benefits going to the former relative to speculators.
4. Conclusions

The overall effects of changes in property taxation through the aforementioned approaches do not seem to influence the preservation of agricultural land to a great extent. Since these approaches cannot control the timing and pattern of development, they have to be linked to other land use control measures in order to increase the inducements to farming and direct urban growth to non-agricultural land. This problem is dealt with in the Conclusion and Recommendations section of this study. As Whyte (1968, p. 116) has stated:

My own guess is that preferential assessment is going to do very little to halt the conversion of open space. Even if the speculator is weeded out and only the true farmer benefits, the true farmer is going to do what anybody else would do. When the price is right, he is going to sell out, low taxes or no. And why should he not? He is not going to forswear a large capital gain so suburbanites will have pretty scenery. Unless there is some compelling incentive, he is going to relocate.

B. Transfer of Development Rights

Transfer of development rights is a relatively new technique which is being used increasingly in the United States. The mechanics of the technique are quite simple, although their implementation through a market system makes it less attractive, but still valuable. Under the program, a zoning district designates areas where development is prohibited, and others where development can still occur. The densities of development in developable areas are made higher than those allowed under the previous zoning system by transferring the development rights of the areas which have lost their potential residential development to the developable areas. As it is put by Nieswand, Airola and Chavooshian (1974, p. 15):

Landowners in the preserved areas, who will continue to own their land, may sell their rights to further development to other landowners or builders who wish to develop those areas in which development is agreed on.
For instance, a developer or builder who is willing to increase the density of his parcel of land to the new ceiling resulting from the establishment of the preserved zones, must purchase development rights from owners of the said area at a market-determined price. The market can be of two kinds: a private market in which the price of development rights is determined by supply and demand forces, or a public market system in which a public body acts as both buyer and seller of development rights.

A major advantage of the transferable development rights scheme lies in the fact that it allows owners of regulated areas to be compensated for the loss of a basic right attached to land ownership. It thus curtails the financial inequities which stem from the severity of the regulation restriction. It does not alter the level of overall development which was granted to the community through the previous zoning provision; it only modifies the rate of development in one area and transfers it to another. Moreover, the farmer keeps ownership of his land and hence, there is no disruption of farming activities and tenure. The cost to municipal taxpayers is very low since there is no acquisition by the local government except for the zoning and planning which is essential to establish the supply and demand for development rights. Finally, it makes the provision of public services much easier since the pattern of development can be easily controlled through zoning districts.

Although the technique has several advantages attached to it, there are also many difficulties to be overcome to make it implementable. For instance, it is very hard to determine the value of development rights since the market may not work properly. As mentioned by Lapping, Bevins and Herbers (1977), a possibility exists that there will be insufficient demand for the development rights; the developer or builder
might decide not to opt for higher densities in developable areas and thus not purchase the rights. By the same token, even if they were buying development rights, they would be able to pick the landowner in the preserved area who is willing to sell his rights for a lower price. Consequently, the landowner would not get a fair price for his development rights and the developer or builder might end up with windfall benefits from the deal. Finally, the technique is faced with another problem. Although it deals with the pattern of development, it does not address the timing of such development, "Since it is left up to the developer and/or builder to decide when they will take advantage of the program.

As to whether transfer of development rights should be implemented in Canada, the exposition is left to abler pens:

The primary reason [for its rejection] is that in Canada the right to develop is not an ownership right, but a privilege given to a few by government to meet the public's requirement for changes in land use. At this stage, to grant the right of development to landowner would be a backward step in that it would place serious additional problems on orderly development and long-range planning. (Alberta Land Use Forum, 1976, p. 100).

C. Purchase of Land Through a Land Trust

The last technique to be fully discussed in this study is called land banking. Although land banking can come into existence through the creation of three different types of trusts: (private, public and community land trusts), the study assumes that whatever the type of trust is created, the same advantages and disadvantages would result. In this approach, the local or provincial government establishes a public corporation which is granted power to acquire the fee simple rights to land both through purchase on the open market and by expropriation procedures. The land banking corporation can be financed either directly by government in the form of grants and loans, by borrowing or by both.
This approach has been implemented: (i) to ensure the availability of sites needed for development; (ii) to control the timing, location, type and scale of development and, (iii) to prevent urban sprawl (Fishman, 1975) but it could be geared toward creating a permanent agricultural reserve.

The advantages related to this scheme are several. First, it ensures that agricultural land is retained in its present use, thus securing an adequate supply of farmland. This is particularly important in the urban fringe areas, where land is usually the most suitable for agricultural activity and most susceptible to development pressures. Second, it compensates owners whose land has been purchased by the corporation and restricted to agricultural use. Third, the lease back of purchased land on a long-term basis to farmers or corporations willing to farm would either lessen acquisition costs or compensate for the loss of property taxes no longer levied upon the land. It also allows for a deferment of farmland maintenance costs. Finally, additional lands required by a farmer who does not wish to acquire the fee simple rights can be made available by the land bank corporation.

On the other hand, local government involvement in such a program is not always economically feasible. Since land banking operations require a large initial outlay of public funds and a decrease in tax base, (which, in itself, could entirely offset the objectives of the scheme), local government may not be able to cope with such an investment quite apart from the costs of carrying a land inventory. For these reasons, the provincial government may be the most suitable governing body to undertake a program of this kind since it has a greater financial capacity and can compensate municipalities for property taxes no longer collectible.
Another major area of concern rests upon the fact that the farmer loses ownership of his land. Not only must this be weighed against the advantages of the program, but it could also be detrimental to the rural community as a whole since its ties to land have been considerably reduced. Furthermore, it would be futile to expect high levels of investment in farm equipment on the part of farmers who have now become tenants on the land.

On the whole, land banking can be justified on the basis that it could be the best means available to governing bodies to preserve key areas which are in the process of being lost to agriculture.
IV. ANALYSIS OF TWO STATES USING DIFFERENT SYSTEMS

A. The State of California and the California Land Conservation Act

1. Description

The California Land Conservation Act (often referred to as the Williamson Act or CLCA) was enacted by the Legislature of California in 1966. In its present structure, the Williamson Act has three major objectives:

(a) to preserve the limited supply of agricultural land for the maintenance of the agricultural economy of the state and for the assurance of an adequate food supply for future residents of the state and nation;

(b) to discourage the premature and unnecessary conversion of agricultural land to urban uses because urban sprawl increases the costs of community services;

(c) to preserve lands in agricultural production because they constitute an important physical, social, aesthetic and economic asset to existing or future urban developments.

In order to realize these objectives, CLCA authorizes counties and cities to enter into contract with landowners in which the latter agree to limit the use of agricultural land to agriculture or other compatible uses. To qualify, the land must meet certain agricultural criteria and be located within an area designated by a city or county as an agricultural preserve. The contract is for a period of no less than ten years and is renewed each year automatically for an additional year unless the landowner gives notice of non-renewal. In return for the obligation of restricting land
to agricultural use, the county or city agrees to assess the land on the basis of its use value rather than on that of its market value, thereby reducing property taxes.

If the county or city or the landowner gives notice of non-renewal, the contract remains in effect for the balance of the remaining period. When the owner gives such notice, the assessed value of his land is to be increased according to a complex formula enunciated in the California Revenue and Taxation Code (Section 426). During the first year, land is assessed at approximately 60% of what it would be if it was assessed on the basis of its market value, gradually increasing until, at the end of the runout period, it reaches full assessed value which, in California, is 25% of the market value.

