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THE FLEXIBILITY OF LAND TENURE, CAPITAL, AND CREDIT SYSTEMS TO MEET TECHNICAL, ECONOMIC, AND SOCIAL DEVELOPMENTS

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LAND tenure is a broad term covering all those relationships established among men which determine their varying rights in the use of land. It deals with the division of property rights among various owners: between owner and occupier, between owner or occupier and creditor, and between private owner and the public; and it includes assessments of taxes on private rights and regulation of land use through various social control devices. Land-credit and land-taxation problems are definitely land-tenure problems which arise from aspects of human behaviour in which property rights in land are the dominating directing factor, just as are tenancy problems. Land-credit and taxation problems, however, are so large and significant and courses of study, research, and administration have been established in these fields in so many institutions that discussions of land-tenure problems ordinarily confine themselves principally to tenancy problems, or the division of rights between owner and occupier, division of title among various private owners, and division of ownership between private and public owners.

This paper will be devoted largely to these tenancy problems, but will also include discussion of certain of the more important land-credit and taxation problems which bear specifically upon land tenure and land utilization. Many of the problems discussed will be hardly more than mentioned, with the hope that later papers and discussion will bring out some of the important points on these various problems which should be developed.

Land-tenure problems have not been given the amount of study in the United States that they have been given in many other countries. In a young country such as the United States, with an abundance of land, it is quite understandable that land-tenure problems have demanded less emphasis than in other parts of the world.

Stability and efficiency are major goals in any sound agricultural

programme. Economic progress emphasizes the necessity of using agricultural resources efficiently. In general, maximum efficiency of resource use requires that each resource be used where its remuneration is at a maximum. Unstable conditions growing out of price fluctuations are intensified, particularly in certain regions, by weather and climatic vicissitudes. Price fluctuations have a marked effect in determining the kind and intensity of land-tenure problems. The uncertainty of prices leads farmers to reduce their demands for capital, to buy too small farms, and to place heavier emphasis upon labour. Credit institutions tend to give reinforcment at these very same points, and income uncertainty places the farmer using borrowed funds in an extremely vulnerable position. For the most part, free market prices constitute a poor guide for resource allocation to achieve maximum income.

It is not the purpose of this paper to discuss at any length the various proposals or means of achieving more stable agricultural prices. It is sufficient at this point to indicate the significant role which prices and markets play in determining land-tenure issues, and to state that, regardless of the price programmes developed, we must assume the continuance of a certain amount of fluctuation in prices and markets. In other words, stable prices would solve, or at least lessen, the severity of many land-tenure problems, but at this stage of civilization we must assume that in most countries, at least, price-control programmes will be at best incomplete and partially ineffective. Scientific advance has increased man's control over nature and the influence of weather to some extent, but there will continue to be need for flexibility in our land tenure, capital, and credit systems if we are to make the necessary modifications and adjustments that are likely to be required in the national interest as conditions change, both at home and abroad.

LANDLORD–TENANT RELATIONS

The arrangements effected between landlord or landowner and tenant or land-occupier have a marked effect on land utilization and the economic and social status of farm tenancy. The forms and amount of rent payment, the length and form of leases, the arrangements for compensation to tenants for improvements made, compensation for disturbance or penalties for deterioration of the property by the tenant, and similar arrangements are of major importance in efficient use of land resources and stabilization and maximization of farm income. Many would place the land-tenure problems which arise out of the arrangements between owner and

occupier as the most important group of land-tenure problems which must be solved satisfactorily in any nation.

Forms and Amount of Rent Payment. Various forms of rent payment include cash, livestock share, crop share, crop-share cash, share-cropping (where the tenant supplies labour only, the landlord supplying land and equipment), standing rent (where a stated amount of the principal crop is paid as rent), or stated-price rent (where there is an agreement to raise crops or stock and deliver them to the landlord at a stated price per unit). Under the livestock and crop-share forms of rent payment, the share which goes to the landlord varies in different nations and in different areas within many nations. In numerous cases a half-and-half share basis is common, although there is a tendency for the share rent paid to be smaller on intensive crops like cotton and tobacco than on less intensive crops like small grains and corn. An important weakness of crop-share renting is that it provides little opportunity for production of livestock and tends to emphasize the sale off the farm of most of the crops produced. The result is depletion of soil fertility. Moreover, studies I have made indicate that there is no necessary relation between the landlord's share and the yield or productivity of the soil. In many areas, apparently, the division between landlord and tenant seems to be established and continued more by custom than by yield- or productivity-rating of the lands.

It would seem logical to assume that on the more fertile and productive lands the share which goes to the landlord would be greater than the share on the very poor or unproductive lands, because on the latter the proportion of the total rent required for producing the crop (the tenant's labour, cash expenses, &c.) is greater, and the tenant would have to have a larger share of the total product to meet his expenses. In marginal areas, or areas of high vulnerability, such as semi-arid sections where natural hazards are particularly great, it would seem especially imperative that the division of product between landlord and tenant should be correlated with the productivity-rating of the soil. In addition, where crop-share renting is practised, provisions should be made in the lease for a satisfactory and stable livestock enterprise by the tenant if soil fertility is to be maintained. Application of commercial fertilizers will not maintain soil productivity over a long period of years because of resulting unsatisfactory soil texture and lack of organic materials.

In cash renting, the tenant ordinarily has the greatest degree of freedom in utilizing land of any form of renting. Cash renting tends

to lead to less soil exploitation than crop-share renting, because livestock enterprises are more intensively developed as a rule. Moreover, security of occupancy is greater and the cash tenant is usually in a much stronger financial position than the share tenant. In some share-renting areas, however, only the smallest and poorest farms are rented for exorbitant rates to financially insecure tenants. If the amount of the cash rent is correlated closely with the productivity rating of the soil (or carrying capacity rating in the case of grazing lands) some of the more glaring weaknesses and rigidities of cash renting will be eliminated.

Length and Form of Leases. A great variation exists in the length of lease periods and in the form of leases. Many leases are for only one year. Others are for periods of from five to ten years, or even longer. In the United States the year-to-year leases are prevalent, and the most common plan is for the lease to run indefinitely and to close only by termination notice given several months before a specified date. A less common arrangement is for landlords to grant relatively long-term leases, usually from three to five years, but reserve the right to terminate the lease by notice sometime in advance of a set date annually. This does not give the tenant much more security of tenure than the year-to-year lease, and makes it impossible for him to plan his farming operations over a period of years. On the other hand, fixed leases of three to five years or longer have many disadvantages from the landlord's point of view. Such fixed period leases, however, can be written to give the landlord an option of terminating the lease at the end of any crop year, provided the tenant is definitely unsatisfactory, as indicated by the execution of certain things specifically prohibited in the lease.

We should always keep in mind that relations between tenant and landlord cannot be improved merely by the signing of a fixed contract by the landlord and tenant. Harmonious relationships between the two must be built on a sound basis approximating the character of a business partnership. This requires an intelligent and sane attitude on the part of both. It is true that tenancy conditions can be made quite satisfactory and socially constructive without the co-operation of the landlord, through legislation placing more managerial freedom and responsibility in the hands of the operator, as has been done in some countries. A strong educational programme to develop intelligent and sane attitudes on the part of tenant and landlord will probably produce more effective results over a long period of time.

The use of provisions in leases that either party must give the other notice a specified period in advance of the date of termination,

providing that this period is sufficiently long to assure the tenant time to arrange for another place, is probably the most effective way of dealing with the farm-lease problem so far as the length of leases is concerned.

Farm leases are often merely verbal agreements or understandings between landlord and tenant. In the United States most farm leases are of this nature, and in some areas written contracts are practically non-existent. While the oral lease is convenient for making changes, it is likely to give rise to misunderstandings which would be less likely with a specific written contract. These misunderstandings are likely to cause difficulties or failures to renew leases at the end of the year. Oral leases should be unanimously ruled out, and insistence made upon a written lease with specific provisions as one important step in improving farm-tenancy conditions.

Compensation for Improvements and Penalties for Deterioration. Statutes in many states in the United States, as well as the common law, cause an improvement affixed to the soil by an agricultural tenant to become the property of the landlord at the termination of the lease. Some states have already changed their statutes to allow tenants to take away removable fixtures and improvements, while other states have changed the common-law ruling by requiring landlords to make all repairs and improvements. Neither of these adjustments, however, covers improvements that cannot be removed. Farm tenants in many areas make many such improvements in the form of applications of lime and fertilizer, construction of fences, ditches, and roads and terracing.[1] If productivity is to be maintained or increased tenants must make improvements. It is imperative that plans be worked out which will encourage them to do so. This involves incorporating into the written lease plans for compensation to the outgoing tenant for the unexhausted value of such improvements. Although in some nations at the present time the number of written farm lease contracts is comparatively small, there is a tendency towards the increasing use of written leases.

Compensation for improvements made by the tenant may be of two principal types: (1) improvements which the tenant cannot make without prior consent of the landlord, and (2) improvements which

[1] In the United States the census of agriculture reports that during the crop year 1929, for example, some type of fertilizer or limestone was used on almost a million tenant-operated farms at a total cost of over 100 million dollars. There was also an expenditure of over 200 million dollars for seed during the same year. Both these items added to the fertility of the soil, and the average of the two per tenant-operated farm amounted to 397 dollars, enough to be of considerable importance in landlord–tenant relations.

he is free to make without consulting the landlord. More permanent types of improvements (buildings, permanent fences, commercial fruit and vegetable enterprises, and the like) are usually included in the former, and items like application of fertilizer and manure, limestone, and related improvements in the latter.

The amount which the landlord should pay the outgoing tenant for unexhausted improvements should ordinarily be agreed upon in advance, although this is not always necessary. The tenant should agree to keep a complete cost record of improvements he makes, so that the amount of his compensation at termination of the lease can be equitably determined. In case the landlord and tenant disagree on the amount of compensation an appeal should be made to an arbitrative board selected by the parties concerned. This procedure will work out satisfactorily in most cases, but there will be instances where the temperaments, personalities, and characters of the two contracting parties may make satisfactory settlement impossible.

Although some nations have passed legislation requiring that provision be included in the lease contract for compensation, the practice is still not very general. In the Agricultural Act passed in 1947 by the British Parliament there is a comprehensive compensation code. The items for which a tenant has a statutory right to claim compensation are divided broadly into three classes: (1) long-term improvements, (2) medium-term improvements, and (3) tenant-right matters. Long-term improvements include erection of buildings, provision of water or electricity supply systems, &c. Where a tenant has made such long-term improvements, he has, on quitting the holding, a claim to compensation on the basis of the increased value of the holding attributable to the improvement. He must, however, have obtained the prior consent of his landlord to the improvement before making it. Where a landlord unreasonably refuses his consent the tenant is given the right to appeal to the Minister of Agriculture, who can give his approval on such conditions as he thinks reasonable. The Minister's approval will then rank as equivalent to the consent of the landlord, and entitle the tenant to compensation on quitting the holding. The right of appeal to the Minister does not apply in case of long-term improvements set down in Part I of the Third Schedule of the Agricultural Act. The measure of compensation payable to the tenant for long-term improvements is the increase attributable to the improvement in the value of the holdings. This is a change from the 1923 Act, which provided that the basis of compensation should be the value to an incoming tenant. The reason for the change is that in the case of long-term improvements

the proper values should be the increase in the value of the holding. That is, whether the improvement enables the landlord to rent the holding at the increased rent.[1]

Medium-term improvements under the British Agricultural Act include such things as the liming of land or mole drainage. Where a tenant has made such medium-term improvements he is entitled to claim compensation on quitting on the basis of the value of the improvement to an incoming tenant. In this case prior consent of the landlord to carrying out the improvement is not required—a provision similar to that under the 1923 Act.

In the third class of items for which a tenant has a statutory right to claim compensation in the British Agricultural Act are included such things as growing and severed crops left on the farm, or seeds sown, or acts of cultivation performed on which the outgoing tenant will not benefit but which will be of value to an incoming tenant. The items for which an outgoing tenant can claim compensation under the tenant right and the basis of compensation for such items vary considerably at the present time in different areas of the country. These customary variations, we understand, bear little relation to modern farming practice. For example, in some sections, compensation is paid regarding cropping on what is called 'consuming value', while in other areas it is paid on 'market value'. Again, in most parts of the country where a tenant goes out in the spring, compensation is paid regarding acts of cultivation and seed sown on a 'seeds and labour' basis, while in the north areas compensation is paid on the basis of 'away-going crops'—that is, on the estimated probable value of the crop when harvested.[2]

At the present time a great deal of uncertainty as to the exact customary rights exists, and the customary basis of values in certain parts of the country is very high, so that an incoming tenant is compelled to tie up an undue amount of capital in the holding. This may result in his being left with insufficient working capital for efficient operation of his holding. For these reasons, and in order to provide for a variation in farming conditions, provision is made in the Agricultural Act that a landlord-tenant may, by written contract of tenancy, substitute a different measure of compensation from that laid down in the Act, and may also agree that compensation should be payable regarding additional items not included in the Act, such,

[1] See pp. 10 and 11 of the *Explanatory Memorandum on the Agriculture Bill*, presented by the Minister of Agriculture and Fisheries to Parliament, Dec. 1946, His Majesty's Stationery Office, London.

[2] Ibid., p. 11.

for example, as acclimatization value for hill sheep. The basis of compensation payable under the Act will be the value to an incoming tenant, and the Minister of Agriculture may make regulations prescribing the method of calculating that value. The problem apparently is to achieve a standardized method of calculation, and for this problem the Agricultural Act provides for appointment of an expert committee to advise the Minister on provisions to be included in the regulations. A clause is included which provides that a tenant may elect to leave the holding either on the basis of the compensation laid down under the Act or on the basis of custom or contracts of tenancy under which he entered the holding. Reasons for such provisions include the hope to secure uniformity regarding tenant-right compensation and remove present uncertainty and the high basis of in-going valuations in certain parts of the country.[1]

In the United States, only the more far-sighted landlords appear to have adopted the practice of incorporating compensation provisions in leasing-contracts. Failure to use such compensation provisions more generally is an important factor accounting for some of the more significant shortcomings of farm tenancy in the United States, partly accounting for the low economic and social status of farm tenants in many sections. Studies made in various parts of the United States substantiate census data, indicating that homes of tenant-farmers have fewer fixed conveniences of all kinds than homes of owner-farmers. Tenants' homes are, however, much more like those of owners with reference to movable equipment.

