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tion involves multiple subdivisions with attaching dwelling entitlements on land of Classes 1, 2 and 3, the consultative process between the Council and the Department of Agriculture should be a "consultation" role. That is, the Council should be *required* to refer such development applications to the Department of Agriculture without being bound by any recommendation from the Department, and with 21 days maximum for response.

Finally, the responsibility remains with the Council to fully evaluate all development applications under the "with-without" scenarios developed above. Section 5 of the EPA Act exists for a good reason and the sooner that it is applied by planners in a rigorous manner the better.

## References

- BALDERSTONE, J. S., L. P. DUTHIE, D. P. ECKERSLEY, F. G. JARRETT and J. C. McCOLL (1982), *Agricultural Policy: issues and options for the 1980s*, Australian Government Publishing Service, Canberra.
- DEPARTMENT OF ENVIRONMENT AND PLANNING (1985), *Draft Kosciusko Regional Environment Plan*, Sydney.
- HARRIS, S., J. G. CRAWFORD, F. H. GRUEN and N. D. HONAN (1974), *Rural Policy in Australia: report to the Prime Minister by a Working Group*, Australian Government Publishing Service, Canberra.

# Should Agricultural Land be Protected from Sub-Division? – Economic Considerations

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Zoning is a coercive act on the part of the State whereby landholders lose certain exclusive, or private, property rights. At the same time, new property rights are created which are held in common. These newly issued rights enable the conversion of an open, or uncontrolled access resource – such as the amenity value of a neighbourhood – to property held in common. The property rights taken usually include the right to sell land for any end-use. It may include restraint on subdivision. The newly created right held in common is typically also enjoyed by the very land owners who have been deprived of exclusive rights. Thus, while such land owners may lose by the taking, they stand to gain by the granting of the new rights. Whether they are net beneficiaries as the result of the exchange is, of course, an empirical question. Further, the losers of the private exclusive rights may not be the sole owners of the new collective right. In such a situation they could be net losers even if the value of the collective rights exceeds that of the lost private rights.

We are all familiar with examples of zoning, particularly in the urban context where industrial development may be constrained to certain areas, perhaps to prevent "undesirable" externalities from interfering with the amenity value of residential areas. For similar reasons, subdivision is constrained, or certain types of dwelling (e.g. high rise apartments) are not permitted, in some residential areas. Undesirable externalities are uncompensated ill-effects imposed by one party on another. In the present context they could be the erosion of the value of the amenity of a neighbourhood by crowding, the creation of noise, smell or other pollution.

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Similar instances of common property problems, and of externality, could be postulated in the case of rural land. The best example of this would be the situation where certain activities, such as residential development, are banned because they are hostile to, or incompatible with, agriculture. Such incompatibility could arise if the agricultural use in question involves the practice of spraying which, because of problems of drift, is incompatible with high density residential development. Dedication of land to agricultural use, by zoning, could be appropriate in such a situation in order to avoid the dislocation of farming that the incursion of residential development would represent. The high value of land in residential uses implies, however, that if the pressure for such development were to persist, the zoning arrangement must eventually permit the orderly replacement of agriculture by housing.

There can, therefore, be an economic rationale for zoning which can conceivably apply in the agricultural as well as the urban setting (Nelson 1984). Even so, the benefits of zoning should still exceed the cost. The net value of the output of land in the use which is guaranteed by zoning (including the value captured by the zoning rights) should exceed the net value of the output of each banned use. Ideally, this superior value should be reflected in the market value of the land concerned. But, for this to be the case, all the value of the preserved use should be captured by the owners of the land. This is not always the case.

There are instances, as already indicated, where the losers from zoning may be distinct from the beneficiaries. This could be the case with regard to restraints on subdivision of rural land such as are currently being implemented in NSW. If such constraints on subdivision are being introduced in order to protect the amenity value of rural land, not for the benefit of farmers but for benefit of non-farmers, then, while the farmers lose the right to subdivide their land in certain ways, those who enjoy the amenity value of the rural landscape are guaranteed that it will be preserved for their enjoyment. While the farmers may benefit from the preserved

amenity value, their loss in asset values due to zoning is likely to far exceed their gain. More significant, at least numerically, among the beneficiaries would be those such as tourists. Thus, in such cases, zoning or subdivisional restriction transfers wealth from farmers and potential purchasers of subdivided land to those who obtain amenity benefits from the continued existence of the rural landscape (Wills 1980). While such transfers raise questions of equity, there would seem to be no reason to regard them as being unacceptable, even in the absence of compensation. Indeed, according to the potential compensation criterion of Paretian welfare economics, such transfers could be deemed to improve social welfare, if the gains in amenity benefits exceed the net losses to farmers and potential purchasers of subdivided land.