The owner may also petition the board or council for cancellation of the contract. The board or council may approve the cancellation if they deem that it is in the public interest. The Act goes into greater details by mentioning that an opportunity for another use of the land as well as the uneconomic character of the existing agricultural use should not be sufficient reason for the cancellation of a contract. A cancellation fee, equal to 12.5% of the land's market value must be paid as deferred taxes upon cancellation, unless a waiver is obtained from the county board or city council and approved by the Secretary of the State Resource Agency. In addition to the cancellation fee, an amendment was made to the Act in 1978 requiring the payment of additional deferred taxes, which or any portion thereof may also be waived. These additional taxes are based upon the number of years for which the land has been under contract according to a complicated formula (California Government Code, Section 51283.1). The cancellation fee, however, should be subtracted from the additional deferred taxes.
So as to relieve school districts and local government of the additional burden supported by them through a decrease in property taxes due to the implementation of the Act, the State of California has established a subvention program which provides payments to participating county and city governments for a partial recovery of the estimated decrease in property taxes.

At this juncture, other particularities of the CLCA must be pointed out. First, all successors in interest of the owner are bound by the contract. Secondly, a contract between an owner and a county can be voided by a city which wishes to annex any land within one mile of such city, at the time the contract was initially executed. Likewise, a city can protest the forthcoming execution of a contract between a county and an owner, which includes land within one mile of the exterior boundaries of said city.

2. Advantages

The California Land Conservation Act has been a first step toward the preservation of good agricultural land. By creating a statewide legal structure, it has helped maintain the agricultural economy of the state. As stated by Schwartz, Hansen and Foin (1975, p. 131):

By increasing current income, CLCA contracts could induce some landowners in areas suitable for development to farm their land much longer than they would otherwise. The CLCA would be viewed as having successfully prevented "premature conversion" on these lands ...

Since the term of the contract is ten years and longer, CLCA encourages the farmer to plan and invest into agricultural activities with more certainty, and thus allows a greater stability of land use. Also the financial participation of the State through subvention programs has expanded the base of financial support recognizing that the state,
as a whole, benefits from the preservation of agricultural land and open space.

3. Disadvantages

Since the California Land Conservation Act is permissive legislation, it does not impose a duty on each city and county having a general plan to implement the Act's provisions. Referring back to the objectives of the Act, as stated on page 27, it is worth analyzing whether the CLCA has met its objectives.

To begin with, it should be pointed out that few owners of prime agricultural land have enrolled in the program. Of the 15,000,000 acres under the program in the 1976-77 fiscal year, only 4,557,000 acres were considered prime land - which represents about 30 percent of the total acreage enrolled and about 23 percent of the total potential prime agricultural land acreage in the State of California (Regional Science Research Institute, 1977). This non-enrollment might easily be related to two main factors: the attraction of large capital gains near growing cities and the insufficiency of adequate tax benefits derived from the program. The latter stems from the fact that the more productive a parcel of land is, the higher its use value and, therefore, the smaller the property tax reduction (this is dealt with in greater detail in Section V). With respect to the former, Hansen and Schwartz (1975) have demonstrated through their research that development expectations were important in the decision to accept a CLCA contract.

Our detailed spatial analysis clearly indicates that, with few exceptions, CLCA parcels in all three areas are located away from development activity - the heaviest enrollment being found in the most distant foothill locations. Much smaller average parcel size and acreage per owner for non-enrolled parcels were observed in each study area. This result could be attributed to
the greater development potential of these parcels, since parcel sizes were smaller closer to developing areas. (pp. 345-346)

On the whole, there is little evidence that the Williamson Act has met what it intended to do. Indeed, it has partly preserved the limited supply of agricultural land and partly discouraged the premature and unnecessary conversion of agricultural land to urban uses.

Another problem to be mentioned is the creation of a vicious circle which seems to be built in the structure of the program. No doubt, the greater the level of participation in the program, the less desirable for non-participants to enter into contract. Since the contract is made on a voluntary basis, one can argue that a landowner would be inclined not to enter into contract because of the increasing probability of development that is related to a decrease in the availability of land for development. This phenomenon can be viewed as a direct cause to urban sprawl: by leap-forging enrolled lands, development may extend far beyond the route it would normally have used without the program.

A further weakness of the Williamson Act arises out of the role of both the State and the county or city in the implementation of the program. Besides its role of financing part of the decrease in property taxes, the State of California does not play any other role. This had led to an inconsistent implementation of the program throughout the state (as of 1975, eleven of the 58 counties did not offer it at all), to a 'laissez-faire' approach with respect to timing and pattern of development, to an inadequate supply of incentives to both the local governments and the landowner to get more land into contracts, and to an inability to differentiate between classes of landholders. As reported by Goodenough (1978, p. 295):
Finally, despite the original intent of the act to benefit the small independent, dedicated farmer faced with rising land values on prime land near the urban frontier, the fact is that the ten largest beneficiaries are vast corporations often holding non-prime land in locations some distance from urban areas.

By the same token, the role of local governments has been limited considering the influence that they could have had on the direction and depth of change. The limitation stems from two related factors: the first being rooted in the perpetual belief by local government that the expansion of the tax base might resolve any financial problems with which it is faced, and the second, the lack of incentives given to the local bodies to carry out their duties in an efficient and orderly manner.

4. Conclusions

The State as well as the county or city may have some cards to play in order to solve; or at least, lessen, the problems, weaknesses and difficulties encountered both in the implementation stage and in the consequences of the CLCA.

In the first place, one can argue that the State should get much more involved in the process. Although it was the initiator, its control over the process and the monitoring associated with it has been deficient in many respects. As we have seen earlier, it did not at all resolve the struggle between the physical growth of the State to accommodate a growing population, and the need to preserve agricultural land so as to feed this population. The small proportion of prime agricultural land near urbanized areas enrolled in the program confirms this statement. The State's degree of involvement has also to be related to the notion of equity. Since the CLCA benefits all people in the state as well as people who are fed by the output of agricultural activity, the take over of the program's financial liability by the state should invite little rebuttal. The city or county
would then be more inclined to contract farmland and it would also be more equitable to counties which experience a large proportion of agricultural land but a small tax base.

B. The Province of British Columbia and the Agricultural Land Commission Act

1. Description

In 1973, the Legislature of British Columbia enacted the Land Commission Act, which empowered a provincial commission to designate land, including Crown land, suitable for farm use and to establish agricultural land reserves (ALRs) throughout the province. At the outset, the Agricultural Land Commission had four major objectives:

(a) to preserve agricultural land for farm use;
(b) to preserve greenbelt land in and around urban areas;
(c) to preserve land banks for urban and industrial development;
(d) to preserve parkland for recreational use (Land Commission Act, Section 7(1)).

However, in 1977, the Act was amended to apply only to agricultural land and the Agricultural Land Commission's objectives were narrowed down and now, read as follows:

(a) preserve agricultural land;
(b) encourage, the establishment, maintenance and preservation of farms, and encourage uses of land in an agricultural land reserve compatible with agricultural purposes; and
(c) advise and assist municipalities and regional districts in the preparation and production of land reserve plans.