Many written leases specify that the tenant must treat the property in a good and proper manner, or return the farm in as good condition as when he first rented it, ordinary wear and depreciation being excepted. As a matter of fact, considerably more written leases in the United States contain this provision than provisions for compensation for unexhausted value of improvements made by the tenant. In cases where the farm deteriorates by wasteful and negligent practices, however, the only recourse available to the landlord in the United States is to terminate the contract. In the more glaring cases, of course, the tenant can be sued in the courts. Ordinary practices are so difficult to measure in a given year that the landlord ordinarily finds it difficult to make a strong case against the tenant. Moreover, unless reciprocal provisions are incorporated in the lease contract to allow the tenant compensation for improvements, more liberal courts, at least, would not be inclined to consider the landlord's case in deterioration instances too favourably. If many of the

[1] *Explanatory Memorandum on the Agriculture Bill*, p. 12.

more glaring evils of farm tenancy in the United States are to be removed, lease contracts must contain provisions for compensation to tenants for improvements, as well as provisions for penalties for deterioration. In the interests of maintaining and improving productivity value of agricultural lands, landlord–tenant relationships must be adjusted in the direction of more security of occupancy for the tenant, accompanied by reasonable assurance of realizing the benefits of utilizing soil-conserving practices and receiving compensation for improvements made.

The British Agricultural Act gives a landlord corresponding rights to compensation against an outgoing tenant for damage to the holding caused by the tenant's neglecting his responsibilities under the rules of good husbandry. The measure of compensation is the cost of making good the damage, but a landlord may, if he so wishes, claim compensation under a written contract of tenancy in lieu of the provisions of the Act. Where a landlord can show that the value of the holding has been reduced to such an extent that he will not be fully compensated by the cost of making good the damage, for example where it will take some time to remedy the damage and the lease value of the holding will be reduced accordingly for a number of years, the landlord is entitled to additional compensation.

Security of Tenure and Compensation for Disturbance. One of the most important means of providing stability to the agricultural industry is to ensure that a tenant-farmer who is reasonably efficient can plan his farming operations well in advance with the knowledge that he is not likely to be disturbed in his tenancy without good cause. The 1923 Act in Britain (sections 12–14) gave the tenant a right to compensation for disturbance on leaving his holding. Under existing conditions, however, this provision is not considered to be adequate security. Accordingly, the present Agricultural Act provides that where a notice to quit is given a tenant, he shall be entitled to object to the notice, which is thereupon not taken into effect until the landlord has obtained the Minister's consent. The test to be applied by the Minister of Agriculture in deciding whether to give his consent is whether the change of occupation is likely to result in the more efficient use of the holding for agricultural purposes. The one exception is where an owner has acquired an interest in the land before March 25, 1947, and informs the Minister that he wishes to farm the land himself or have a child or grandchild farm it. In this case the Minister may not give his consent, even though the landlord does show that the change of occupancy will result in increased efficiency. Excluding this provision it would be unfair to owners of

agricultural land who had acquired it before having full notice of the effect of the Bill. Provision is made for appeal from the Minister's decision to the Agricultural Land Tribunal. If, after notice to quit has taken effect, the owner fails to carry out the proposals, or an approved variation of the proposals, the Minister has the right to take possession of the holding. Where a certificate of bad husbandry has been made against the tenant the Minister's consent to a notice to quit is not required. Where the tenant has broken a condition of his contract of tenancy which is not or cannot be remedied, where he is bankrupt, or where the tenant has died three months before the giving of the notice to quit, or where the land is owned for a non-agricultural purpose and planning permission has been obtained or is not required, the Minister's consent to a notice to quit is not required. The provision of the 1923 Act, requiring at least twelve months' notice to quit for agricultural holdings, is retained in the present Agricultural Act.[1]

DIVISION OF RIGHTS AMONG VARIOUS PRIVATE OWNERS

One of the most serious land-use problems in many areas, particularly in arid and semi-arid regions in the western United States, is that of blocking the numerous small ownership tracts into units of economic size controlled for maximum productivity. These numerous small tracts are scattered in shotgun fashion among many types of owners, including railroads, insurance companies, land banks, non-resident individuals, non-operating residents, resident operators, and others. The thousands of separate properties, combined with absentee ownership, makes the problem of working out effective utilization difficult. The numerous small absentee farms on scattered parcels of land necessitate farmers and ranchers leasing from several owners residing in various parts of the country. This places the operator in an uncertain position, because he has no assurance from year to year that he can maintain his operating unit intact. This insecurity encourages misuse and abuse of the land. Considerable progress in blocking out small tracts and establishing more secure occupancy and use of farm and ranch lands has been made in recent years by (1) consolidation of farms and ranches by the more successful operators taking over lands abandoned by their less successful neighbours; (2) voluntary grouping of ranchers to form co-operative grazing districts and acquire effective control of a given area through collective tenure; (3) establishing of adequate control of the public range in areas where federal lands are a signifi-

[1] *Explanatory Memorandum on the Agriculture Bill*, pp. 13 and 14.

cant portion of the total, through the Taylor Grazing Act; and (4) outright purchase of numerous small privately owned tracts in selected areas by the Federal Government to block out adequate operating units.

Grazing Districts. Many western states have passed legislation providing for establishing of grazing districts, which are non-profit co-operative associations of livestock operators to control and manage use of range lands within their boundaries. In general, state grazing-district laws empower co-operative associations of livestock operators to lease or purchase grazing lands, to develop and manage district-controlled lands, and to allocate grazing privileges among members and non-members. Thus, state grazing-district laws are a form of enabling legislation permitting the establishment of collective tenure devices for securing and maintaining control over the right to use range lands.

In areas where federal lands comprise a large portion of the total area and where the lands are of such low productivity that they have never been alienated from the public domain through private settlement and purchase, Taylor grazing districts seem to be an effective way of developing a satisfactory tenure system. The Taylor Grazing Act, passed in 1934, authorizes the Secretary of the Interior to create grazing districts on federal grazing lands in the eleven western states and North and South Dakota. Within districts grazing is to be regulated under a permit system similar to that in use on national forests. Permits are non-transferable and revocable, and granted for a period of ten years, renewable if the permittee complies with rules and regulations. Provisions of the Taylor Act, while designed for the public domain, can be applied to land in all types of ownership, provided co-operation of the various types of owners can be secured.

The provisions of state grazing-district laws vary, but two characteristics seem to be universal: (1) voluntary membership, and (2) restriction of membership to livestock operators. Grazing districts are established if, after proper hearings, a majority of those who own or control over 50 per cent. of the lands to be included are favourable. The district is formed by filing articles of incorporation.

Grazing districts generally may regulate and control the use of district lands and construct improvements for conservation and better land use. Some states' laws, however, provide that district control in some cases may be extended to privately owned or privately leased lands as well. This form of co-operative action or collective tenure has worked out satisfactorily in many of our western range areas. There are large sections of the West, however, in which

districts have not been established. The extension of grazing districts to these areas would appear to promise beneficial results.

Soil Conservation Districts. Nearly all of the forty-eight states in the United States, with the encouragement of the Federal Government through its Soil Conservation Service, have passed state soil-conservation district laws. These soil-conservation district laws permit farmers to organize soil-conservation districts which have the status of governmental subdivisions and thus combat soil erosion and prevent local misuse of land through land-use regulation. More than half the area of all farm lands in the United States is now covered by soil-conservation districts. District boundaries ordinarily include all the territory which should for physical and economic reasons be handled as a unit. A district is not limited in most states to any given political unit, and may cover parts of several counties or part of only one. In most states both the owner and the operators of land may vote in determining whether a district should be established. The district Board of Supervisors formulates a programme of erosion-control projects and preventive measures. Powers granted to a district are of two kinds: (1) authority to engage in co-operative action against soil erosion, and (2) authority to prevent local misuse of land by voting land-use regulations upon the district. The supervisors are empowered to carry out soil conservation operations on the land including contour cultivation, strip cropping, terracing, ridging of pastures, contour furrowing, &c. They may enter into contracts with farmers, give them financial and other assistance, buy lands for retirement from cultivation and for other erosion-control purposes, make loans and gifts of machinery, seeds, &c., to farmers and ranchers, take over and operate erosion-control projects, and recommend land-use plans for soil conservation. If such action is deemed desirable they may formulate ordinances prescribing land-use regulations for soil conservation, but such regulations cannot go into effect until they have been submitted to farmers of the district and approved by referendum by a majority vote. Some states' laws, however, require more than a majority vote. Soil-conservation districts also have power to levy taxes or issue bonds.

Soil-conservation districts are a use of the police power, but they do not contemplate zoning as this term is usually interpreted. Soil-conservation laws comprehend particular, individual soil-erosion practices, whereas zoning laws essentially contemplate regulation of land occupancy or broad types of land utilization by districts. Soil-conservation districts cannot control land occupancy except indirectly through forcing of agricultural operations to cease in extreme

cases. No technical restriction, however, prevents soil-conservation districts from being given zoning powers through broadening their present scope of action by statutory amendment. Since they have been set up as a specialized means of dealing with a specialized problem, erosion control, it would seem inconsistent to broaden these powers on this basis.

Weed Control Districts. Another form of co-operative action to conserve land is creation of weed control or weed-seed extermination districts. Establishment of weed-control districts occurs when 25 per cent. of the freeholders of any proposed district petition the county commissioners to create a weed-control and weed-seed extermination district. After proper hearing, if 51 per cent. of the owners of agricultural land in the proposed district file written consent to creation of the district, the county commissioners may create the weed-control district.

After a weed-control district has been established, all landowners within the district must comply with the rules and regulations established by the supervisors. If such compliance is not met within a time specified by the supervisors, they are authorized to destroy and exterminate weeds found on the land of non-compliers, and costs of such extermination must be borne by the landowners.

Each of the above collective devices has contributed much in recent years to conservation of soil resources, and calls attention to practices which will increase soil productivity. Each form of control has its particular advantages for special types of agricultural land-use, and undoubtedly there will be further developments and applications of these forms of collective tenure as the need arises for such collective control and voluntary group action.

Area Diversification. Because of the natural characteristics of arid regions, and especially semi-arid regions, where dryland agriculture is practical, farm operators must devise methods of adaptation to anticipated variations in growing conditions. The cardinal feature of a farm economically adapted to the variations of growing conditions characteristic of semi-arid regions is flexibility, or, as one writer has put it, the ability to 'roll up and unroll' much after the manner of some plants which have structural provisions for living through unfavourable growth periods, in order that they may later take advantage of suitable growing conditions.[1]

In order to achieve this flexibility, the farm operator needs a combination of enterprises which will allow him to take advantage of

[1] See E. A. Starch, 'Types of Farming Modifications Needed in the Great Plains', *Journal of Farm Economics*, Feb. 1939, p. 115.

good growing conditions when they occur and to cut down during unfavourable periods to avoid dissipating his accumulated reserves. This process of expanding promptly in certain periods and shutting down drastically and suddenly in other periods is not consistent with the usual conceptions of good farm-management practices, because most budget items in the farm-management account require continuous and steady operation for highest efficiency. Such 'rolling up and unrolling' procedures are essential in areas where precipitation variations occur in an irregular and unpredictable manner above or below a norm which is so close to the margin of successful crop production that bumper crops or complete crop failures occur from time to time.

Achieving a diversification or combination of enterprises which will give the flexibility needed for the 'rolling up and unrolling' practices essential in the arid regions is extremely difficult within the boundaries of an individual farm or ranch operating unit. *Area diversification*, rather than diversification by specific farm units, may be an adaptative procedure which will be useful. With area diversification, the farm headquarters would be located in the irrigated area along streams where feed crops and a large garden for the operator's family could be grown; grain could be grown upon good nearby land extending back to the benchlands above the irrigated valleys; and finally, livestock could be run on grazing lands lying beyond the grain-producing benchlands in the foothills or near the mountains. Modern rubber-tired machinery permits operating grain lands several miles from the farm headquarters without much loss in efficiency. Grazing areas could be handled co-operatively and cattle cared for by co-operative grazing associations during the grazing season. Thus, a farm operator could have a few acres of irrigated land surrounding his headquarters, additional grain-producing acres on the benchlands within a radius of ten, twenty, or thirty miles from headquarters, and an allotment of a number of animal units of sheep or cattle in the grazing district on the range lands beyond the wheat lands. Achieving flexibility in arid regions to the extent necessary for successful farm operation, however, requires more than flexibility through diversification. It requires flexibility in overhead costs—particularly debt service charges and taxes, the two major fixed operating costs in agricultural land utilization.

DIVISION OF RIGHTS BETWEEN OWNER OR OCCUPIER AND CREDITOR

The level of values at which ownership rights in land are exchanged is a major determinant of the practices and profitableness of utiliza-

tion of land. The widely prevalent idea of making easy credit available to tenants in order that they may become owners frequently leads to serious consequences in practice—too frequently it results merely in exchange of an obligation to pay rent for an obligation to pay interest, combined with the added risks and vulnerability accompanying ownership. Unless the tenant can pay down a substantial part of the purchase price of the farm, permanence of occupancy may be less rather than more assured. Sound farm-loan credit practices are, therefore, extremely important in a land-tenure system.

Capital Valuation and Credit. The first and most important step towards more satisfactory farm-credit practices is determination of the productivity value of land. The income capitalization technique supplemented with the comparative approach promises to be most useful. One of the major causes of unsatisfactory farm-loan experience is lending more than the productivity value of the land, so that excessive overheads and a false basis of operations are created. This tendency is particularly encouraged by the procedure of money-lending agencies in lending a given percentage, say, 50 per cent., of the current value as reflected by current loan appraisals and sales prices. During boom years, when land values are high, the 50 per cent. lent may be more than the basic value or true productivity value of the land, whereas during depression periods, when land values are extremely low, the 50 per cent. may be much less than that which could be safely lent and may be low enough to keep the borrower from carrying out operating plans which in themselves may be sound and desirable.

After productivity values have been determined by scientific methods of land appraisal, a concerted effort should be made to lend a smaller proportion of this value on poorer lands or sites than on higher grades. The total income on which debts can be charged is greater in relation to the capital on a good farm than on a poor one. In general practice, of course, loans should not ordinarily equal the full value of the real estate on land, because there would be no margin of security to provide for contingencies, but if 80 per cent. or so or the maximum per cent. were given on higher-grade lands average loans on the poorer grades should be proportionately less.

In general lending agencies, including federal land banks in the case of the United States, have in practice lent the same percentage of appraised value on all grades of land in a given area. Loans have apparently been made on the theory that a residual rent should be received at the same rate on all grades of land after the labour has

been reimbursed. Studies show that the failure to use scientific methods of land appraisal results in the poorer lands usually being over-valued. It is no wonder, therefore, that under these conditions the percentage of loans which have failed, as indicated by foreclosures and bankruptcies, is naturally considerably higher on low than on high grades of farm lands. Changes in prices of farm products cause greater relative changes in value of land near the margin than of good land. The use of scientific methods of land appraisal, the use of productivity value as a basis for farm-mortgage credit, and the lending of a variable percentage of the appraised value, with the highest percentage on the highest quality of land and the smallest percentage on the lowest quality of land, would do much to improve our farm capital and credit systems and contribute to improved farm-tenure conditions.

The percentage of the productivity value of the land which should be loaned is a question which should be discussed thoroughly. Many farm operators can supply only 10 or 20 per cent. of the capital necessary to finance purchase of a farm, and most lending agencies will not loan more than 50 per cent. of the appraised value. The making of government loans of 100 per cent. of the price of farms is not considered a sound method of promoting general farm ownership, even under normal conditions. The tenant purchase loans of the Farm Security Administration in the United States cannot be considered an adequate solution to the problem. They have been effective in their limited way, but they have operated only during a period of generally rising real-estate values and their long-time effectiveness is not known. The second mortgage is about the only device that has been offered to bridge the gap, but it has not proved satisfactory, particularly as a means of tapping the more stable and dependable sources of funds of the central money markets.

In general purchasers should be required to make a cash down payment of at least 10 or 15 per cent. in addition to having a substantial equity in the necessary livestock and machinery. A fair land-purchase contract should be employed until the debt has been reduced to the proportion of the usual first mortgage. The lending agency should have option to buy the farm at the purchase price plus improvement in case the owner wants to sell during this period.

Flexible Methods of Loan Repayment. The dangers and disadvantages of low-equity financing must not be ignored, particularly in the case of semi-arid and arid regions. It may be argued that deserving young farmers would benefit in many cases if they were able to finance their

operating capital and equipment with less equity than is now rigidly required. A substantial equity in mortgage property, however, has often enabled borrowers to ride through difficult periods of financial stress when other borrowers of less equity were facing foreclosure. In fact, in certain marginal areas or high-risk regions, such as arid and semi-arid areas, public ownership or ownership by large corporations or landlords in strong financial position is preferable to individual operator ownership. Under such arrangements the operator is usually able to manage his business more effectively than he could were he heavily indebted, because of the more flexible nature of his capital resources, particularly operating capital.

Flexible but realistic repayment schedules are of major importance in assisting large numbers of low-equity borrowers through temporarily unfavourable seasons. Relatively lower amortization requirements in the early part of the loan, with the option of additional payments as desired, would permit more rapid accumulation of operating capital, with resulting added flexibility of management.[1]

The equal annual instalments of the usual amortized loan are much more desirable than the straight-term loans which too often in the past have been made for relatively short periods at comparatively high rates of interest and require the operator to pay the principal in a lump sum at the maturity date of the loan. The annual instalments of the usual amortized loan, however, are not in terms of purchasing power or actual ability to pay. Such equal annual instalments in terms of dollars do not constitute a flexible or elastic overhead. Such flexibility is particularly essential in the semi-arid sections, where a combination of climatic conditions and one-enterprise agriculture makes farm operators especially vulnerable to fixed overhead charges. The loan contract might stipulate that the owner should pay back dollars of the same purchasing power as those he borrowed. This would require use of information on changes in production or yields, changes in the general price-level, and changes in the present portion of commodities the operator produces, so that the annual loan payments could be adjusted to current ability to pay.

Useful as flexible payment plans are in improving farm-mortgage credit practices, they are of little real value over a long period of time if too much has been lent on the farm in the beginning. Combined

[1] Butz suggests that it might even be practicable in some cases to amortize a loan over a period of, say, twenty years, but to set aside, say, one-half of the amortization payments for insurance so that payments could extend over forty years if necessary without the loan becoming delinquent. See Earl L. Butz, 'Postwar Agricultural Credit Problems and Suggested Adjustments', *Journal of Farm Economics*, vol. xxvii, No. 2, May 1945, p. 285.

with sound practices of lending, however, a reasonable proportion of a reasonable value based on productivity varying with the grade of land, flexible payment plans are effective in improving farm real-estate mortgage-loan experience and making possible more successful farm-operation.

Substantial improvements in production credit available to farmers have been made in the United States during the past decade, both by production-credit associations and banks. Perhaps the most significant improvement is the shift in emphasis from security to ability to repay as a basis for extending credit. With this shift has come the budgeted loan under terms of which a borrower may have money advanced to him as he needs it and may repay the loan as income becomes available. Interest is charged during the time the money is actually in use.

Credit for Improvements. Under existing practices it is difficult for institutional lenders to extend credit for financing land improvements such as buildings, tiling, soil conservation, &c., because not enough is known concerning the productivity of improvements. Nearly all types of lenders are hesitant to reopen a mortgage and extend additional credit for obviously desirable improvements like drainage, new buildings, fences, &c. Where a mortgage already exists on the farm practically the only way additional credit may be secured is through a complete refinancing of the mortgage. This is both bothersome and costly. Arrangements must be developed under which qualified borrowers may receive additional funds from the mortgagee without rewriting the mortgage for the purpose of making improvements which are clearly desirable. One student of farm-credit problems has indicated that it may be desirable in the more stable agricultural regions of a capital-surplus country like the United States to have a long-term loan system at low-interest rates, with little or no amortization, in order to encourage the improvement of farm homes and the improvement of farms generally. Under this proposal, amortization payments could then go into the improvements themselves rather than into reduction of principal. Such an arrangement would be similar to the corporate practice of operating indefinitely on borrowed capital so long as improvements so financed yield a rate of return in excess of interest cost. This type of financing for rural improvements, if used intelligently, should result in bringing about a higher level of rural living.[1]

Mortgage Provisions for Better Land Use. Clauses in mortgage contracts can be used to assure improvement in management and

[1] Compare with Butz, op. cit., p. 290.

land-utilization practices. Both borrower and lender must, of course, be in close agreement regarding the features incorporated in the mortgage contract. Recent agricultural adjustment programmes and related governmental activities in many countries are increasing annually the amount and accuracy of data on quality and character of the soil and weather, yield, price, rent, or cost-of-production data on which more accurate judgements of proper conditions and long-time productivity value can be made. It is significant that agricultural credit is coming to be regarded more and more as an instrument to further social progress. In the past neither creditor nor borrower was particularly concerned with the broad social effects which might flow out of the loan, but to-day a more general recognition exists of the place of credit as a means of altering land-use patterns or solving tenure problems and controlling land speculation influencing agricultural settlement, &c.

Crop Insurance. In certain sections, particularly in arid and semi-arid regions, even though future prices and costs to farmers can be made to be fairly stable over a period of years it is hardly likely that yield variations will be reduced considerably in intensity. Drought-resistant varieties of grain, more general use of moisture-conserving practices, and related practices all play a part in reducing the intensity of such fluctuations, but they cannot be expected to reduce greatly the magnitude of the variations. Even a livestock enterprise under conditions in sections without irrigation like the northern Great Plains of Canada and the United States would show a considerable variation in returns from year to year, due to changes in the carrying capacity of the range, supplementary feed reserve that could be produced, &c. A sound crop-insurance programme is one way by which more stable incomes can be assured in such areas. Adjustments must be made in the form of crop-insurance premiums, however, if such a programme is to be most effective in stabilizing farm income.

The present crop-insurance programme in the United States is difficult to operate in periods of high yields when premium rates are still necessarily high because of past experience with low yields. The psychology of the average farmer is to participate in the insurance programme less after a succession of good years, but to participate highly in periods of successively low yields. This makes it difficult to administer and maintain a sound, self-sustaining insurance programme with reasonable rates. A long-term insurance contract such as a three-year policy would help. One writer indicates that 'yield percentage premium' plans would be most effective in stabilizing

farm income.[1] To be administratively feasible, however, the yield-percentage premium plan would require some method of obtaining continuous participation in the programme.

Flexible debt service charges; less emphasis upon rigid property taxes as major sources of governmental revenue, particularly for schools and roads; 'yield-percentage premium' plans of crop insurance; and related financial and risk-bearing devices offer considerable hope of providing more income stability in the inevitable swing from crop failure to bumper yields in areas where income capabilities averaged over a long period of years are reasonably adequate.

Other Debt Arrangements. The following recommendations were made by the Committee on Post-war Agricultural Policy of the Association of Land-Grant Colleges and Universities, of which the author was a member, in its report on post-war agricultural policy in 1944: (1) A public appraisal service should be provided so that all prospective buyers and sellers would have a knowledge of the basis on which they would be able to judge the approximate long-time value of farm properties. A re-sale gains tax should also be enacted. (2) Particularly undesirable is the practice of investing in farms by people whose interests are not primarily agricultural, as a means of reducing the amount of tax that must be paid on incomes obtained in non-farm enterprises. This can be discouraged if income-tax laws are changed to specify that depreciation and losses on farm properties shall be deductible only from income derived from such properties rather than from the total income of the taxpayer. (3) Closely associated with this problem is that of abnormally large-scale ownership, frequently of the absentee sort. One solution is a graduated land tax which imposes a higher rate for additional farms owned by the same taxpayer. (4) State laws should be improved to prevent injustices in foreclosures. One essential is receivership or moratorium rights for debt-ridden farm owners during depression emergencies. Another is the establishment by courts of a fair long-time value for foreclosed farms, regardless of the bids of mortgage holders. Deficiency judgements should be limited to the difference between this fair value and the amount due on the debt, and should be enforced only against owners who have other property or sources of income, or who have been guilty of bad faith. (5) Legal costs in transferring and mortgaging farms are excessive, particularly as to the preparation and examination of abstracts of title, title insurance, and foreclosures. Variation in procedures exists among the states.

[1] See Carl P. Heisig, 'Income Stability in High Risk Farming Areas', *Journal of Farm Economics*, vol. xxviii, No. 4, Nov. 1936, p. 963.

Legal procedures and transfer practices should be simplified with resulting reductions in cost.[1]

DIVISION OF OWNERSHIP BETWEEN PUBLIC AND PRIVATE OWNERS

Public land-use control may take an almost endless variety of forms and may serve a great variety of purposes. It is generally conceded, however, that adjustments between individual and social rights must be attained without the discouragement or destruction of private initiative. Some of the older European nations have attempted to develop an optimum of individual freedom combined with social control, on the grounds that public ownership or operation means political instead of economic control of production, and that while the process of reconciling private control with social control is tedious and time-absorbing it is desirable in the last analysis.[2]

In marginal areas where the ownership pattern contains many small absentee-owned parcels, so that there is no common interest among different private landowners, it is frequently desirable and necessary to purchase outright most of the numerous small privately owned tracts to secure the control necessary for establishing and maintaining correct land-use practices. Through grants-in-aid or in-lieu-of-tax policies, public agencies can provide revenue for local governments formerly dependent upon tax revenue from the lands, and in this way help meet the practical problems of fiscal support for local governmental services.

We should keep constantly in mind the fact that while soil-conservation districts and grazing districts, zoning, and related land-use controls may be effective for a certain time or for considerably long periods, they may, nevertheless, be terminated in the case of the United States by local or state action, whereas federal ownership necessitates a more far-reaching, widespread change in public opinion before lands can be reopened to private acquisition and unwise practices. Under certain conditions it may be desirable for the Government to sell or delegate responsibility for administration

[1] See Committee on Post-war Agricultural Policy of the Association of Land-Grant Colleges and Universities, *Postwar Agricultural Policy*, Oct. 1944, pp. 31–3.

[2] Karl Brandt, 'Public Control of Land Use in Europe', *Journal of Farm Economics*, vol. xxi, No. 1, Feb. 1939, p. 70. Brandt states that in Europe, 'For three generations the philosophy behind the scores of laws referring to land use has been that adjustments between the rights of the individual and of society as a whole must be attained in a manner which does not discourage or destroy private initiative.' According to M. M. Kelso, discussing Brandt's paper, 'A great deal of education and "trial by fire" will be needed before a web of land use controls in the public interest will exist in the United States in any degree approaching what now exists in Europe' (Ibid., p. 73).

and supervision of lands it acquires through purchase programmes or other means.

DISCUSSION

W. G. MURRAY, *Iowa State College, U.S.A.*

I am in general accord with Dr. Renne's paper. I have one or two points I would like to add, however, regarding the discussion on appraisal and the valuation of land. This question of whether or not we value the lower-grade or the poorer land too high is a very perplexing problem in our country. Although we have given it a great deal of thought I do not believe we have arrived yet at a correct solution. There are a number of people who are certain that there is a scientific method of valuation, a productivity-value method that will get around this problem. After the depression of the thirties considerable effort was devoted to a productivity method of appraisal. By taking a representative yield for each soil type and converting that on a rental basis into a yield in dollars we were able to obtain a normal return from a given piece of land. That normal return from a given piece of land is based, as you well know, on estimates, and those estimates in many cases may not be accurate. I am afraid that we, in our country, are claiming too much for what I call this scientific or productivity method of valuation. We have individuals who, under the guise of a scientific method of valuation, are coming out with figures to the third decimal point on the value of a piece of land. They are using scientific soil terminology and other terms which to most laymen are difficult to understand. For example, one of these values would come to 35 dollars 67 cents an acre, and figures like these are being considered as accurate. I favour the productivity system of appraisal, but I do not think we are able to appraise land as exact as this.

There is another factor which some people have overlooked, namely, that on the poorer land we cannot count on as good management as we can on the better land. In this connexion there is the point which has been brought out, I think first by Mr. A. B. Lewis at Cornell University, that on many of these lower-grade farms a place to live has a certain amount of value. Some people say the very fact that the farm helps to hold the world together may give the farm some value. However, this quality does not help to pay the interest on the mortgage.

Over time people have put too much emphasis on superficial appearances. To some people the fact that a farm has length and breadth gives it a certain amount of value. They are not in a position

to judge just how much there may be under the surface, but in many cases they get the feeling that it is worth more than it turns out to be worth when they cultivate it. We have had many examples in our state of that situation and I shall mention one which has given us a lead on where we think part of the solution lies. We have in our state some areas that are very low in value, some other areas that are on the margin, and then large areas which are above the margin. Strangely enough our trouble has not been in the areas with very low values. Our trouble was in the marginal areas, in the areas that appeared to be a little better than the poor areas but not as good as the better areas, and it is in those areas that we have had over-valuation. We think an improved method of appraisal will consider three dimensions instead of two, will consider not only the length and breadth, but also the depth of the soil and the probable type of management. If we can get this type of valuation both in sale value and in mortgage appraisals we will have made progress.

D. WITNEY, *Edinburgh and East of Scotland Agricultural College, Scotland.*

I should like to say that all that I have heard this morning emphasizes that each country has through a process of time evolved its own system of tenure suitable for its own systems of agriculture. The system of tenure is moulded in each case by the character and the social habits of the people, by the position which agriculture holds in the national economy, and by the country's constitution, laws, and institutions. Every one of us, then, speaking of land tenure, is looking at it from the standpoint one would expect of the country from which we come.