In order to carry out its responsibilities, the Commission was given zoning and regulatory powers. The creation of agricultural land reserves was done through the involvement of regional districts. Each of the 28
regional districts was given the duty of identifying, discussing and designating an agricultural land reserve within its boundaries, with the advice and financial assistance of the Commission. The latter could amend the plan if necessary, and had to submit it to the Lieutenant-Governor-in-Council for approval, after having held a public hearing.

The agricultural land reserves were designated on a scientific basis using the Canada Land Inventory (CLI). The CLI provides basic information in terms of capability of the soils for a variety of possible uses. It classifies arable land throughout British Columbia into seven classes, according to their potential for agricultural use, with the highest rated soils designated as Class 1; the first three classes are considered fit for sustained production of commonly cultivated crops; the fourth is marginal for sustained arable culture; the fifth and sixth are suitable for hay or improved pasture and for grazing respectively, and the seventh class is unsuitable for agriculture. As reported by Manning and Eddy (1978, pp. 13-14), the agricultural land reserves were designated according to the following method:

1. All class 1 to 4 Canada Land Inventory land that was not irreversibly developed, regardless of ownership or tenure, was included in the Agricultural Land Reserves;

2. Sufficient land was excluded from Agricultural Land Reserves to allow for roughly five years growth of urban areas if non-agricultural land was not immediately available for urban expansion;

3. Land of lower agricultural capability (classes 5 and 6) was included in the Agricultural Land Reserves where historical land use patterns indicated that such land could be effectively used for agriculture in conjunction with the class 1 to 4 lands;

4. Small pockets of non-agricultural lands (class 7) were included in the Agricultural Land Reserves wherever exclusion of such land might allow undesirable intrusion of incompatible uses in an area of predominantly agricultural use.
Land uses within the ALRs are regulated by the Agricultural Land Commission as determined by the Act and the regulations. Besides the use of land as farm land, certain non-farm activities can be allowed within the ALRs. B.C. Regulation 93/75 established two categories of uses, namely: outright uses and conditional uses. The former includes accessory buildings and structures necessary for farm use, ecological reserves and public parks, golf courses, and the like. The latter is permitted if, in the opinion of the Commission, the proposed use and manner of development thereof do not materially reduce the future agricultural potential of the land, or is in the public interest. This includes the processing of agricultural products, additional dwelling units and buildings for joint tenants or tenants in common, electrical transmission lines and utility installations, trunk sewer and trunk water lines, sanitary land fills, open land recreation uses, gravel pits over two acres in area, schools and other public institutions, or the like. Since the Act does not apply to land of less than two acres in area, the Commission also has to deal with subdivision of land within the reserves in order to impede both the reduction of options for crop production and the increase of the pressures upon existing adjacent commercial farm operations (British Columbia Agricultural Land Commission, 1978).

In June of 1978, the Agricultural Land Commission adopted new guidelines with respect to homesite severance. But, in order to provide an opportunity for retiring farmers to subdivide from the farm a retirement homesite when their land would be sold, the Commission has developed specific stipulations so as to restrain the new program from being abused.

In its present structure, the Agricultural Land Commission has to administer the Soil Conservation Act (1977) which specifically prohibits the removal of topsoil from, including the placement of fill on lands
within the Agricultural Land Reserves. Furthermore, of the myriad of statutes enacted by the Legislature of British Columbia since its birth, the Agricultural Land Commission Act is subject only to the Environment and Land Use Act and the Pollution Control Act. Nor can any Minister, Ministry of Government, or agent of the Crown exercise any power granted under any other Act or regulation if it contravenes the exercise of any power granted under the Agricultural Land Commission Act. On the other hand, the Act does not have any legal constraints whatsoever on federal activities concerning land uses in British Columbia.

The Agricultural Land Commission has to deal with applications for inclusion or exclusion of land from the Agricultural Land Reserves. The procedures are spelled out in Section 9 of the Act. Subsection 9(1) allows for a municipality, regional district, the Commission or Cabinet itself to solicit the Lieutenant-Governor-in-Council for an exclusion of land from the ALR. Through subsection 9(2), an owner of land aggrieved by a designation by the Commission of his land as part of a reserve, may apply to the Commission to have it excluded from the ALR and, if this application does not come about, the land owner may appeal to the Environment and Land Use Committee (ELUC) if leave of appeal is granted either by any two members (out of seven) of the Commission or by the Minister of Environment.

There are no provisions in the Act allowing the landowners included in an Agricultural Land Reserve to be compensated for the loss of value arising from the limitations imposed upon development by the Act. Section 16 of the Act explicitly deals with this matter by stating that land is not being taken, or injuriously affected by reason of the designation by the Commission of that land as an agricultural land reserve. As it is put by G.G. Pearson (1975, p. 70):
In fact, there is no basis in law for compensating individuals for perceived losses due to zoning. To recognize the principle of compensation in zoning matters would create an impossible financial burden for tax payers.

However, subsection 26(3) of the Assessment Act (S.B.C. 1974, c. 6) allows farmland to be assessed at its actual value as a farm without regard to its value for other purposes, but the improvements on the farm have to be assessed at the percentage of actual value set by the Lieutenant-Governor-in-Council. This rate was fixed at ten percent in 1980. (B.C. Regulation 463/79).

2. Advantages

The Agricultural Land Commission Act has proved to be clearly effective in preventing land use change with the Agricultural Land Reserves. It has influenced positively the level of farmland size as well as of capital investment in agricultural activity, and lessened the spread of urban sprawl. These benefits with regard to preservation of agricultural land stem from several factors. As stated by Runka (1975, p. 21), the use of an independent commission as a vehicle to implement land use controls is an important factor of success:

By nature they [commissions] can be flexible enough to give a sympathetic ear to local concerns while at the same time consider how a particular land use action fits in with a regional or provincial plan. ... An independent commission can treat private and public interest without bias. But in order to be successful a commission must have broad powers; it must also be able to balance conservation with essential development and ecological principles with economic, social and political realities.
A second factor contributing to its effectiveness has been the compulsory provision built into the Act which, in turn, has had several side effects. As of January, 1979, 11,647,980\textsuperscript{1} acres have been included in an Agricultural Land Reserve throughout British Columbia. As shown in Table 1, 67.88% of the total acreage available in Classes 1 to 4 is in the Agricultural Land Reserve.

With respect to side effects, it can be argued that the Agricultural Land Reserves have fostered the development of land within already developed areas, through the in-filling of vacant lots and/or the increase in population density. The consequence has been a more comprehensive and integrated land use planning and thus, the constant improvement in the provision of municipal services in urban areas.

Another factor directly associated with the Act has been the harmonization of decision making process related to land uses at each level of government. Indeed by integrating local governing bodies in the implementation stage of the process, as well as in the monitoring and appeal process, the Act has insured the participation of every community at each stage of the process. It also seems that regional districts have had an educating role to play by explaining ALRs and the procedures of the Commission to the general public and have contributed to the general acceptability of the statute.