There are, for instance, differences in the system of land tenure even between Scotland and England, and it might perhaps help some of our overseas visitors if I illustrate what these differences are. Although in broad principle the type of land tenure is the same, some of the differences are really fundamental, even if, for the sake of simplicity, we refrain from making any reference to the special problems peculiar to the crofting counties of Scotland. In the first place Scotland has its own Agricultural Holdings Acts. The first Agricultural Holdings Act was passed in England and Wales in 1875. Its effect was neutralized because it was possible for landowners to contract out of it. Scotland would have none of this—she looked at the question of an Agricultural Holdings Act for quite a considerable period. Eight years later, in 1883, she said: 'Well, this thing that the Englishmen seem to have swallowed holus-bolus has something in it; we will have an Act somewhat similar.' Hence, in 1883, when an

Amending Act was passed which applied compulsorily to England and Wales, a separate Act, also compulsory in character, was passed for Scotland. In later years Amending Acts and Consolidating Acts have been passed in both countries, e.g. 1906, 1921, and 1923, and, in Scotland only, in 1931.

The Agriculture Act, 1947, to which Dr. Renne referred, has now been passed applying to England and Wales, but Scotland's legislature has not yet reached that stage. There is an Agriculture Bill for Scotland that has just been presented to Parliament, and should become law before the end of the year.

Scotland differs from England not only in that it has its own Agricultural Holdings Acts, but its system of tenure differs in other ways. For instance, in Scotland the long-term lease-system is common, whereas in England and Wales tenant farmers hold their farms on year-to-year tenancy agreements. The Scottish long-term leases generally run for fourteen years, sometimes with a break at seven years, sometimes with two breaks at five years or ten years; leases for nineteen years are not uncommon. Again Scotland differs from England in the system of letting farms. It differs also in its administrative machinery with which its land-settlement problems are handled. There are therefore very fundamental differences between Scotland and England and the more one looks into problems of land tenure the greater those differences seem to be. Between Great Britain, on the one hand, and Northern Ireland, on the other, there are even greater differences in tenure.

I should like to refer briefly to this system of tenure with which we are broadly familiar in Great Britain, where it caters for what is in the main an intensive system of farming, and where something like two-thirds of the farmers are tenant farmers. In considering it we should try to regard it not as a problem of purely academic interest, but one that vitally affects the whole set-up of our agricultural industry, and I should like to suggest that the main purpose of any system of land tenure should be to see that the farmers operating under it are achieving the optimum production from their land in conformity with the needs of the nation, whilst assuring to those engaged in the agricultural industry a reasonable livelihood and at the same time maintaining the land in a high state of fertility. We in this country, where land is so limited, must come more and more to regard the land as a trust, a national heritage. We must see both that we get the best use out of it for the nation as a whole, and that any impediment, any obstructions, preventing that are swept away.

I myself believe that in this country the best system of tenure is

occupying-ownership, but I think that our system of tenancy does offer very great possibilities and has really proved of immense value during the past 100 years and more. The key to the whole problem is security of tenure, and the successive changes in the Agricultural Holdings Acts and the resultant changes in our tenancy system have been largely to give the tenant an ever-increasing measure of security, to enable him to see that what he sows he will reap. Our tenancy system in this country gives the occupier three safeguards. He is protected in the first place by the Agricultural Holdings Acts, i.e. by the landlord–tenant legislation to which I have already referred. Secondly he is protected by what we term 'customs of the country', which have grown up over a long period of time, that have almost the sanctity of law, and which do immensely strengthen the tenant's position. And thirdly, in Scotland, we have the lease, and in England and Wales the tenancy agreement.

I might perhaps refer in a little detail to leases since Dr. Renne has mentioned them. Most of us agricultural economists working in our own areas have seen a great many of these leases as used on our landed estates, and we have some in our possession as examples. They are instructive and they do indicate how difficult our problems of tenure are. Probably you all know that two model leases were devised some ten years or so ago and printed, one that is regarded as suitable for England and Wales, and one that is regarded as suitable for Scotland. In both countries, however, so numerous are the different types of farms, so varied are the dates of entry and other matters of moment, that it is almost impossible to devise a single type of lease that would suit all types of farms.

Our tenancy system works well in certain conditions. It works well where the farms are of a reasonable size, where they are well laid out, where they are compact, equipped with good buildings and permanent improvements, such as fences, water, and so forth, and where, in addition, the landlord not only has ample capital to spend on his farms, but is interested in them and endeavours to keep them in a good state of repair. Given those conditions our land-tenancy system works well. I am quite sure that all agricultural economists here could take you to farms in their areas where those conditions are fully satisfied, where the tenants are highly successful, where they make a good job of things, and where they have no desire whatsoever to become owners.

But there is another side of the picture. There are many farms where the reverse holds good, where, as the National Survey shows, farms are practically derelict, where the buildings are tumbling to

pieces, where they require large sums of capital expenditure on buildings, on drainage, on fences, and on roads to give the tenant even an opportunity of making a good job of his farm. And there is this also to be borne in mind. In this country, where the system of farming is *intensive*, this measure of security that the tenant enjoys enables him to maintain a high standard of farming, and discourages what we call 'farming to leave'. But this system of farming does mean that a tenant requires a very large amount of capital. Hence when a farm changes hands the incoming tenant has to provide not only a large amount of cash for his working capital in stock, implements, and so forth, but to take over growing crops and improvements which the outgoing tenant leaves, and to which Dr. Renne has referred. There are, therefore, very serious defects to our present system of tenancy, but some of these defects will now be swept away, we hope, with the passing of the Agriculture Act. I should simply refer to that Act as the coping-stone in our landlord–tenant legislation—a very important one, so much so that I myself regard it as the most important measure relating to agriculture that has been passed through Parliament since 1883. Properly interpreted and applied it can be of immense value to our agricultural industry.

It is perhaps opportune to look at the possible effects of our new agricultural policy to which reference has been made. First of all, as to the system of guaranteed prices and assured markets, you have all seen in the newspapers during the past week the very substantial increases in prices that are to be given to the farmers under the new price agreement. What will the effect of that be having regard to our land-tenure system? One would assume that it will have the effect of increasing farm profits, and therefore raising the value of land very considerably, so that every landlord who has a farm to sell would, I think, assume that the value of his property has gone up by reason of these price increases; and it is likely to remain high. Land values to-day are extraordinarily high, and the effect of this price agreement will be to raise land values still further. The cynic might say: 'Well, surely that is making a tremendous present to the landowning class?' I rather agree that it is, and it is this that makes one wonder about the ultimate long-term value of this policy.

Secondly, under the Agriculture Act of 1947 provision is made for power to dispossess landlords who no longer perform their proper function of land management, and there are many of them, as I have already explained. The effect of the Act should be that a great deal more land, by reason of this clause and certain others, will come into the hands of the State. The State in this country already holds a very

considerable proportion of land, for between them many government departments hold hundreds of thousands of acres, e.g. the Forestry Commission, the Department of Agriculture (in Scotland), or the various County Councils (in England and Wales), the Commissioners of Crown Lands, the Defence Ministries, and so forth. For various reasons there is likely to be a great deal of land coming into the possession of the State, so that whether we want it or not we are going to see an increasing proportion of the total surface of this country owned by the State. In addition to this, there is much land in the hands of the Church and the colleges of Oxford and Cambridge. But I am not going to enter into the realms of discussion about the merits of land nationalization or occupying-ownership or tenancy. That, of course, may come up later, but I suggest that we shall see a development of three systems side by side: first, an increasing measure of State ownership; second, a greater measure of occupying-ownership assuming that long-term credit facilities are made cheaper than they are to-day; and, thirdly, I think, we shall see our present tenancy system completely overhauled and streamlined to make it more suitable for twentieth-century farming.

I should like before I conclude to put in one plea for further investigation. I think before anything so far-reaching as land nationalization is even considered, the time is ripe for large-scale economic experiment. Would it not be possible for us in this country to think of something, not so ambitious or far-reaching, as, for instance, the T.V.A. experiment in America, but a more modest one comprising, say, one or two large parishes, or perhaps even a small river valley running maybe to 20,000 or 30,000 acres, taken into the hands of a specially constituted corporation which in that small and limited area could pool and reallocate the lands in such a way as to ensure that the farming units were economic, well equipped and well laid out, and within its scope endeavour to tackle a new system of farming with the assistance of agricultural co-operation? I think the time is ripe for that kind of experiment.

Now I should like in conclusion to tell Dr. Renne a story which I think may be regarded as illustrating the difficulty of using calculations in agriculture. It is perhaps not very apt, but it does emphasize that when he is trying to estimate the capital value of his farm, the farmer himself may miscalculate. This story has the merit of being true. It relates to a lady in Scotland who held a public appointment as agricultural adviser (or in the American term an 'agricultural extension officer'), rather a unique position for a lady in this country. She was unique also in that she was of elephantine proportions.

She was very well known for that, as well as for being a very able extension worker. On one occasion she was looking over a farm accompanied by the farmer. They had gone through one field and when they were making their way to the second field the farmer was tactfully heading a long way round in the direction of the gateway. The lady, however, was making no concessions to weakness and insisted on their climbing the fence at the nearest point. But she had misjudged her agility. She got to the top of the fence and there she stuck. The farmer went to her assistance, and after two or three tremendous efforts behind her ample posterior he succeeded in heaving her over the fence, but it was the hardest day's work he had done for a long time! When he got over himself he said: 'Lord, Miss, how much do you weigh?' 'Eighteen stone,' she said. (That was before she had really put on weight!) 'Good God, woman,' the farmer replied, 'another two stone and you would weigh a ton.'

G. R. Simpson, *Commonwealth Bank of Australia, Sydney, New South Wales.*

First of all I have a serious admission to make. I am not an economist, but also I am not altogether an intruder here, as in the Commonwealth Bank of Australia I am in charge of a section which has lent, and I hope will continue to lend, large sums to Australian farmers on long terms at a fixed rate of interest. In that capacity you will realize that I must keep in close touch with rural economics, land tenures, credit systems, production goals, and existing and future markets for primary produce.

Unlike Dr. Renne, who expressed concern that twenty of his American colleagues were listening to his address, I have only one of my countrymen here and I am hopeful he will not be over-critical. Addressing an audience of experts always calls up some degree of nervousness, but I am confident the information I intend to give you will assist your discussions on the important question of the flexibility of land tenure, capital, and credit systems to meet technical, economic, and social development.

You will remember that at the Hot Springs Conference in 1943 all nations which attended were urged to make a full survey of their tenure systems in the hope that means would be found to increase productivity and improve conditions of farm-owners and tenants. In this decision the Conference recognized that any rigid tenure system is a bar to progress. We have made that survey in Australia, and I think a short summary of the findings of our Rural Commission, which

travelled to all parts of Australia and interviewed hundreds of farmers, will be of interest.

You might think that Australia, being a young country, would have few tenure problems, but in order to get the country colonized and developed as quickly as possible it was necessary in the early stages of settlement to offer land on terms that would attract settlers.

We have seven governments in Australia; a Commonwealth Government and six individual state governments. The control of land is in the hands of the states and altogether an enormous amount of legislation relating to land has been enacted. Varieties of tenure are many, but for the purposes of this talk I will reduce them to five groups:

1. Freehold.
2. Improvement leases.
3. Conditional purchases.
4. Restricted leaseholds.
5. Perpetual leaseholds.

Altogether about 1,000 million acres are held under leasehold or licence and I will deal with these.

Improvement Leases comprise large tracts of land leased to individuals or companies having the resources to develop the areas. Occupancy was granted on condition that the lessee effected such improvements as clearing, fencing, and the provision of water. At the termination of the lease the land is often split up into smaller blocks, given a new title, and balloted for.

Conditional Purchase, as the title implies, is a sale by the Government of a living area to an individual on long and easy terms. The lessee has the right to repay the Government the full amount owing at any time.

Restricted Leaseholds. Leases are generally confined to a suitable living area only, and are for varying periods, usually for 28, 33, and 52 years, and, providing the farmer does a good job, he may rest assured that a further lease will be granted him at the termination of the existing lease. He may also apply to have his lease extended in perpetuity.

Many thousands of acres in Australia are now held under *Perpetual Lease* with an annual rental based on the freehold value. After fulfilment of certain conditions, usually during the first seven years of the lease, the lessee has almost the same rights as a freeholder, except, of course, he must pay to the Government the annual rental. In all land settlement in Australia two things are watched closely, the first is undue aggregation, the second over-subdivision. Care is taken that the standards of those engaged in the industry do not fall

through fault of their holdings being too small. What we are aiming at is a higher standard of living and a greater farm population. Latest policy moves are towards security of tenure with the State having the power to ensure proper use and soil conservation, and recommendations have been made to the Australian Government on the lines of clauses in the British Agriculture Act as mentioned to you by Lord Huntingdon in the opening session. Although in Australia as in most countries there is a disposition to believe that an owner should be free to do as he likes with his land, it is thought the dominating function of a land-tenure system is to secure from the land the maximum contribution to the needs of the community. As in England, where the supply of good agricultural land is limited, it must be treated as the heritage of all the people and should be used and conserved not only for this generation but for the generations to come. When speaking of conservation I not only refer to good methods of tillage and crop rotation but also to control of noxious animals and weeds, such as rabbits and prickly pear. You will realize that lack of control by an occupier may have ruinous results for adjoining owners.

When a man is given a restricted tenure, that is, one for a limited period of years, towards the end of the term he is likely to lose interest in maintenance or improvements. There is also a tendency under these conditions to flog the land, to overcrop or overgraze, in other words, to destroy rather than to conserve it. This was the second reason for the Commission's decision to favour the perpetual lease.

The third reason is that we like to give the good type of settler with limited capital a chance to acquire his own place, and so a tenure must be one that is attractive to lenders. In recent months, for instance, we have granted individual loans of up to £5,000 to fine types of young ex-servicemen who, prior to being successful in a land ballot, had very small resources.

Australian farmers have numerous avenues of credit available to them, the most important being the trading banks; government agricultural banks; insurance and trust companies; private lenders; traders and agents. However, the Commission, after taking evidence, feel that all these have drawbacks. For instance, the banks prefer to restrict advances to a certain percentage of their valuation of the security—usually 60 per cent.—the insurance and trust companies and private lenders make loans for short terms and the farmer is sometimes faced with a matured mortgage just when credit is difficult. This method of financing is also costly as fresh mortgages have to be drawn up each time. In all the avenues I have mentioned it is considered

there is also a great risk of embarrassment for the farmer, as lenders are inclined to close down on further credit in periods of low prices.

Another weakness is that a farmer will approach several sources as the need arises, and he finishes up with a little here and a little there; a long-term from an insurance company; seasonal carry-on from a bank; perhaps he will purchase a tractor or other machinery under a hire-purchase agreement, and run up a fairly heavy debt for stores with his storekeeper, with the rate of interest climbing as the risk increases. This spread of borrowing has been one of the major causes of failure. No one credit service is broad enough to meet all the demands of agriculture; each service operates in its own particular field and the whole is badly integrated. It leads to an oversupply of credit in certain times (such as at present when there is a strong demand for rural investment) and an under-supply at other times. Governments have had to step in from time to time to fill gaps in our existing private forms of credit. In other words, they have become a lender of last resort.