Another positive feature of the scheme lies in the fact that the Land Commission Act has priority over the provincial statutes. As pointed out by Baxter (1974, p. 18):

\textsuperscript{1}This figure differs from the one shown in Table 1 because the division of acreage in ALR into classes was not available from the Agricultural Land Commission. The study had then to rely on the figures provided by the Select Standing Committee on Agriculture.
### TABLE 1 - COMPARISON OF AGRICULTURAL LAND IN THE ALR AND TOTAL AGRICULTURAL LAND BY CLASS

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>Land distribution</td>
<td>130,765</td>
<td>714,272</td>
<td>1,710,154</td>
<td>3,481,837</td>
<td>3,627,675</td>
<td>1,066,385</td>
<td>413,991</td>
<td>11,145,099</td>
</tr>
<tr>
<td>Reserve (in Acres)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land Distribution in British Columbia (Improved)</td>
<td>172,840</td>
<td>982,673</td>
<td>2,470,418</td>
<td>5,267,772</td>
<td>15,167,517</td>
<td>13,329,190</td>
<td>36,818,812</td>
<td>74,209,222</td>
</tr>
<tr>
<td>Land in ALR as a Percentage of Total Land in British Columbia</td>
<td>75.66%</td>
<td>72.69%</td>
<td>69.23%</td>
<td>66.10%</td>
<td>23.92%</td>
<td>8.00%</td>
<td>1.12%</td>
<td>15.02%</td>
</tr>
<tr>
<td>Class 1 - 4 Land in ALR as a Percentage of Total Class 1 - 4 Land in British Columbia</td>
<td>6,037,028</td>
<td>8,893,703</td>
<td>= 67.88%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class 1 - 4 Land in ALR as a Percentage of Total Land in ALR</td>
<td>6,037,028</td>
<td>11,145,099</td>
<td>= 54.17%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) Source: Select Standing Committee on Agriculture (1978).

(2) Source: B.C. Environment and Land Use Committee Secretariat (1976).
... the Commission is in a good negotiating position in discussions of the activities of various departments as they relate to farmlands. Before any new development by another provincial agency is commenced, their plans will be vetted by the Commission. This will enable the Commission to ensure that all reasonable alternatives are explored before agricultural land is alienated for such purposes, and that the negative impact of these developments on agricultural productivity are minimized.

Moreover, by amalgamating the administration of both the Agricultural Land Commission Act and the Soil Conservation Act, the B.C. Legislature has allowed a better integration of agricultural land regulations since these Acts are closely associated with each other. The use of CLI classification has permitted a better acceptance of the Act since it is based on scientific grounds rather than on arbitrary zoning practices. Finally the exclusion of sufficient land to allow for about five years growth of urban areas has allocated regional districts and municipalities reasonable time to reformulate a land use strategy taking into account the new terms of reference spelled out by the Agricultural Land Commission. This advantage, however, has to be qualified based on the recent study conducted by Manning and McCuaig (1977). Indeed, they discovered that 53.5% of Canada's Class 1 land is located within a 50-mile radius of Census Metropolitan Areas (CMAs). This also applies to 28.6% of Canada's Class 2 land, and nearly 20% of its Class 3. Although Victoria and Vancouver CMAs were not included in the study, the authors stated that their omission did not affect the figures significantly. One might argue therefore that the exclusion of land for short-term growth could have somewhat affected B.C.'s prime agricultural land inventory.

3. Disadvantages

A number of inherent disadvantages or weaknesses have been related to the procedure utilized by the Agricultural Land Commission as well as
to the consequences of certain sections of the Act itself, especially with respect to the appeal procedure.

Apart from the land either already being assessed as farmland or zoned for agricultural or farm use under a by-law of a municipality or regional district, the use of the Canada Land Inventory classification as the sole base for evaluation of land to be incorporated into the Agricultural Land Reserve has been criticized on several grounds. First of all, since CLI classification itself is mainly based on soil capabilities, it does not take into account agricultural activities such as chicken coops, mink farms and piggeries which are not soil bound. Secondly, the agricultural capability rating is based on common field crop of the region and thus does not take into account that some land, albeit poorly rated, can be very productive for certain specialty crops, such as tobacco and blueberries. However, through the fine-tuning of ALR boundaries which is being carried out, the Agricultural Land Commission has committed itself to solving the CLI classifications shortcomings.

A further disadvantage which, recently, has been heavily commented upon, is the ability of individuals to apply for exclusion. Since the 1977 amendment to the Act which allowed the unsuccessful applicant for land exclusion to use the alternate route of the Environment Minister to appeal to ELUC, there has been an increasing number of appeals for exclusion which have been processed through the aforementioned Minister. This has resulted in the removal of more acres of farmland from the Agricultural Land Reserve. In the next section, an attempt is made to resolve that problem, or at least make the exclusion of agricultural land from the ALR less attractive.

Similarly, paragraph 9(1)(b) of the Act can, in several cases, weaken the object of the Act if it is over- or misused by the B.C. Cabinet.
Krueger (1977, p. 129), in effect, stated that:

... the greatest potential weakness of the Land Commission Act would appear to be the great discretionary powers of the Cabinet of the provincial government. The Cabinet may exclude land from an Agricultural Reserve without a public hearing, without approval of the Commission, and without application from a local government. If a Cabinet were to change its view concerning the desirability of preserving agricultural land, the whole intent of the Land Commission Act could be undermined.

Finally, although the Commission has allowed only subdivision and use of lands which were considered compatible with agriculture, it might have a negative impact on farm viability in the long-run. For instance, hobby farming does not preclude agricultural potential of land since the land remains intact or may be very productive under intense cultivation. It does, however, contribute to fragmenting the agricultural land into units too small to be commercially productive and also does not support the locally agricultural infrastructure, which will be required to return the land to commercial production. Another aspect of the problem is presented by Manning and McCuaig (1975, p. 9): "Disuse or misuse of land may result in physical or chemical damage to soils: a common example is soil erosion due to lack of maintenance." Likewise, the Act itself has been conducive to disuse of farmland in some cases. Since it would have been expensive and unprofitable for a developer who had purchased land at speculative prices for development purposes, to convert the land back into farming in terms of capital and operating costs or even in terms of insignificant financial returns from leasing out the land, the land has been left idle in several areas of the province.

4. Conclusions

The way in which the Land Commission Act has been carried out has proved to be very effective. The Act's effectiveness can be confirmed by
looking as to whether or not it has reached its intended goal of preserving agricultural land. Since most of the prime agricultural land is now included in the Agricultural Land Reserve (see Table 1), one could argue that British Columbia has taken the right action to meet future requirements of food and related issues. Although the preservation of agricultural land in itself does not lay foodstuffs on one's table, it has brought stability for agricultural decision-making. The recentralization of some of the land use controls has led to a more comprehensive land use planning. Manning and Eddy (1978, p. 99) put it this way:

   A major positive effect of the ALRs has been an influence upon municipal and regional planning. The ALR zoning is now used as a guideline by planners in the overall planning process. In many regional districts and municipalities, the ALRs have been used as a justification for comprehensive zoning or as a scapegoat for their actions. Since 1972, ALR boundaries have been used as parameters in all regional planning.

C. Comparison of California and British Columbia Approaches

   Although the State of California and the Province of British Columbia had the same intent when enacting a piece of legislation, namely the preservation of agricultural land, their approach has been quite different. Table 2 shows the major particularities of both Acts.