As a result of these deficiencies the Commission has made a recommendation that the Australian Government should sponsor a specialized Rural Credit Service, broad enough to meet all the needs of Australian agriculture. An eligible borrower would be able to obtain a fixed loan or a long-term loan on the amortization principle. An overdraft could be arranged against suitable security, such as a second mortgage, a stock mortgage, a crop lien, or against a life policy. Development and reconstruction loans would be available at concessional rates of interest. The bank would set up a research section and a valuation section. These divisions would give expert advice to farmers running into difficulties. The Australian Government has at different times made funds available to compensate farmers for losses due to drought or flood. The bank would act as agent for the Government in administering the allocation of such monies and also in the collection of crown dues.

It will be seen that the proposed service would be a complete one, competing in all fields.

Well, Mr. Chairman, my time is nearly up so I will just conclude by setting out the main recommendations I have outlined to you. Firstly, in Australia we believe in a system of farm units occupied by owner-operators. We think the farmer should have authority over the land he uses. Secondly, he should have security of tenure and all future settlement should be on the basis of leases in perpetuity. Thirdly, the Government should have the right to resume possession of the land if it is thought that the holding is not being efficiently

farmed; and, finally, the setting up of a credit service capable of meeting the full requirements of Australian agriculture.

There are many other matters linked with these questions, such as the method of valuation, but I cannot go into those now. I think you might agree with me that if such conditions are set up Australian farmers will be able to face the future with confidence.

I trust that what I have had to say to you has been of interest and will assist your discussions.

Question by *Dr. Norton*, U.S.A.: Do the different states in Australia have similar land laws?

Answer by *Mr. Simpson*: No. As I told you earlier, the control of land is a matter for each state and the titles of tenures differ greatly, but in the main they may be divided into the five divisions I have outlined. It must be remembered that Australia is a large country, as big as the United States, and we vary from tropical land in the north, growing sugar-cane, down to the cold country in southern Tasmania. In all states the tendency is to favour perpetual leaseholds.

Question by *Dr. Norton*: What is the common form of tenure in the wheat-growing regions?

Answer by *Mr. Simpson*: The area suitable for the growing of wheat in Australia is restricted. Being the best-quality land it was taken up quite early, so that in nearly all of our wheat-growing areas the land is freehold.

I would like to mention at this stage that the Government is not harsh when a restricted leasehold matures. If the Government resumes the holding it pays compensation for structural improvements, and should a man be holding a very large area he is generally offered a lease of a section equal to a living area—usually the homestead block containing the main buildings.

Question by *Dr. Norton*: How large would a holding be in the wheat-growing regions?

Answer by *Mr. Simpson*: That is a difficult question to answer as we range from rich land to areas which may be classed as marginal. I would work it out this way. A living area in Australia is one that would produce on an average approximately 3,000 bushels of wheat per annum.

Question by *Dr. Norton*: What percentage of the appraised value would a bank lend in the wheat-growing regions?

Answer by *Mr. Simpson*: Well, that question is linked with the method of valuation, and if I started on valuations I am afraid the Chairman would have to close down on me as I am one that advocates

productive valuation added to common sense. I am very opposed to the method of just following the market, which, after all, is the opinion of the most optimistic bidder present at the sale. But on our valuation, which is usually based on a long-term productive basis, the Commonwealth Mortgage Bank is prepared to advance 70 per cent. Our General Bank section and most of the trading banks in Australia lend up to 60 per cent. of their valuation.

Question by *Dr. Young*, U.S.A.: When land is drawn in a ballot has the successful ballotee an equity?

Answer by *Mr. Simpson*: I am very glad you have brought up this question. Until recently it was the practice to wait until a man, successful in a ballot, had fulfilled the conditions attaching to a lease before accepting the title as a good security, but lately the Commonwealth Mortgage Bank has decided that when a deserving ex-serviceman is successful in a ballot we are prepared to lend him immediately up to 70 per cent. of our valuation of the security.

In recent cases the bank's valuation of holdings allotted by ballot has been about £7,000, so that the loan the bank is prepared to make immediately would be in the vicinity of £5,000, to enable the man to effect further improvements, build a home, and buy stock. It may interest you to know that our method of valuing perpetual leases is as follows. We value on a freehold basis, capitalize the annual rental at a rate of interest decided on—at present it is 4 per cent. per annum —and deduct this amount from the freehold value. An example would be:

	£
Freehold value of property	8,000
Annual rental £40 capitalized at 4 per cent. per annum .	1,000
Value for security purposes	7,000
70 per cent. loan	4,900

G. Baptist, *Leerstoel voor Landhuishoudkinde, Gent, Belgium.*

I would like to make a few remarks about the problem of leases. The question of the adjustment of the lease to economic circumstances has been discussed quite lately in my own country by a committee of which I was a member. The first proposition we discussed was the possibility of having rents change from year to year according to a weighted index of farm prices. That proposition was not accepted because people thought, firstly, that it would cause too much discussion if the rent had to be changed every year and, secondly, that in any case the farmer and even the landlord should take some of the risks of price changes.

Finally, a proposition was accepted by which the farmer or the landlord can ask for a change in the rent if the decrease or increase in prices is more than 20 per cent.

Should the lease be written or not? Ideas about that question are different. Some people point out that the farmer should be free to have a written lease or not. When there is a written lease the landlord is at an advantage in the company of his tenants. He is better educated, knows better how to draft the contract, whereas on the other side the farmer, not generally very well educated, may be inclined to sign something he does not clearly understand. He may even be inclined to sign too rapidly when land is scarce. When the lease is not written difficulties have to be settled according to local customs. As the renter most likely knows the local customs as well as the landlord there is no relative advantage to the landlord.

Anyway, even when the lease is not written the renter and the landlord should, at least, make a full description of the condition of the farm at the time the tenant takes over; a complete inventory that will avoid difficulties when the tenant has to leave.

The question of the length of lease is, of course, very important and is still more and more important in relation to the scarcity of land and to the intensity of the agriculture. The scarcer land is the greater the desire of the tenant for a long-period tenancy. The more intensive the agriculture is the more important it is to stay a long time on the farm. Some of the reasons have been given by the Australian representative. It is a question of the renter getting the full benefit of the temporary improvements he makes to increase production per hectare.

When the agriculture is intensive there are big differences in farms, in crops, and ways of breeding cattle, even within short distances. The more intensive agriculture is, the more difficult it is to change from farm to farm. In such a case it is necessary to know more accurately the climatic and soil conditions on the farm. This takes time. The farmer may need different machines. Altogether these make the changing of farms difficult in regions of intensive agriculture.

For these reasons we have had a law in Belgium since 1929 which makes the nine-year lease obligatory. If the landlord does not inform the renter at the end of the eighth year the lease is automatically renewed for three years from the end of the ninth year. Of course, landlord and renter may make a new nine-year agreement at once.

Since 1929 we have also had provisions for the payment for improvements. The tenant has to be paid for the temporary improve-

ments he has made on the farm. For definite improvements he has to have the consent of the landlord. If the landlord gives his consent he will have to pay for the value of these improvements when the tenant leaves.

The tenant may make definite improvements without the consent of the landlord. He still may ask the landlord to pay for it at the end of the tenancy. If the landlord does not pay the renter may take the improvements away. Quite often the next tenant will pay for the improvements.

G. MINDERHOUD, *Landbouwhoogeschool, Wageningen, Holland.*

I need not say that Holland is a small country, and has also a very dense population which is increasing rapidly, especially in the rural districts. The increase is about 1 per cent. per year. The land is and has always been in the hands of private owners, but not all the owners of land are farming themselves: about 50 per cent. of the land is rented to farmers. Almost all our land is in cultivation, and, as the rural population is increasing so rapidly, there has always been a strong demand for farms and a keen competition among the tenants. As a consequence farm rents have always been high. To give an example, before the war the yearly rent was about 15 dollars, that is about £4 per acre. When we hear Lord Huntingdon speaking of the scarcity of land in England, and even Mr. Witney on the scarcity of land in Scotland, we have some difficulty in understanding it, because the average size of farms in Holland is about 25 acres. In the period of depression after 1930 farmers got State aid, but as soon as farming became more profitable as a consequence of the State aid the rents of the farms increased. As a result a good deal of the money the State spent to help the farmers did not remain in the pockets of those farmers, but was passed to the landlords. That was not what the Government had meant by State help to the farmers.

Just before the war we passed a Tenancy Act. The Act was slightly modified during the German occupation, but not much. It gave more rights to the tenants than they had ever dreamed of before. Our farmers fought for the right to the three 'Fs', which they learnt, I think, from Ireland. They fought for a fair rent, free sale, and fixity of tenure. They have now got the right to two 'Fs'. They did not get the right of free sale, but they got the right of a fair rent, and the rent of every farm now in Holland must be approved by a governmental board, called the Farm Rent Board. If a rent is judged too high the landlord has to reduce it. If he does not consent to reduce the rent, then the Rent Board has power to do so or to

cancel the contract. In that way farmers get a fair rent, and they also get fixity of tenure, or at least security of tenure. The leases are for twelve years, but after those twelve years they are renewed for another period of twelve years and so on, except in a few cases, namely, when the landlord's son wants to start farming on a farm owned by his father that has been farmed by a tenant. In that case the governmental Rent Board examines the case and makes the decision of whether the tenant may keep his farm or not. Thus there is security of tenure as well as fair rent. They also get compensation for improvements, but not compensation for disturbance, as a farmer farming well can never be disturbed.

The Act of 1940 solved the problem for some years, not for ever, as the principal problem was and still is that there are far more people who want to rent a farm than there are farms available. We have not found the solution of that problem, and a solution is not likely to be found as all the land that can be cultivated is in cultivation. The average size of farms in Holland is less than 25 acres, so that the further splitting of them is impossible. Of course, before the war there was not only a keen competition among tenants, but also among those who wanted to buy a farm. During the German occupation farm prices were simply fixed on the pre-war basis. It was the easy way, but as farming during and after the war has been more profitable than before the war few farms are sold, and if they are sold they are sold at a black-market price. I think it is the fate of planned economy that when you find a solution for one problem two new problems arise from the first one.

C. IHRIG, *Agrarian Research Institute, Budapest, Hungary.*

I am sorry Dr. Renne has not given some emphasis in his comprehensive opening to that system of land tenure where private ownership is combined with co-operative management. It is unfortunate that we cannot go into this problem owing to lack of time, because it has no small significance in some countries. I cannot take the time to tell you about its implications in my country, Hungary, which is perhaps typical of all this part of Europe. I only want to put our problem before you. It arises from the fact that a considerable part of the land is split up into holdings which are too small for rational management. They are too small to absorb the family labour, for market connexions, and even in many cases perhaps for a sound crop-rotation system. So a considerable part of the land cannot be used in independent individual farm management because then there would arise a great loss for the national economy, that is to say, for the

agrarian sector in the national economy. Also great social danger would arise because the people could not earn their livelihood on the standard of living which they think is due to them. Well, what is to be done? It is very simple to say that some way of co-operation within production should be introduced. But how is a compromise to be made between private ownership and production in common? The people, the owners, and also the new smallholders created by the Land Reform insist upon private ownership, and they are very suspicious of any measure which, according to their suspicions, might endanger private ownership. This principle must therefore be maintained, and I think it may be stated that all political parties in my country agree on the principle that private ownership for smallholdings will be and must be maintained.

On the other hand, it is a problem to maintain the proper efficiency of labour when these farmers, as members of a co-operative, are working in common and the common products have to be distributed. The task confronting us is first to convince them that a compromise might be found between these two principles, and secondly, to find a way of management which induces them to give their best effort for the common work, and which thereby does not reduce the output of this common farm management. This is a great problem, for instance, in Hungary, where I estimate about one-fourth of the arable land is now in the ownership of such very small farmers. If this problem cannot be solved, then the total yield of agriculture will be lower than it was before. Therefore I think it is a pity that there are no members here among us who could tell about the experiments and the solutions which have been found in other countries. There are other countries in Europe where this problem may have arisen also, perhaps even much earlier. It would underline the international character of our discussions if they could be extended to these and similar questions which have perhaps no actuality in most of the countries represented here but are of great significance in some parts of Europe.

A. Huni, *Swiss Farmers' Union, Brugg, Switzerland.*

I would like to say a word about the proportion of tenancy in Switzerland. Only one-fifth of the agricultural land in Switzerland is owned by non-agriculturists. Nevertheless, farm people in Switzerland think that this is the highest level that it should reach. By tradition and by our conscious thinking we believe that the interest of the nation is best served when the number of owner-occupiers is high. We have in Switzerland, of course, a few farms where, as

Mr. Witney has quoted, the farmers are satisfied to remain tenants. But these are exceptions in Switzerland. In general the Swiss peasant regards tenancy as a means of acquiring experience and a little more capital, which will enable him to become an owner later. The goal is ownership, even if the peasant knows that he may be just as well off financially by being a tenant.

In order to help this process and in order to keep down prices of agricultural land, the Swiss Government at the beginning of the war made a regulation whereby non-agriculturists were unable to buy agricultural land, and even farmers were not allowed to buy another farm or part of a farm unless they could prove that the additional land was needed for the maintenance of their families.

EARL O. HEADY, *Iowa State College, U.S.A.*

Farm-tenure policy (or research) may centre around various objectives. It is possible that two or more of these may be in conflict. We can come to few well-defined conclusions if we attempt to discuss all facets of this heterogeneous mass simultaneously. Instead we need to isolate the individual components of the overall problem. Until this is accomplished we are likely to do a large amount of meaningless wandering. Farm-tenure policy might, for example, be directed at any one of the following objectives:

1. Redistributing the wealth in agriculture by dividing large holdings among small-scale operators. This has been the objective of recent land-tenure reform in some of the nations' representatives at the Conference.
2. Making farm owners from all or the majority of tenant-operators. Some of us in the United States tend to focus emphasis in this direction. Many point out our policy in respect to land settlement and farm credit, and thus suggest that one of the given values of our society is the owner-operation of farms.
3. Creating security of tenure regardless of ownership or farm size. This objective is sometimes considered independently or is sometimes related to other objectives.
4. Maintaining an upper limit to the size of farms. An endless chain of discussion has centred around this question of area. In the United States, for example, there are many who insist that farming should be maintained as an industry of family units (defined variously in terms of income or labour).
5. Encouraging a 'large' portion of the population to remain in or enter agriculture. The reasoning behind this objective is often sociological, ethical, or political.

6. Establishing alternative tenure or leasing arrangements which will make possible, or result in, the most efficient use of farm resources.

Other possible objectives might be listed. Enough have been set forth, however, to indicate that (*a*) any two or more may be in conflict, or (*b*) the answer for a given objective may well differ, depending upon the social values of the economic group in question. Yet it is evident that unless we separate some of these threads we continue to travel in circles.

A first task should be the isolation of those ends which are either compatible or are in conflict. For this purpose the multitude of economic objectives can be broken down broadly into problems of (*a*) income or wealth distribution, and (*b*) efficiency in the use of resources. I am prone to throw several of the first four objectives listed above into the general category of income or wealth distribution. The specific end in respect to the distribution of income or wealth in agriculture is a value judgement which must be made by each individual national group. The role of the economist is not that of making value judgements. However, as economists we can point out that given objectives may be in conflict with others. An equal distribution of wealth in agriculture may be effected by dividing holdings into 2-acre units and distributing these among the peasants. But certainly this is inconsistent with farming efficiency. Policy which attempts (either directly or indirectly) to make owners out of all farmers may result in an unproductive combination of resources when operators are limited on capital. An upper limit on farm size may well result in an inefficient scale of operations for all, or at least for some, systems of farming. Conversely, added security may go hand in hand with farming efficiency.

There are numerous combinations of objectives which may be either complementary or conflicting. Analysis is needed which will indicate the sacrifice society must make if it adopts alternatives A or B. If a democratic society adopts alternative A with full recognition that it means, say, some sacrifice in the efficiency with which resources are used, then the agricultural economist's duty is fully discharged. Of course, this supposes that the economist will have indicated in which cases the ultimate objectives under alternative A may be accomplished by measures supplemental to alternative B. The agricultural fundamentalist argues that we should have a large number of people in the industry because agriculture is a way of life. One alternative here would include a large number of small farms and thus make possible many families in agriculture. Yet a

large number of families might be allowed to 'live in the country' through the following alternative: farms of the most efficient size might be encouraged while society made up for fewer farms by subsidizing the living of other families whose homes were scattered over the country-side and whose farming operations were restricted to a few acres for table use. The last alternative might not only allow the same number of people to 'live in the country' and 'avoid the vice of the city' but would also allow the same output of food with a smaller input of resources. These examples are cited not as recommendations, but to suggest the kinds of analysis needed.

Dr. Renne has suggested that efficiency in farming may vary depending on whether the farm is owned or rented or on the type of leasing system employed if it is tenant-operated. I wish to probe farther in this direction. My subsequent remarks will be confined to the resource-efficiency aspects of alternative tenure and leasing systems. I have in mind the maximum output of food and fibre from a given amount of resources or, conversely, the minimum input of resources for a given output of product. The following provide criteria for the evaluation:

First, if consumer satisfaction is maximized with a combination of Xa units of commodity A at price Pa and Xb units of B at price Pb, a leasing or tenure system is imperfect if it results in an output or price either higher or lower than the otherwise equilibrium.

Second, if a total output of X units of all products is possible on the basis of the most efficient techniques, any characteristic of a leasing or tenure system is imperfect if it results in an output of less than X from the given stock of resources.

On the basis of these criteria there are numerous instances in which (*a*) rented farms as compared to owner-operated farms, or (*b*) alternative leasing systems may result in variations in farming efficiency. Briefly, these imperfections grow out of the three following cases:

First, a fixed supply of specialized resources is established within the farm business and input of these is not related to their marginal returns. In the United States this division grows out of the custom wherein the landlord furnishes one category of resources while the tenant furnishes another and proceeds are split along similar lines under crop-share leases. The landlord ordinarily furnishes the buildings, but since his return thereon is indirect or perhaps non-existent he is often unwilling to invest in the kind or quantity of buildings necessary for the most efficient organization of the farm. Accordingly the tenant may produce pork since he can furnish the equipment and realize all the return rather than produce dairy pro-

ducts which would otherwise be more profitable on the basis of consumer desire as reflected in market prices. Or, if he does select dairying, he may employ the hand-milking technique, whereas machine-milking would be more profitable were the landlord to provide the equipment.

Second, uncertainty is created beyond that which normally exists in the market or for a given state of technology. In the United States this uncertainty grows out of the short-time period for which leases are made. In the case where the tenant knows with certainty that he will move from the farm at the end of the year, he tends to invest in inputs or select enterprises which will give him a return in the same year. Even though his lease does not terminate at the end of a given year he will still tend to invest in types of inputs which give a quick return as long as there is uncertainty as to how long he will remain on the farm. Uncertainty or short-term leases tend to result in a discounting of future returns and places a premium on production plans which are of short duration. Specifically, this means that our nation gets more corn, pork, and similar products and less forage crops and dairy products than it desires were the pattern of production to coincide with the equilibrium conditions outlined earlier.

Third, costs and returns are distorted within the farm business. This imperfection is quite frequent under our crop or livestock share-leases in the United States. There is a tendency for crop-share rents to become established at some given level without much variation over relatively long periods of time. However, instead of charging shares greater than a customary one-half on corn the landlord may add a cash premium for hay or pasture. Or in areas where farm population presses land resources there is a tendency to include in the share rent some premium for using the farm as a place to live. Obviously, these and other cost transfers within the farm business distort the use of resources. In the first case cited corn acreage tends to be expanded at the expense of hay. In the second case the tenant may well find it less profitable to invest in land improvements when he pays a one-half share instead of a one-fourth share if the latter represents a transfer of costs from the household (rent for the privilege of living on the farm) to the business. Many other examples of cost transfers within the business could be cited for the crop-share and the livestock-share leases.

At first glance imperfections make it appear that tenant-operation must necessarily give a less efficient use of farm resources than owner-operation, or that one form of lease is less efficient than another. Yet this need not be so. Theoretically it should be possible that the

organization of enterprise or the combination of productive factors be the same whether the farm is rented or owned or regardless of the form of lease employed. The imperfections grow not out of tenant-operation or leasing systems *per se*. Instead they grow out of the special arrangements and customs which have grown up around the various renting systems. We have tended to perpetuate these imperfections through the advice retailed to landlords and tenants. For example, we tend to describe the existing leasing systems and arrangements and recommend the one of these which fits the conditions peculiar to a landlord or tenant. We need to give more recognition to the imperfections and suggest arrangements which overcome these. This has been partially accomplished in discussions which centre around such problems as compensation for unexhausted resources. However, we have not given enough thought to the effect of various leasing arrangements and systems of sharing on the combination of resources and enterprises. We can make improvements here by suggesting arrangements which will encourage the same farming efficiency on rented as on owned farms. We need to think not so much in terms of existing customs but in terms of conditions which would hold were leasing systems perfect in respect to their impact on the combination of resources. The imperfections cited above would be eliminated by perfect leases in the following methods respectively:

First, the rigid compartments between categories of resources and division of receipts should be abolished so that resources can flow from one investment opportunity to the other in a manner to equate marginal returns throughout the business.

Second, farming inefficiency growing out of uncertainty or the short-time span of leases may, of course, be handled in two ways (*a*) compensation for unexhausted resources, and (*b*) long-term leases. However, one further point is in order. The amount of compensation must represent not only the original outlay but also some return to represent the future returns on the resources. Otherwise the premium is still on investments which return the original outlay plus the 'normal profit' in a short period.

Third, costs and returns should be restricted closely to the individual enterprises of the business or the segments of the household and business which they inherently represent. The lease is not perfect if it is approximately correct for the farm business as a whole. It must go farther and tend towards perfection for each segment of the business. Otherwise inefficient combinations of resources will occur within the individual farm units.

Mention has also been made of the level of rents which is equitable. The level of rents is also a factor affecting the efficiency of resource use. The above discussion treated the combination of resources within the farm business. The level of rents in general is important in determining the allocation (and hence the efficiency) of resources between agriculture and other industries. If rents are lower than the marginal productivity of the land the quantities of other resources combined with the land will be too great. In a practical sense tenants who would otherwise move to industries with higher returns will remain in farming on small, unproductive units when the contractual rents which they pay are relatively lower than real rents. The level of rents paid by the individual business in agriculture should equal the true-value productivity of the land regardless of whether the basic economic system is one of individual enterprise or socialism. Otherwise the flow of resources into alternative industries will be imperfect. If the distribution of incomes is to be altered there are means of accomplishing this end without distorting the efficiency of resource use such as would be the case if rents lower than the marginal-value product of the land were charged. Income tax with public grants in the form of education, food, &c., is one alternative here.

C. MUMFORD, *Oregon State College, U.S.A.*

My good friend and colleague, Dr. Renne, this morning suggested that on poor land the tenant should have a larger percentage of the crop than on good land. I have a suggestion to make, but first let me offer a restatement of the proposition. I have talked with Dr. Renne this afternoon and I know that he will approve of this restatement, namely, that on poor land the tenant should have a larger percentage of the gross income than the tenant on good land. This restatement needs a bit of modification, at least in our experience.

First, agricultural economists should not use the terms 'good land' and 'poor land'. I shall probably be caught in my own trap even in this short speech, but I shall try not to mention poor land and good land, because each quality of land has its own best use. Therefore in many instances it would be more helpful to use the terms 'more productive land per acre', and 'less productive land per acre'.

Second, Dr. Renne's paper implies, does it not, that the net income per farm on the less productive land is lower than the net income per farm on the more productive land. In that connexion may I call attention to a study conducted in my state. Just before the war we

made a farm-management study in the Willamette valley, which is a rather diversified farming area.[1]

We studied all sizes of farms, all types of farms, and all soil types. We divided the valley soils into four groups, based essentially upon land adaptibility. First, we used No. 1 to describe the soil which is the most productive per acre and which occurs along the river, widely adapted to many crops. Soil class No. 2 is soil that is not quite so productive as the first. Third, a little bit less productive, poorly drained; and fourth, the land, which our soils people called (I am not saying this—it is the soils people) poor land, and very poorly drained. Now this little study resulted in the following facts. On the No. 1 soil, the most productive, we found 50 acres in crops. There was more land, but I am speaking now only of land actually in crops. No. 2 land, 78 acres; No. 3 land, 97 acres; and No. 4 land, 194 acres. You see as the productivity per acre goes down notice what is happening in the crop acreage per farm. It is going steadily upward.

Surprisingly enough, I see some of you look worried. This may not work in other countries or in other parts of my country, I am only claiming that it works in my Willamette Valley. As to the results on income, the most productive land per acre did not yield, in the year of the study, the highest labour income, or the highest per cent. return on investment, nor did it show the highest capital accumulation per year. On the contrary the No. 4 soil resulted in the highest labour income, the highest per cent. return on the investment, and within 2 dollars of the highest capital accumulation per year. I think the reason is obvious: that this county has been farmed long enough for the farmers to determine what is an economic unit on almost any type of soil, and they have arranged the size of their units in accordance therewith. The capital invested on the No. 4 type was a little higher than the capital invested on the other units.

So at least from my standpoint I say that Dr. Renne's broad statement needs some modification in our area. If this finding is true it presents a very constructive and hopeful aspect to us agricultural economists. There is not enough highly productive land to go round, and, therefore, if we look forward in our work to combining the factors of production in such fashion that we may reasonably expect to make about as much money per farm on one type of soil as another then to me this thought is hopeful and constructive.

[1] *Farm Organization and Financial Progress in the Willamette Valley*, Oregon Agricultural Experiment Station Bulletin, No. 444.

In view of the foregoing I would like to suggest this formula: first, know your soil—what it is good for; second, use it for that purpose; third, try to get the proper amount of it, so that you may have an economic unit; and fourth, buy it right—do not pay more than it is worth. Viewed in this light I submit to you that there is a great deal of possibility that a farmer can make about as much money on one type of soil as another.

In this study there are several other things that bear upon the question of the stability of tenure and credit which I would be glad to discuss later with any of you individually. For example, we found that the younger men were making far more labour income in the year studied than the older men—approximately 600 dollars and over for the men under 40, but for the men over 60 a minus labour income with a gentle gradation in between.

G. MEDICI, *Istituto di Economia Agraria, Rome, Italy.*

Some of our colleagues have asked me to give some information about land tenure in Italy, and it gives me an opportunity for making some observations about the general problem of land tenure. The question of land tenure is before everything else a political question. If you look at my country, for instance, to-day agrarian reform is one of the most important political problems. You will realize that its most important aspect is the problem of land tenure. For that reason it is not a typical economic problem. With this in mind I would like to raise the following points.

First, I listened with great interest to the point developed by Dr. Baptist about fair rent. The question of fair rents is as old as the question of a fair price, because after all rent is the price for using the land. This question is very important from a political point of view. It is without any scientific and economic importance because we do not know the exact 'fair' and the exact 'unfair', but merely whether prices are in equilibrium or not in equilibrium. From a scientific point of view unless we agree on this point we are unable to discuss about what is fair and unfair. This problem is a political one and as such the question of establishing a fair price is not posed from the scientific viewpoint. It is put by the Government to agricultural economists as a practical political problem, and we are therefore obliged to give an answer, not an abstract answer with the equation of the general economic equilibrium, but a practical answer as men living in a social world.

My personal opinion is that from a technical point of view the best method to solve the problem is to consider a typical farm with a

normal budget, and to establish what rent is the landlord's due. Posed in this way it is possible to solve the problem because we can determine what is the normal income in wheat, in oats, in sugar-beet, in many other crops from a normal farm using the normal methods of cultivation and which is of normal size.

My second point is: some members here set forth the distinction between a system of renting farms which is nothing more than the payment of feudal tribute, and a system which makes contribution to the progress of agriculture. This issue is put in Italy, too, with great political force because a lot of people to-day speak of rent as if it were inconsistent with a progressive outlook on agriculture, and it is interesting to consider this point. The system of renting can be a good thing when it makes it possible for people to invest capital in agriculture when they have no part in the managing. In north Italy, in the Po valley, we have a lot of excellent farmers who are unable to buy the land. At the same time we have professional and industrial people who have the savings made in other activities which they can invest in land. If we compel these people to be the operators of their land we will see a drop in agricultural production.

Nevertheless, I think the best future, especially in this old part of the world, where the familiar capitalist system prevails for the most part, lies in aiding the cultivators to buy their land. In Italy it was possible to sell to peasants 1 million hectares of good land without any direction by the State. Our biggest agrarian reform was made in liberal form. In consequence of an increase of the land tax many peasants who made a lot of money during the First World War were able—as is happening to-day—to buy their piece of land.

I am sorry I am not able to quote Italian experience on the point raised by Dr. Ihrig of Hungary on co-operative farming. Co-operative farming as such has not been a success. In Italy co-operation is fundamental in marketing, in the best utilization of agricultural machinery, in reclamation and irrigation, but tentative efforts to establish co-operative farms were disappointing. The two or three cases which were interesting were the result of the exceptional capacity and exceptional activities of two or three men.