   The Williamson Act has come out with a wider range of land uses to be protected than its Canadian counterpart, although, at the outset, they both had a similar range of land uses. But in 1977, it was unintentionally realized that the objects of the B.C. Act had to be narrowed down so as to be in a position to achieve the Act's main aim. Indeed, the direction of effort toward too large a scope would have jeopardized the effect of the Act on agricultural land. Although the previous objectives were compatible with agricultural land in terms of the possibility of conversion or
TABLE 2 - COMPARISON OF CALIFORNIA AND BRITISH COLUMBIA ACTS

<table>
<thead>
<tr>
<th>California Land Conservation Act</th>
<th>British Columbia Agricultural Land Commission Act</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Intent of the Act</strong></td>
<td>To preserve agricultural land</td>
</tr>
<tr>
<td><strong>2. Land to be protected</strong></td>
<td>Land devoted to agricultural use</td>
</tr>
<tr>
<td></td>
<td>recreational use open space use</td>
</tr>
<tr>
<td><strong>3. Type of agreement</strong></td>
<td>Voluntary non-statutory agreement</td>
</tr>
<tr>
<td><strong>4. Term of agreement</strong></td>
<td>No less than ten years</td>
</tr>
<tr>
<td><strong>5. Instrument of implementation</strong></td>
<td>Counties or cities</td>
</tr>
<tr>
<td><strong>6. Types of tenure included</strong></td>
<td>Private ownership</td>
</tr>
<tr>
<td><strong>7. Role of the State</strong></td>
<td>Initiator and financial supporter</td>
</tr>
<tr>
<td><strong>8. Role of the Provincial Commission</strong></td>
<td>Non applicable</td>
</tr>
<tr>
<td><strong>9. Role of County or Regional District</strong></td>
<td>Executor</td>
</tr>
<tr>
<td><strong>10. Role of the City or Municipality</strong></td>
<td>Executor but at a lesser extent than county since most land is outside city boundaries</td>
</tr>
<tr>
<td><strong>11. Form of compensation</strong></td>
<td>Preferential assessment</td>
</tr>
<tr>
<td><strong>12. Public cost</strong></td>
<td>Loss of property tax revenues</td>
</tr>
<tr>
<td><strong>13. Private cost</strong></td>
<td>Loss of opportunity for the term of agreement</td>
</tr>
<tr>
<td><strong>14. Methods of exclusion</strong></td>
<td>1. Notice of non-renewal</td>
</tr>
<tr>
<td></td>
<td>2. Petition for cancellation of contract</td>
</tr>
<tr>
<td><strong>15. Effectiveness</strong></td>
<td></td>
</tr>
</tbody>
</table>

A. Number of acres in the program 15,017,000 acres (1976/77)
B. Prime agricultural land under the program 4,557,000 acres
C. Total potential prime agricultural land inventory (Classes 1 and 2) 20,300,000 acres
D. Percentage of prime land enrolled in comparison to total potential prime land 22.45%

**SOURCES:**
1Regional Science Research Institute, 1977.
3California Office of Planning and Research, 1974.

**Footnote** A decrease in the rate of conversion from agricultural land use to other uses would have been a better criterion to compare the effectiveness of both Acts, but data were not available in this respect.
reconversion to farm use when needed, several minor land use conflicts were latent.

The type of agreement has strongly influenced the effect of both Acts. The voluntary type of agreement in California has not prevented the conversion of agricultural land to other land uses. For the state as a whole, the California Office of Planning and Research (1974) has projected the magnitude of conversion of the best agricultural land between 1970 and 1985 to run to about 41,380 acres per year. All land in soil capability Classes 1 and 2 (which is largely irrigated) and other croplands are included therein. As mentioned in this study on page 30, the Act has not prevented landowners from selling land ripe for development in urban fringe areas. The speculative goal has predominated over the preservation goal and, consequently, many landowners have declined to enter the voluntary program. British Columbia has had the better record thus far. As of July 1978, 71,749 acres had been included in the ALR since designation, and 68,774 acres excluded, giving a net positive result of 2,975 acres. Furthermore, nearly 74% of B.C.'s prime farmland (Classes 1 and 2) are included in the ALR while California's performance is quite lower at 23%.

The question of tenure has also to be closely considered. Since CLCA deals only with private land ownership, a large chunk of land has been left aside. As reported by the California Land Use Task Force (1975), government owned land amounts to 50.2% of the land area in California, or 50,335,945 acres. Although much of this land (89.9%) is owned by the federal government through the U.S. Forest Service, the Bureau of Land Management and the Department of Defense, one could argue that agreements of some kind might be undertaken so that this land or the remaining 5,084,909 acres owned by other public agencies and suitable for agriculture be preserved as farmland. In contrast, the B.C. legislation has included Crown lands in
the definition of land to be reserved for farm use. This has allowed the Commission to make sure that Crown land does not interfere in the decision-making process. For instance, conflicting policies and projects between the Commission and say, the Department of Highways could have resulted in the construction of a new highway cutting across prime farmland in a particular area.

On the whole, the B.C. Act has clearly demonstrated its superiority over its California counterpart. Nonetheless, both approaches have permitted the safeguard of agricultural land in its original form. However, whereas California has adopted to preserve farmland through the implementation of indirect and flexible measures, such as preferential assessments and voluntary agreements, British Columbia has opted for a direct and relatively inflexible measure such as zoning. In British Columbia, the society as a whole through the State has decided to forgo immediate gratification for the sake of future gains. In California, the priority of private interests over public interest still is of paramount importance.
V. CONCLUSIONS

The study has shown the availability of various methods having different effects upon the preservation of agricultural land. It has also analyzed and compared the efficiency of two methods - one using compensation, the other regulation, as the main means of achieving intended goals. The remaining part of the study is devoted to: (A) a comparison of the different methods analyzed in the study, (B) a few recommendations in an attempt to improve the effectiveness of the B.C. Agricultural Land Commission Act, and (C) a discussion about the pros and cons of the regulatory system and of the compensatory system, stressing the case for an expanded use of a central body regulating agricultural land uses.

A. Comparison of Methods Analyzed in the Study

A comparison of methods considered in this study is shown in Table 3, in which is summarized the comparative advantages of each method in terms of both financial public and private costs, its appropriateness to the level of urbanization experienced in a particular region, the ease and terms of implementation, and the effect on landowners as to whether they are either compensated or penalized. Social costs and benefits have been left out deliberately due to the extreme difficulty of evaluating them without any determined parameters such as knowledge of the region
## Table 3: Comparison of Methods for Preserving Agricultural Land

<table>
<thead>
<tr>
<th>Method/Characteristics</th>
<th>Main Purpose</th>
<th>Main Advantage</th>
<th>Financial Costs</th>
<th>Time for Implementation</th>
<th>Term of Use</th>
<th>Compensatory Penalties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Lot Easement</td>
<td>To keep people away from any potential development</td>
<td>To buy time</td>
<td>Low</td>
<td>Rural/Urban</td>
<td>Short term</td>
<td>None</td>
</tr>
<tr>
<td>Exclusion A: Maximum protection of agricultural land</td>
<td>To meet future demand; encourages farmers to keep land</td>
<td>Loss of opportunity</td>
<td>Low</td>
<td>Rural/Urban</td>
<td>Long term</td>
<td>Yes</td>
</tr>
<tr>
<td>Agricultural Protection of prime agricultural land</td>
<td>To prevent land from being lost to development areas</td>
<td>Loss of prime agricultural land value</td>
<td>Low</td>
<td>Rural/Urban</td>
<td>Long term</td>
<td>Yes</td>
</tr>
<tr>
<td>Maximum Den - To place a limit on density</td>
<td>To control growth and preserve rural areas</td>
<td>Limited to the urban fringe area</td>
<td>Low</td>
<td>Rural/Urban</td>
<td>Long term</td>
<td>Yes</td>
</tr>
<tr>
<td>Utility Ex - To develop un-served areas before non- serviced areas</td>
<td>To encourage farmers to continue farming</td>
<td>Applicable to the agricultural value</td>
<td>High</td>
<td>Rural/Urban</td>
<td>Difficult</td>
<td>Long term</td>
</tr>
<tr>
<td>Easements</td>
<td>To provide compensation for property valuation losses</td>
<td>To provide compensation for property valuation losses</td>
<td>High</td>
<td>Rural/Urban</td>
<td>Difficult</td>
<td>Long term</td>
</tr>
<tr>
<td>Compensatory regulation</td>
<td>To raise basic levels of maintenance</td>
<td>To raise basic levels of maintenance</td>
<td>High</td>
<td>Rural/Urban</td>
<td>Difficult</td>
<td>Long term</td>
</tr>
<tr>
<td>Expropriation Protection of land</td>
<td>To raise basic levels of maintenance</td>
<td>To raise basic levels of maintenance</td>
<td>High</td>
<td>Rural/Urban</td>
<td>Difficult</td>
<td>Long term</td>
</tr>
<tr>
<td>Stewardship</td>
<td>To relieve the farmer of property tax</td>
<td>To encourage farmers to remain in agricultural use</td>
<td>Low</td>
<td>Developing area</td>
<td>Short or medium term</td>
<td>Yes</td>
</tr>
<tr>
<td>Preferential Assessment</td>
<td>To prevent premature conversion of farmland</td>
<td>To prevent premature conversion of farmland</td>
<td>Low</td>
<td>Developing area</td>
<td>Medium or long term</td>
<td>Yes</td>
</tr>
<tr>
<td>Deferred Property Tax</td>
<td>To recover taxes when agricultural land is converted to non-agricultural use</td>
<td>To encourage farmers to remain in agricultural use</td>
<td>Low</td>
<td>Developing area</td>
<td>Medium or long term</td>
<td>Yes</td>
</tr>
<tr>
<td>Restriction To maintain the use of land to agriculture for a given period of time</td>
<td>To maintain the use of land to agriculture for a given period of time</td>
<td>To maintain the use of land to agriculture for a given period of time</td>
<td>Low</td>
<td>Developing area</td>
<td>Medium or long term</td>
<td>Yes</td>
</tr>
</tbody>
</table>

* Short term: Less than two years
  Medium term: Two to six years
  Long term: More than six years
in which the method is to be implemented. It does not mean, however, that social costs and benefits do not have to be taken into account. Indeed, they must be closely considered before the implementation of any technique takes place. However, the evaluation of social costs and benefits in terms of money value often proves to be extremely difficult. For instance, what monetary value can be placed on an actively farmed piece of land which also provides open space and aesthetic amenities, and acts as an ecological reserve? What monetary value can be placed on the social costs of urban sprawl as a whole? These social costs and benefits have to be weighed against the economic values resulting from a residential or industrial development.

The study could have used other ways of comparing methods such as utilizing a weighing system in order to evaluate the characteristics in terms of their degree of importance. But it was felt it would have implied too much of a degree of uncertainty and bias due to the subjective value system on which the method of evaluation would have been based.

In developing a strategy using a set of methods or a particular one to control land uses, it must be borne in mind that some methods are more effective or acceptable under certain conditions than others. Both compensatory and regulatory methods must be tailored to the particular needs of each region or province to preserve agricultural land. Land use control techniques must also be chosen in consideration of the degree of urban pressure which affects the conversion of agricultural land to urban development.

Each method has different degrees of governmental intervention, and political and public acceptability. Their effectiveness in attaining stated objectives of preserving farmland also differs. Although it is up
to the decision-makers to weigh the need for more development against that for agricultural land, and to make use of the different tools and techniques to suit the social, economic, political and environmental needs and values of their people, they must be guided in the evaluation of factors influencing the decision-making process. Since a great deal of the evaluation process implied in the selection of techniques ought to be concerned with the future, it must be kept in mind that a conservative approach appears to be the most acceptable. Inasmuch as the evaluation of future needs with respect to agricultural land faces many unknowns, the options must be kept open. This is a factor, among others, which leads the study to argue that, in most cases, the need for preserving agricultural land must be taken for granted. Apart from economic considerations upon which a large segment of the population's livelihood is based, the irreversibility of many land uses should be a strong component in the decision-making process conducive to its preservation.

One can argue that technology can solve any crisis by coming along just at the right moment and at the right place. For instance, technology has allowed an increase in the average yield per acre of most crops. Why should it not be able to carry out this role forever? The argument might stand for a while but when it comes to grips with the uncertainty of the future, the sole reliance on technology may well lead to an abusive and disruptive utilization of scarce resources. Although the study is not intended to penetrate deeply into this question, it should be said, however, that agricultural land ought to be preserved not only for the benefits of the present generation but also for a better fulfillment of future generations' needs and necessities. The route is not without its problems and traps. There will always be people demanding their "fair share" of the
pie without questioning the consequences attached to their taking. There will always be people who will not realize the basic confrontation between natural amenities and man-made activities, between selfishness and altruism, between needs and desires, between present gains and future priceless return, and so forth.

The present discussion has been set out to legitimize preservation of agricultural land as a social goal which should be implemented in regions which have certain potential for agricultural activities. It is further argued that direct measures through government regulations should prevail over measures which rest on inducements. This statement is based on a sound evaluation of the methods discussed in the study. All of these have been empirically tested in a particular region in North America. Apart from the loss of opportunity with which landowners are faced, exclusive agricultural zoning and agricultural districting are the most valuable methods to protect and maintain agricultural land. Since the principle of no compensation of down-zoning is well established in Canadian law, each legislature should attempt to implement methods similar to those already enacted both in the province of British Columbia and in the province of Quebec. Moreover, both methods secure farmland from being converted to other uses in permanence and the public cost attached to their implementation is fairly low. On the whole, given that the main aim of a piece of legislation is to assure a maximum protection of agricultural land, exclusive agricultural zoning, agricultural districting or the like are directly geared to carrying out that goal.
B. Recommendations

The following suggestions are an attempt to bridge the different gaps impeding the B.C. agricultural land use controls to work at their best. These recommendations are not intended for immediate implementation but to emphasize more precisely the areas in which further research might be fruitfully undertaken. It is implicitly demonstrated that the use of the taxing power could be a useful tool along with a regulatory method, to curb urban sprawl and, at the same time, preserve agricultural land.

1. The Study Recommends that the B.C. Preferential Assessment Program Be Abandoned and Replaced with a Property Tax Credit

In the section relating to taxation methods, it has been stated that use value assessment programs are relatively ineffective for preserving agricultural land. This stems from several factors, the most important of which are: (1) the tax advantages are usually outweighed by opportunities related to development especially in the urban fringe area; (2) prime agricultural lands are assessed at higher use-values than marginal land and thus, are subject to smaller property tax savings; (3) the local tax base is reduced and other property owners' tax bills have to be raised to make up for the difference in forgone taxes. With respect to the B.C. Agricultural Land Reserve, it could also be argued that since the Agricultural Land Reserve is supposed to be permanent, the use value of agricultural land in the reserve would tend to approximate the market value of these lands, thus reducing the effect of preferential assessment upon farmers' tax break.