Third, in Professor Renne's paper there is one extremely interesting point, especially from a theoretical point of view. This is the point about the rigidity of the existing tenure system, and the question of finding the best methods for adequate flexibility. It is fairly clear from European history that only the freedom of enterprise in the system of land tenure can assure the maximum flexibility. When the State starts to make laws which aim to determine the best of fair

land-tenure systems the maximum of rigidity is assured. This is our experience in some parts of southern Italy where there is a general tendency to determine by regulation the level of rent for each quality of soil.

A recent general survey of the distribution of rural proprietors in Italy as related to the system of land tenure reveals that the greatest reclamation and the most striking transformation of poor soils into good orchards, citrus gardens, vineyards, &c., are found either in properties which are owned by the farmer, or in properties which are rented (Plain of Lombardy); it is closely related to the size of the undertaking. Broadly speaking, it is in small and medium-sized properties that we find the most intensive production. In Italy small and middle-sized properties mean from 10 to 100 acres, or perhaps 10 to 80 acres, and it is in those districts that we have maximum employment and the best standard of living.

If we consider the trend of landlord rent in Italy, for instance, over the last fifty years, we realize that there has been a gradual diminution; often this diminution in purchasing value is hidden by inflation. The general diminution in landlord rent has resulted from the increased taxes and wages, which have absorbed all the improvements realized in agriculture through the discoveries of science.

In many countries of old civilization—as are most European countries—the function of landowner is to-day becoming more and more a social function; this is particularly evident in Italy, where progress in methods of cultivation and animal husbandry is due greatly to the educated type of landowner, who spreads among his tenants, share-croppers, and land-workers the teachings of modern agronomy. Only in limited areas of certain European countries is there still a wide gap between landlord and tenant, and this is where latifundia still remain and represent an old period which is fast fading away.

G. A. HOLMES, *London Office of the New Zealand Government.*

Whoever drew up our programme for the first two days of this Conference must have given the matter a great deal of careful thought, because yesterday we took the study of man, the study of migration of peoples, and to-day we have the second important study—land, capital, and credit. I must compliment Dr. Renne on the very able talk he gave this morning, and my only complaint was that it was much too short, because you would all notice from the skeleton draft which was handed round that Dr. Renne was able to get only a little over half-way through. I feel, too, that while the question of land tenure is of paramount interest, the other subjects mentioned

here are equally important. But you will notice that there are three multiplied by three: land, capital, and credit, to meet technical, economic, and social developments. It would take a good deal more than the hours we have spent to-day for us to study those nine possible interconnected factors.

I come from the little Dominion of New Zealand, which was once administered by New South Wales. I will not recapitulate what Mr. Simpson put to you so clearly to-day, because our problems have been very much the same as those of Australia. Our experiments in land tenure and our political experiments have followed very much those of the Commonwealth of Australia.

We first had the problem of land tenure 100 years ago, when the first settlers from Scotland reached the far south of New Zealand. They arrived in a strange country, and felt themselves so completely isolated from the rest of the world that they had to adopt completely new practices. It was impossible to value land when a great deal of it was covered by a totally unfamiliar type of native evergreen forest, and it says a good deal for the shrewdness of the early settlers that they were very soon able to assess what was first-class land, what was second, and what was third-class by the type of vegetation which grew there. The governments in their earlier years tried to encourage and extend settlement, but all the time they were also careful not to perpetuate out there the inequalities from which they had suffered in the old lands. Some, quite a lot of our best settlers, came from the Highlands of Scotland, and they had memories told them by their parents of the Highland clearances. Some came from Ireland and had bitter memories of the Irish evictions. And so they were determined that the land should not get into the hands of a few powerful landowners.

At the same time, as it was obviously necessary to get land put to use, the Government granted short-term leases called pastoral licences. These were assigned for five years only, the expectation being that the pressure of increasing population would soon force the land to be divided up into smaller areas. Much of the land covered with tussock (native grass) was totally unimproved. The settlers had to rely on the natural boundaries to keep their sheep in, rivers and mountain ranges. They were able to run merino sheep from Australia very cheaply with a minimum of labour. The introduction of refrigeration in 1882 made it possible to keep English breeds of sheep for mutton purposes, the merino being, as you all know, principally a wool breed. To keep a dual-purpose breed demanded more intensive farming.

A good deal of the best land was purchased from the Crown—I

should have mentioned that Queen Victoria had taken the sole right to buy land from the natives of New Zealand, the Maoris—and our position to-day after many experiments in the different types of tenure is that about 50 per cent. of the occupied land is freehold tenure, owner-occupier, and the other 50 per cent. (and that mostly the poorer land) is leased from the Crown. There seems no room for the private landlord in between the State and the owner-occupier.

I was interested to hear our colleague from Italy mentioning that land tax had been used as a device for compelling the subdivision of land or the sale of land to peasant proprietors, because that was tried and still operates in New Zealand. It was tried by a Liberal Government away back in 1893 when the call was for closer settlement. The idea was a steeply graduated land tax which would enforce subdivision. Later, again parallel with what Mr. Simpson told us this morning, the Government set up, not a bank, but a State Advances Department, which extended credit to settlers when we had, just after the 1914–18 war, a large-scale development of land by returned servicemen who obtained farms under a balloting system.

We have in New Zealand a system which is rather unique—at least it is unique to Australia and New Zealand. A great deal of the farm finance is conducted by private enterprise companies, known as stock and station agents, who are extremely diverse in their activities. That is a very suitable thing in a country where distances are considerable and where the farmer cannot go, for example, to the market town whenever he happens to have some sheep or some calves to sell, or whenever he wants to buy something for the farm or something for the house. It is quite possible if you have the telephone—we have that even far back—to ring up the stock and station firm and say: 'I want a few rolls of netting, so-many hundredweights of barbed wire, a bath for the baby, and half a sack of flour.' They will supply everything the farm requires; they will sell on commission everything which the farm produces.

We also invented the device of a Land Sales Act to control the inflation of land values. That was necessary legislation in view of the amount of money which is in circulation at present, and the obvious tendency in certain countries for land values to get right out of hand. I was amazed, for example, during the war to find dairying land in Britain being sold, when it was offered freehold, at prices which seemed to me considerably above the economic level. In 1942 New Zealand passed a Land Sales Act which limits the price at which land may be bought and sold. You have a farm, and I want to buy it, but we cannot deal until the price and conditions are approved by a

government-appointed board of expert valuers. I say the legislation is necessary, but, as you can imagine, it produces certain undesirable effects. It is quite a common objection in New Zealand that the operation of the Land Sales Act has to a certain extent driven sellers off the market. An old farmer, for example, who should sell out and retire is apt to say: 'I gave £30 an acre for this land in 1928; the Government value it to-day at £24. I'm not going to lose £6 an acre. Therefore—I've got a home here—I'll sit out on the veranda and run a few heifers; and I won't sell until this legislation is repealed, and I'll hope and pray that that won't be very long.' So, you see, the Land Sales Act, well intentioned, well meaning as it is, can bring a hold-up in the transfer of land from a less efficient to a potentially more efficient younger man who would make better use of it.

It is hardly my task to continue the questions of the flexibility of land, capital, and credit to meet technical, economic, and social development. But there are one or two brief practical points which I should like to mention as they may be of interest to others. On the technical side we have to record some notable achievements. You have only got to think back to a little over 100 years ago when superphosphate was invented and, a much more recent invention, the fixation of atmospheric nitrogen. Those two chemical developments should have far-reaching effects on the operation of farms. The Indian peasant, I understand, spends little or nothing on artificial fertilizers. The progressive Western farmer spends a great deal, and, of course, the higher your ratio of expenditure the more you lean on capital requirements.

Mechanization, which might be called a technical development, is also a very expensive one, particularly in countries which do not manufacture their own machines. We hear people saying very glibly: 'Oh, all our difficulties will be solved when we get our farms more highly mechanized.' Well, in some cases the mechanization is reaching the stage of using a steam hammer to crack a walnut. You buy, say, a combine harvester. Well, that's the best part of £1,000. You then buy a pick-up baler to bale the straw, because you want that as well, and then you have to put in a drier to dry your grain; and you will find sometimes that header harvester doing less work per day than the ordinary old-fashioned reaper and binder. It is a reflection, of course, of the labour position, the inertia which seems to have afflicted some of our labour. I have seen farmers in this country with a patch of potatoes that a couple of energetic Irishmen could dig in a couple of days, who have gone to the expense of a specially imported American potato-digger.

Now in the technical sphere in New Zealand we have developed a very useful practice. That is the practice of the farmer having some of his work done for him by a system of contract operation. In New Zealand the dairy farmer can carry on with his morning milking, but before he has finished the contractor will have started, away down the field, at one of the heavier jobs on the farm. In winter-time he may be spreading lime, with tractor, trailer, and a wide box distributor. In haymaking time he may be going round the field with a pick-up baler at so much a bale. At other seasons he may be doing the ploughing and disking, while the dairy farmer himself is busy with his various other tasks. That is one aspect of the flexibility of capital, because the farmer's capital is not at stake. The contractor provides the capital for this mechanization to give the maximum utilization of that machinery. Instead of it sitting in the shed, the property of the farm owner, it moves round from farm to farm, therefore achieving a much higher efficiency in the use of capital as represented by that rather expensive machine.

JOSEPH ACKERMAN, *Farm Foundation, Chicago, U.S.A.*

I work for the Farm Foundation, which was created by a group of men who deeply desired a better life for the rural people of our nation. They believed the welfare and continuing progress of rural America essential to national welfare. In developing the programme we constantly keep in mind a statement of one of our founders that 'the quantity and the quality of the rural population is a major and most important factor in determining in the long run the strength, the character, and the well-being of the people of the nation'.

A major project of the Farm Foundation is the improvement of farm tenure. Activities include the study of various problems connected with rural land ownership, tenancy, credit, land values, and soil conservation as well as other land problems affecting the social and economic status of the farm population.

Land tenure presents, in my thinking, one of the most serious and long-standing problems in agriculture. It continues to become more and more important as population pressure on the land increases. I am, therefore, delighted to have the opportunity of securing a better understanding and a broader concept of the tenure problems of the world. The knowledge of what problems other countries are facing and their approach to the solution broadens one's vision and provides a better background upon which to base the development of an improvement programme.

Of interest to this Conference is a meeting arranged by the Farm

Foundation in February 1946, at which people from eleven foreign countries in addition to technical people from the United States were brought together to discuss family farm policy. One thing that interested me was that after we got our definitions clear we began to understand that the issues faced by most countries were about the same. The objectives might be summed up as follows: (1) to achieve an adequate income, (2) to attain and maintain security, and (3) to provide opportunities for people now on farms, and for young people as they grow up, to remain on farms under conditions that will enable them to secure an adequate living. Although the objectives were very similar, the means of attaining them were somewhat different. In England and Scotland the problem of establishing a secure tenancy was approached through the Agricultural Holdings Acts. In some other countries, such as Denmark, security seems to be achieved best through owner-operatorship, and legislation was developed with a view to eventual acquisition of the property by the operator.

In our country we stress the family farm as the ideal. It is difficult to arrive at a clear-cut conception of the family farm because conditions vary with the family and with the type of farming. A definition worked out by one of the committees at this international meeting included the following requirements: (1) that the entrepreneurial functions be vested in the farm family, (2) that the human effort required to operate the farm be provided by the farm family with the addition of such supplementary labour as may be necessary, either for seasonal peak loads or during the developmental and transitional stages in the family itself, and (3) that the farm be large enough, in terms of land, capital, modern technology, and other resources to employ the labour resources of the farm family efficiently.

At the same time, as we hold the family farm to be a desirable goal, we need to point out that other tenure patterns have a very definite place. In the north-eastern part of the United States we have almost complete ownership. In the mid-west a large percentage of the land is operated by tenants because land is of such high capital value that a man finds it to his advantage to provide good machinery and equipment with which to work and let someone else furnish the land. In the south, then, we have the plantations operated by sharecroppers. It is difficult to generalize too much about tenure in our country because it represents a multiplicity of systems of tenure.

In discussing the types of reform needed, it is important to mention that social, economic, and political factors are all involved. Yes,

even religious and cultural traditions help to determine the type of farm operations, the arrangements made between parties with respect to land, and the means of passing on rights from one generation to the next.

Because of the importance of education in improving farm tenure, last spring the Farm Foundation brought together a group of extension workers from the states to discuss what kinds of programmes are needed to achieve some of the important tenure goals. How can we bring to our landlords and our tenants facts and experiences they need to solve their individual problems? How can we prevent farm units from being cut up into smaller and smaller farms which can provide only insufficient incomes? What kind of educational information can be given to farm families who want to develop an inheritance pattern which is satisfactory to all members? These are some of the many questions discussed at the meeting.

Some of the discussion here has been centred on problems growing out of population pressures. When there are several children in the family, what happens to those who cannot farm? Our answer is usually that if we are to maintain an economic-sized farm unit, we need to have a continuous free flow of people from agriculture into industry. At a meeting like this we need to describe briefly the situations as they exist within various countries to clarify the issues involved. I for one would like to see further exploration of the tenure problems of other countries in order to learn what is being done to solve them. What efforts are being made towards educational programmes? Towards legislative regulations? What skills and abilities need to be developed by rural people who go from farms into industries?

We continually need to look ahead and try to anticipate the tenure problems that are likely to confront farm people so that they will have useful and timely information readily available when the need for it arises. The place of tenancy, as well as the forces which facilitate, and the conditions which retard, the acquisition of land by farmers constantly needs to be studied in an effort to find rational means for promoting land ownership and providing the desired landlord–tenant relationship on tenant farms so that the best use is made of the soil in view of the welfare of both the present and the future generation.

E. C. YOUNG, *Purdue University, Indiana, U.S.A.*

I would like in the few minutes I can take to relate the discussion to the problem we discussed last night, that is, the movement of

population. This characteristic of mobility was almost completely neglected in our discussion last night and, in my opinion, is very closely related to the problems we have in hand to-day. In the older countries populations are extremely immobile. In the United States they are exceedingly mobile. Our people are born with wheels on. They start moving about almost immediately they are born, and they keep it up at an accelerated pace. With the passage of time, especially with the very rapid changes incidental to the war, our mobility increased still further. In prosperous times we are still more mobile. As a result, economic changes which we initiate in the markets catch up quickly with us in our population movements. I am confident that if we develop a system of price control and depart from the free market it will just be a matter of a very short period of time until we get into trouble with our tenure system. In older countries where populations are less mobile it will take longer, but with us it is just a matter of time until our population becomes hopelessly ensnared as a result of the poor allocation of human resources which would result.

Historically, population movement has been slow in its adjustment to price changes. Under our conditions I am confident that the very great mobility of our population would result shortly in serious population maladjustments under a system of controlled prices.