In order to solve these shortcomings, it is proposed to implement a property tax credit program which has the following characteristics and
requirements. The program would be applied to farmers whose management units (as opposed to farm units which only consider the amount of property owned, but not the amount of property leased out) is being farmed at a minimum level of production. The amount of property taxes to be credited would be based on the ratio of property taxes to the net farm income plus an amount of off-farm income over a certain minimum amount of exempted off-farm income. This ratio would be compared to a predetermined property tax rate and the excess (the property tax credit) either subtracted from the farmer's income tax liability or rebated from the provincial government to the farmer if no income tax were payable. A maximum credit would also be allowed to restrain well-to-do farmers from taking advantage of the program. The following equation shows the possible mechanics of the program:

\[
C_{pt} = \left( \frac{pt}{nfi + (ofi - a)} \right) - b \quad pt, C_{pt} = 0 \text{ if } > c
\]

where \(C_{pt}\) = property tax credit

\(pt\) = property tax

\(nfi\) = net farm income

\(ofi\) = off-farm income

\(a\) = off-farm income exempted

\(b\) = net property tax rate

\(c\) = maximum property tax credit.

The program allows for flexibility and equity. Since the three constants \((a, b, \text{ and } c)\) presented in the equation can be changed at the pleasure of the legislator, this would make it possible to adjust the magnitude of the property tax credit and then allow for a wide variety of alternatives. For instance, if the legislator wanted to give relief of property taxes only to low income farmers, the maximum property tax credit could be decreased. With regard to equity, the program decreases the
relative regressivity of property taxes. Indeed, it is based on the ability to pay principle which states that different amounts of taxes must be paid when people's ability to pay taxes differ. Since the program is worth more to the low-income farmer than to the high-income farmer, it is more equitable than use-value assessment programs which partially take this principle into account.

Several other advantages are related to the program. First, it does not change the local tax base since the cost of the program is to be borne by the Provincial government. Secondly, speculators and high-income farmers are excluded from any tax benefits. Thirdly, the land needs not to be assessed at its use value, thus reducing the assessor's burden. In the fourth place, the program might be capable of influencing the pattern of development. If the tax break is large (this could be done by decreasing the net property tax rate), it might provide incentive for farmers to hold land in farming much longer than previously expected. Since the program brings about an increase in the farmer's net income, the farmer might be inclined to increase operating expenses or investment, or do a combination of both, making the overall farming business more viable. Fifth, the program might be effective to bring about a shift from non-farm taxable property to farm taxable property uses in order to increase the tax credit return. Sixth, prime agricultural land owners would benefit the most from the program since their land is usually being assessed at higher value (generally being closer to urban centres) than marginal land.

On the whole, the property tax credit program would improve the equity of property taxation and stimulate the development of farming areas by encouraging the maintenance of farming units in production.
2. The Study Recommends that Industrial Development as Well as Business Property Taxes be Regionalized

Industrial development should be added to the actual functions of regional districts as stated by the British Columbia Municipal Act (RSCB, 1960, chapter 255). This would permit a better utilization of already serviced industrial lands and thus reduce the need for exclusion of agricultural land from the ALR. By the same token, the regionalization of business property taxes would serve two purposes: first, it would reduce competition between municipalities for industrial developments, and second, it would give regional districts the financial autonomy and instrument which is, without any doubt, necessary to fulfill the role of providing services to the community. Since the latter purpose is beyond the scope of the present study, it will not be spelled out to any greater extent.

The need for this recommendation stems from the now well-publicized Gloucester Properties Ltd.'s application for removal of 626 acres in Langley from the Agricultural Land Reserve. The company wanted to develop the acreage as an industrial park. The Municipality of Langley supported the company's application because it felt more industrial land was needed although the Fraser Valley still has 3,875 acres of industrial land waiting to be filled. The Municipality of Langley's behavior seems to be normal considering that fiscal zoning through industrial property tax is very attractive to any municipality. In this context, fiscal zoning can be defined as an instrument under which industrial landowners pay more than the cost of their public services. The excess can then be used by a municipality to fill the gap between cost and revenue produced by the provision of other municipal services.

The regionalization of both business property taxes and industrial development would permit any regional district to better plan, manage and
control the direction and change of future industrial development, away from agricultural land to land suitable for industrial undertakings (i.e. having poor soil), or to land already serviced. It could also allow regional districts to use the excess of revenue stemming from business property taxes either for providing tax relief to municipalities which are poorer than other adjoining municipalities or for reducing the cost of other functions granted to them by the Municipal Act.

3. The Study Recommends that the Agricultural Land Commission Act Appeal Procedure be Extended to Include the Use of Referenda

In a recent address to the B.C. Fruit Growers Association Annual Convention, Axel C. Kinnear (1980), the then Agricultural Land Commission Chairman suggested the appeal procedure to ELUC be replaced by an experienced, respected two to three person appeal body, perhaps appointed by an all-party committee of the Legislature. The reasons which lay behind the proposed change were that the new alternate route through the Environment Minister which can be used to appeal to ELUC for exclusion of land as stated on page 41, has increased dramatically the number of appeals. Kinnear further suggested the removal of the appeal system from the political level.

The present study would argue that the political level in the appeal system is necessary and even fundamental to the well-functioning of a democratic society since the political body is the only one which is responsible for and accountable to the electorate within the present appeal procedure. It does not mean, however, that the system cannot be improved. Hence the study recommends that if and only if the Agricultural Land Commission decision is overruled by ELUC, a referendum device might be used as a second appeal instrument. The ELUC decision would then be submitted to popular vote and the public within the regional district would be the last group to
decide upon the issue since it is the one who, in the long run, would be affected by the decision of ELUC. An underlying advantage of this device is its flexibility to deal with a large array of "hot issues." Indeed once implemented and tested through the Agricultural Land Commission Act appeal procedure, it could be used for issues about energy conservation and development, or the like. For example, the recent decision of the B.C. government to stop uranium mining for a period of years, could have been otherwise decided upon through the use of this device.

One could argue that the use of referenda to rule out important issues would be ineffective in B.C. because one fears that the public is not willing to participate in the process. This could be so in the short run but once the public has been educated to react to the proposal, a change in its attitudes and values would lead to its acceptance of the new device. In this respect, the American experience might be helpful in the implementation and acceptance of this recommendation.

4. The Study Recommends that a Tax on Real Estate Unearned Increment Be Levied

In order to curb speculation and hinder the conversion of agricultural land to other non-compatible uses, it is proposed that a windfall tax should be levied on the difference between the use value and the selling price of any agricultural land. The reasons lying behind this scheme are twofold: First, the difference between use value and market value often is unearned gains for the landholder since he did not improve the land in any way to earn the increase in value. Secondly, the source of this increase in value frequently stems from the investments made by the community as a whole such as the execution of public works or improvements through government action.
Although the scheme could be used for any type of land, emphasis is placed upon land within the Agricultural Land Reserve. Before land is being released from the reserve, an *ad valorem* tax should be imposed on the difference between the agricultural value and the new use value created by the release of the land from the reserve. The tax yield received by the Agricultural Land Commission should be earmarked for the purchase of agricultural land. The tax rate imposed should be very high so that the scheme can meet the two aforementioned objectives.

On the whole, the recapture of windfall gains by the society would make the retention of land for speculation less profitable and reduce land prices because it taxes land more heavily than other investments on which capital gains are levied and also because land supply is fixed. As to whether or not the speculator or the developer would buy such a scheme, it can be argued that the fiscal principle of "habituation" would get rid of any dissatisfaction as it did after the implementation of taxable capital gains in 1972. This principle can be defined as the state of getting accustomed to a level of taxes which, when first reached, seemed too heavy. Because of habituation, dissatisfaction is unlikely to persist except under very special circumstances.