This analysis applies to farm populations and industrial populations alike. The labour turnover is very rapid. Hired men stay only a few hours, or a few days, or a few weeks. Tenants are always on the look-out for a farm to buy or for a better farm to rent. The short-tenure system which we have, and about which we worry so much, is almost inevitable in our circumstances. It is directly related to the question of mobility. A possible but not a practical alternative is to lower the mobility of the population. Only under conditions of extreme mobility of population and other resources does an economy have an opportunity to readjust itself continually to changing economic and technical conditions. Undoubtedly any action that would cut down population mobility might serve certain ends as suggested by Professor Heady, but at the same time it would reduce our efficiency and reduce the constantly increasing rate of economic productivity.

C. R. SAYRE, *Delta Experiment Station, Mississippi, U.S.A.*

I should explain before I begin that my interests are in the southern or cotton-growing regions of the United States, where we have the highest percentages of the more unfavourable types of tenancies

which exist in our country. I can agree very readily with Professor Young that we must maintain mobility. I think, too, however, there are two or three things which need to be recognized concerning farming and tenancy as it has developed in the south in relation to mobility and ways toward which we should look for future solutions, unless we want to take some very direct types of governmental action. In the first place, the tenancy forms in the southern parts of the United States have developed from very strange mixtures of social and economic conditions. Many of them grew directly out of the conditions following the war between the States. Those conditions, in the sense of adequate education and vocational training facilities, development of desirable ratios between land resources, and the accumulation of capital resources, have not corrected themselves very satisfactorily over a period of almost 100 years. Although we can take the social objectives which Mr. Ackerman mentioned, higher incomes, security, and opportunities for improvement, as the objectives for improvement of living on southern farms, I doubt within our political situation—either in the south or for that matter in any other of the major areas of the United States—if we can depend upon social consciousness as an approach to the attainment of these objectives. It seems to me that we must turn to an economic approach to generate changes for improvement which will mean widespread adjustments.

Unfortunately, with the exception of the alluvial valleys and a few other rather fertile areas, most of our soil resources in the south are relatively infertile. They are hard to manage and to operate profitably. They are high-risk lands under most conditions. The point which seems to me as the inevitable conclusion is that if we change the economic balance between people and land and capital in the parts of the south with relatively infertile soil resources, we must do it through technological advancements which will involve high-cost mechanization and the development of more extensive systems of farming. Those types of adjustments in an economy which has been developed around cotton and tobacco with very wide ranges in price fluctuations result in financial risks too high for the individual farmer to assume alone.

Mr. Simpson referred this morning to the State and private efforts towards providing types of capital which I would call venture-capital for high-risk agricultural developments. We need venture-capital, it seems to me, to stimulate the technological advancements which must come in the south. Here I must depart from Dr. Young's point, however, in the sense that he has said that price

manipulation or regulation would necessarily mean immobility to the point of slowing down desirable changes. It is my feeling that economic approaches to needed adjustments in resource–population balance and to undesirable forms of tenancy require the elimination of some of our market risks and price fluctuations and by advances of capital, either through government advances or through some new leads, to the money market which have not developed as yet. I believe we must depend upon technological advancements to generate the changes, advance venture-capital to help in bringing them about, and reduce some of the risk elements by smoothing out a part of our price swings.

L. J. NORTON, *University of Illinois, U.S.A.*

We have had to-day some very interesting descriptions of land-tenure systems in various parts of the world, but so far as I am concerned we have not had a satisfactory answer to the topic which the programme makers listed, namely, the flexibility of land, capital, and credit systems to meet various developments. Instead of talking about flexibility we have been discussing inflexibility and how some of these various patterns have tended to freeze. I take it that the people who arranged this programme really wanted to raise the question which might be restated this way: 'Are our tenure and credit systems sufficiently flexible to contribute to certain major objectives of agricultural policy?' It is very late in the discussion to be bringing up an entirely new subject, but I must confess that I have not heard the answer to my question. I assume that at the moment and for many years in the future the real problem before the agriculture of any country will be how to organize its agricultural resources so as to attempt to provide a more adequate diet for the peoples of the world. If there has been any agricultural policy in the United States which has continued over the years, it has been to maximize agricultural production. I certainly think that it will be a continued objective. Sometime I would like to have an answer by competent people in the various countries of the world to this basic question: 'Do our present tenure and credit systems provide for sufficient flexibility to accomplish maximum production?'

In the United States the ownership of land and land tenure in general is essentially a business proposition. We have not yet any regulations which limit the price at which farms can change hands. I might say for the benefit of the non-Americans here that this situation exists in spite of the activities of certain agricultural economists who thought that it would be highly desirable to have such controls. But

our politicians, the men who draft our laws, did not pay attention to these views. In large measure it is possible for anyone who owns land to rent it to anyone he selects under the conditions that he wishes to prescribe. Now that is, of course, a completely different situation from the one outlined by Professor Medici as obtaining in various European countries. So our problem has to be approached from an entirely different point of view than in countries where land tenure is essentially a political question. But the major political question in any country in Europe or in any country in the world from the agricultural standpoint is: Do all the policies—land and otherwise—favour a maximum production of food? If I were a responsible economist (in any country where economists are permitted to speak freely), or a responsible statesman, I would be guided in my views on policies by this simple rule because I would be most likely to hold my job either as a professor or as a politician if the policy added up to a maximum production of food. Such policies will in the long run have a greater political appeal to the people of any country than will some particular scheme which may be promoted to subdivide the land in an uneconomic fashion, as was mentioned for several countries this morning. You may say that that is a very comfortable position for one to take who is 3,000 miles away from the problem, but I think it is something which ought to be kept in mind in any country. In general, our agricultural and economic policies in the United States are now directed towards maximum production.

Just a few words about various systems of tenure from the standpoint of flexibility. To-day we have talked much about the owner-operator and the advantage of the operation of land by the owners. The evidence in the United States as to whether the owner-operator or the rented farms produce the most is quite contradictory. In the mid-west, where we have a great deal of tenancy, we are often comparing two different groups of people. Very often the more active and younger men are on the rented farms, and the older men who are not quite so active are more often on their own farms.

But a system which aims at complete operator-ownership has a basic difficulty in an area where any significant amount of capital is involved in agriculture, namely, the amounts of capital required. What particular good does it do to set a man up as the owner-operator of a farm if he is starved of capital? As Dr. Ackerman has pointed out, in the middle-west we have a very high percentage of rented land. This is due largely to the fact that a young man wishing to start farming, unless he is fortunate enough to have been born into

a landowning family and has a father who is ready to retire, practically has to start as a tenant-operator, simply because of the capital required. I want to throw this point out as a limiting factor to a system of land tenure which would involve having all operators as owners.

I wish to turn briefly to the question of different types of leases. Fundamentally, I think there are two: the cash and the share. I would say, from what little observation I have had of English agriculture, that your system of long-term cash leases over here, which is well established and which, as was pointed out to-day, grew out of your social and economic situation, has resulted in the landlords being forced to abdicate their essential responsibilities as landlords. I checked on the rent on each of the farms I visited. I happen to be a very small-scale landlord in the United States, and if I were renting my land at the rent charged for the farms I visited, I do not see how I could afford to put a dime into capital improvements. I gather that is exactly what is happening here. The upshot of it is, that under your system (which I am not criticizing but rather describing one aspect of it as I see it) you have thrown the complete responsibility for the provision of capital, which is very large under your system of agriculture, on to the tenant. This may be all right, but this is a period when large capital investments are needed, and it seems to me that by this system of rental you have eliminated one large potential source of capital for agriculture. If these men have the capital to own all this land and to carry it with these low rentals, they must have other capital which, if there was sufficient incentive, they might invest in the improvement of their properties.

The American system is largely one of share-rentals, and certainly it is more flexible than the cash system. As President Renne pointed out, it may not be sufficiently flexible, because of customary practices, but it is certainly more flexible than the cash system, because under it, if the productivity of a farm is increased, the landlord benefits immediately. As Professor Heady pointed out, the landlord only gets part of the income and this may deter some landlords from making improvements. However, they have more stimulus than the British landlord who does not get any of the increase. In spite of all its faults the American system of share-rentals, which is pretty general in the mid-west, where the landlord and the tenant share in the income from the crops and, under the more scientific type of leases, in both the crops and livestock, certainly is much more flexible than cash leases. It provides greater incentive to the landlords to invest the capital which may be necessary for the improvement of the land and the development of the property.

I would like to register a note of objection to a very minor point which Renne made, namely, that there is very little flexibility to allow for different conditions under our share-renting system. That is not the case in the state of Illinois. Roughly 50 per cent. of our land is operated by tenants, and in the more productive grain-producing sections, in eastern and central Illinois, the percentage runs up to 70 per cent.—one of the highest percentages of tenant-operated land in the world. We have found by surveys that, as you go from the northern to the southern part of the state, that is from the better lands to the poorer lands, the percentage of the crops which the landlord is getting decreases very definitely. There is some degree of adjustment. The adjustment in share of crop may not be fine enough, but the real adjustments come in the shares of various expense items borne by landlords and tenants. I think that Professor Renne left an erroneous impression when he said there was little flexibility in share-rentals.

Professor Heady made a very good point, the strongest indictment of our share-rental system in accomplishing the objective of achieving the maximum production from a given piece of land in view of resources, cost, and technical knowledge; namely, that since the landlord received only a share of the income he might be discouraged from providing as many improvements as he would if he operated the farm. I submit, however, that if he gets a share of the gross product he will be much more willing to do so if it results in increased production than he would if he were a cash landlord. I know many landlords who are making substantial improvements on their farms. These men either have some understanding of agriculture or hire a manager who understands agriculture. There is an increasing trend in our country on the part of absentee landlords to hire what you in England call estate managers, although with us they may be managing farms for several different people. In such cases, I think, we find increasingly that the landowners are making the type of improvements which tends to increase output.

In respect to co-operative farming, I happen to have a rather intimate knowledge of a farming community where I think there is as much co-operation among farmers in getting jobs done as in any community in the United States. That is extremely important for labour efficiency. Back in the war years we paid a great deal of attention to labour efficiency. Our department searched out, among the records of farms, those which had high man-work units per man. They located these farms and then went out and studied them. Almost without exception these were cases where two, three, or

four farmers, either related or not related, co-operated in doing many farm jobs. By that process they cut down on the amount of equipment they needed and got the jobs done more effectively. In the community which I know intimately, whenever there is a job involving a considerable amount of labour that requires group activity for efficiency, the men simply get together and exchange work. In connexion with operations involving expensive machinery such as combines, threshing machines, or corn pickers, it is almost the universal rule that one machine will be used on more than one farm. That is not co-operative farming, but it is co-operation in getting tasks done where more than one person or expensive machinery is needed for an effective operation. Most of these farms in this particular community, which, incredible as it may seem to most of you with European experience, range in size from 160 to 240 crop-acres, are operated, unless they have more than the usual amount of livestock, by one man. The only way they can get multiple-men jobs done is by this kind of co-operation. I do not know whether this example in any way contributes to the problem or has any value to our friend from Hungary, but I will say that this type of co-operation works under actual farming conditions and operates to permit economies in equipment and labour.

But to revert to my opening point, sometime I would like to see this group or some other group analyse the question as to whether our land tenure and capital systems actually tend to hinder or to help in the big job which the agriculture of the world faces at this time, and will face for several years to come, of getting the most production we can out of the rather limited agricultural resources of the world.

S. C. Lee, *University of Nanking, China.*

Since we have heard so much about the West, may I take a few minutes to say a few words about the East? I am of the opinion that the tenure system as an institution is a common and collective product of the social, political, economic, and technical environment, so any land-tenure system should be adaptable to and should fit into the social, economic, political, and technical environment of that country or nation. The tenure system should be flexible in order to cope with the situation of that country. If an institution becomes fossilized then some kind of reform is called for to make it meet the need of that community. So, speaking generally of the land-tenure system of any nation, it should aim at making the best of men, land, capital, and management, so as, according to

Alfred Marshall, to obtain an ideal proportion between all the factors in agriculture, or indeed any business. Only thus can we attain the highest output of that industry. So it seems to me that the tenure system should be very flexible instead of inflexible. China is an agricultural country because she lacks other natural resources. Her population has to live on agriculture, and we have not developed in the technical and mechanical sciences. So that there is a vicious circle in that we are handicapped in developing scientists who make progress in agriculture.

I would like now to mention some of our tenure problems for your solution, as Professor Ackerman suggested a little while ago. In China before the war cultivating owners were about half of the rural population; 25–6 per cent. were tenant farmers; and the rest were part tenant and part owners. And, of course, during the war farmers, especially the tenants, have profited by the higher prices. So a portion of the farm tenants became owners with the help of the farmers' banks.

Fundamentally, as Mr. Medici said, the tenure system is a political problem. We have been troubled by communistic disciples who started their campaign in rural districts. They proclaimed that they would divide the land equally among the farmers, so during the war in the communistic regions they destroyed all the boundary lines and the plans of the villages and transferred all the workers between the ages of 16 and 45 (as I said yesterday). Now in the rural districts not only are we short of workers, but we have difficulties in recovering the original farms because the Communist Army has destroyed all the boundary lines. We cannot recover all the farms for all the farmers, no matter whether they are owners or tenants or part owners. Several provinces, the northern part of the Kiangsu province, the Shantung province, and at least six provinces altogether, have the same difficulty in recovering their old boundary lines between the farms.

The Government has tried its best to help the farmers to re-establish their old farms. Several methods have been and still are being tried. First, land of absent landlords is sold to the tenants at market price, and the former owners paid a portion in bonds or notes on the farmers' banks. Second, in accordance with the land law that an owner can only operate a size sufficient to provide a living for the family, any excess of land over that amount has to be sold to tenants. The tenant has the right to ask the Government to buy the excess of land from the large landowners. Third, public land is to be appropriated for tenants. Fourth, if a tenant remains on a farm for eight

years, then that tenant will have the right to ask the Government to buy the land from the owner for the tenant. And fifth, heavy taxes are levied on big farms. These are the five steps we are now trying in China, but, of course, the problem will not be solved in the very near future because first we have to re-establish the boundary lines between the farms, and these proposals are just a beginning of an attempt to solve the land-tenure problem in China.

As we look round the world we see land-tenure problems to be different in different countries. But they are different also in time. I suppose forty or fifty years ago land-tenure problems in the United States were quite different from now. As Professor Ackerman said, farms are becoming smaller. The U.S. population forty years ago was only 98 millions; now it is 140 millions. The population pressure forces a division of large farms into small farms. When the population comes to our 470 millions perhaps the farms will become even smaller than we have now. Thus I think the world is really one, and we are passing through the same problem in different stages. As this is the International Conference I would like all of you gentlemen who are looking at this problem from different angles to recognize that we have the same object: to attain the highest efficiency from land, capital, and labour.