5. The Study Recommends that the Agricultural Land Commission Act Be Amended so as to Give the Agricultural Land Commission the Exercise of the Right of Preemption

In Subsection 7(d) of the Agricultural Land Commission Act, it is mentioned that the Commission has the power and capacity to acquire and dispose of land and personal property. It is proposed that this subsection be amended to include the right of preemption. The subsection should read as follows: "The Commission has the power and capacity ... to acquire and
dispose of land and personal property either by voluntary sale or by pre-
emption."

Under this instrument, when any parcel of land within the ALR comes
on the market, the Commission may substitute itself for whoever is willing
to purchase the land. This is done by constraining an owner who wishes to
sell, to notify the Commission of his intent. The Commission then has two
choices: either to let the sale occur - or to make use of its right of pre-
emption where it feels that it is in the public interest. This would hinder
any speculator or non-bona fide farmer to try to convert the land to an
unacceptable use, thereby stabilizing land use patterns in the Agricultural
Land Reserve.

6. The Study Recommends that the Concept of Stewardship Be Implemented
Throughout the Agricultural Land Reserve

In their impact analysis of the agricultural land reserves in Bri-
tish Columbia, Manning and Eddy (1978) concluded that because a return to
any form of farming on land previously purchased at speculative prices would
provide the developer insignificant returns, many areas of developer-held
ALR land have been left idle. They also calculated that 5% and 14% of land
within ALR boundaries were vacant and unused land respectively. In this
case, vacant land means an entire property which is not currently used for
any activity whatsoever while unused land means some land within management
units which is idle.

It is proposed that an annual maintenance fee be charged by the
Agricultural Land Commission on agricultural lands left idle by their hold-
ers in order to stimulate a more productive use of land, or at least, to
make sure that the idling of one parcel of land, often overgrown with weeds,
does not have detrimental effects on adjacent and productive land.
C. Pros and Cons of the Compensatory System and of the Regulatory System

The methods which have been analyzed in Section III consider the need to compensate farmers for the loss of rights in property or to assist them in maintaining their land in agricultural activity by substantially reducing the tax burdens imposed on them. On the other hand, most of the methods analyzed in Section II imply that since land which has lost its development rights is being used in the public interest, owners should not expect any compensation for the societal acquisition. Therefore a decrease in property values due to regulation per se should not be compensable.

The special features of the regulatory power of any government make it a direct tool of public land use policy since most of the methods related to the government's police power are well equipped to deal with spillover effects of urbanization and other effects influencing the use of agricultural land. Although regulation is not the only system available to the decision-maker to cope with the conservation of agricultural land, it may be the only one available to local governing bodies at an acceptable cost, as well as because of its simplicity of operation and ease of implementation. In addition, the right to say what land is to be preserved is usually conferred upon the community, albeit the centralization of zoning powers through a provincial agency has also be be considered.

The alternative of a rural planning process not underpinned by strict enforcement of zoning provisions would, to us, be too uncertain in its operation to prevent the eventual deterioration of these extraurban areas (Gray, 1976, p. 104).

However, regulation is not desirable for its own sake. In most cases, it cannot compel that land be farmed. It only acts as an indirect incentive to do so. It also imposes substantial costs on several groups of people. These costs include not only those borne by the taxpayers who pay public servants' salaries and expenses, but the costs borne by the developers
and eventually passed on to the consumer. Moreover, farmers see the regulations as reducing their likelihood of an affluent retirement.

The equity issue boils down to creating these benefits by imposing a wealth loss on the owners of prime agricultural land by immobilizing the land in that use and thus preventing land use shifts at higher prices. Thus, unless compensation is given, these landowners absorb losses in order to provide the collective goods enjoyed by society as a whole (Gardner, 1977, p. 1034).

It is further argued that the cost of public benefits should not be borne entirely by private owners but distributed evenly among members of the society through compensation to the losers. Since society as a whole will be made better off through the substantial amenities and social benefits stemming from the preservation of agricultural land, the penalty imposed upon private property should be borne by every member of that society. But as stated by Michelman (1967, p. 1168):

> We may assume that society is acting rationally in the sense that the new conditions of resource employment will produce a greater amount of welfare in society than the old one did. Even so, the fact will remain that some members of society will be less well off after than they were before the reallocation. One effect of the decision to reallocate resources will have been to redistribute welfare among the members of society. This redistributive effect can be partly cancelled, insofar as the values involved are convertible into dollars, by paying monetary compensation out of the social treasury.

It is also fair to add that, although not compensated for, farmers benefit from the exclusion of uses which are incompatible with their operations. Likewise, it helps them stay in business longer and reduce some of the uncertainties associated with long-term commitments. On the whole, regulation gives farmers some protection from the threats of suburbanization (Mitchell, 1978).

On the other hand, zoning as a land use control device has some weaknesses which are worthwhile mentioning. First of all, the most carefully prepared zoning map may be overwhelmed by variances, zoning amendments, and special exceptions. As it is put by White (1968, p. 49):
The agricultural zoning had saved large unbroken tracts, and large unbroken tracts were what developers now wanted most. They raised the offers to $3,000 an acre, to $4,000, to $5,000. Farmers began to ponder. They had gotten themselves zoned; they could get themselves unzoned. They could, among other things, ask the nearest city to annex them. One by one, they began to do so.

Another weakness is that zoning decisions are normally controlled by politically vulnerable local government authorities. The facility with which zoning has, indeed, traditionally been changed restricts its usefulness, unless its permanence is increased by better procedures and its implementation complemented by better framework.

The potential of police power regulations for rural land preservation is severely limited by the short-sighted administration characteristic of most local governments. Piecemeal and ad hoc administration fail to meet broader regional needs. To better control land resources of areawide importance, regulatory powers should be exercised by regional governing board with review by state agencies (Roe, 1976, p. 422).

As mentioned in the subsection related to governments and land use controls, provincial involvement in agricultural land use control seems to be a necessity in order to cope with the different and often conflicting interests in land uses. Although all of those who are affected by these controls must be allowed to participate in the decision-making process, the provincial government should play a leading role in the overall land use strategy.

Finally, it is a fact beyond question that, in some cases, some kind of incentives or compensation are needed to support protection of agricultural land and complement regulations. Since the actors on the political scene often have different standpoints with respect to preservation of natural resources, the coming into play of both regulations and compensation might help reach a consensus on what could be done to obtain a better allocation of resources.
Since incentives are more acceptable politically but less efficient than regulations in many cases, it might be thoughtful to explore the relationship between both within a particular geographical area. However, it has to be kept in mind that, if regulations are implemented on a sound and rational basis such as on soil capability and suitability for farming, as well as on economic, social, aesthetic and ecological values attached to farmland, and are exercised intelligently and without discrimination, there are no reasons whatsoever why strict agricultural land use controls should not be carried out. Moreover the integration of an educational process of some kind at an early stage of the overall process has important implications as to whether land use controls will be accepted by the interests affected and supported by the public at large.

On the whole, it could be argued that land use controls based on regulations are the most effective way for preserving, in the public interest, agricultural land, although some inducements may be helpful to relieve the interests affected if, under special circumstances, there is unfair taking of land or of rights in land.
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