Following this line of reasoning there is a base for an intellectual case for subdivisional control. It begs two questions, however. The first is whether the common property benefits will exceed the sum of private losses to land holders and land buyers. I will return to this empirical question below. The second question is rather more fundamental and is concerned with the issue as to whether there might be other reasons for imposing controls on subdivision.

If the 1984 policy statement of the NSW Department of Agriculture on protecting agricultural land is any guide (*cf* Hawkins 1986, Appendix 2) there are a number of other reasons for controlling subdivision. The reasons advanced in the document for controlling subdivision appear to be:

1. agricultural lands of the world are becoming scarce;
2. long term productive capacity of land should be conserved;
3. the State must maintain its ability to produce food and fibre both for domestic consumption and exports;
4. supply of good agricultural land is limited and its reduction is undesirable;
5. family owned farms should be supported and strengthened; and
6. farm size should be able to support efficient, sustainable production.

None of the justifications advanced in the

policy document reflects the type of common property problems already discussed as a possible justification of rural land use zoning. Rather, the concern appears to be with the ability of the world to feed itself, the need for Australia to maintain (increase?) its agricultural production, the need to preserve productive capacity, the need to conserve prime agricultural land, the need for farms to be of an efficient size and the need to support and strengthen the family farm. The implication is that meeting all of these needs could be helped by a policy which places a limit on subdivision in NSW. I doubt this.

Detailed analysis of the propositions underlying this rationalisation is not possible in this paper. A number of points should be made, however. First, restrictions on subdivision are unlikely to have any significant impact on world food problems. There is ample evidence that the world is able to produce enough food and fibre to meet its needs. Certainly it has serious problems of distribution, effective demand and regional production. Indeed, the main message of contemporary analysis of world food problems is that they are political, economic and institutional rather than technical (World Bank 1986). In the unlikely event that restricting subdivision in the Australian State of NSW did add to world food supplies it would make no more than a trivial contribution to the problem.

Second, the effect of subdivision on the productivity of agricultural land is a moot point, particularly as the meaning of the word "productivity" is not clear in this context. If the average net contribution of a unit of land to national wellbeing is intended, then it can be argued that a unit of land in urban use is more productive than it would be in agricultural use. But this meaning is probably not intended, particularly in view of the fact that only a small proportion of our useful land surface devoted to agricultural use is, at the margin, being diverted out of agricultural use into urban use. Further, the fact should be recognised that an upper limit is set to the conversion of agricultural land to urban uses by the supply and cost of existing urban land for recycling.

From the rhetoric surrounding the

policy under discussion the conclusion is suggested that "productive" refers to the net return per hectare of similar land units in full-time commercial farming compared with that in part-time farming. The implication being that small (*i.e.* below the subdivisional minimum) farms are less productive than larger (full-time?) farms. There is certainly scope for more research on this topic, but work to date suggests that part-time farming has a negligible impact on land productivity (Giles 1985). Indeed, when the non-pecuniary value of farming activity, and the low opportunity cost of much part-time farm labour is considered, the productivity of land in part-time farms, in terms of its contribution to national wellbeing could be substantially greater than that in full-time farms. This springs from the fact that, for many part-timers, farming is a recreation rather than a chore. The conclusion on this point, then, is that a policy of restricting subdivision does not seem likely to contribute to the goal of maintaining the productivity of agriculture.

Third, the evidence is that New South Wales has been experiencing little difficulty in maintaining its ability to produce food and fibre for domestic consumption and exports. Agricultural output and productivity have been growing steadily and unhindered subdivision, either for urban development or part-time farming, is unlikely adversely to affect these trends. The argument could be advanced, however, that the inhibition of sub-division, by restricting the performance by part-time farming of its role in agricultural adjustment could actually inhibit the performance of the industry.

Fourth, the way in which uninhibited subdivision will erode the supply of prime agricultural land is not particularly clear. As already indicated, the demands of urban growth for such land are not great while those of part-time farming would be even less. Further, there is no evidence that the growth of part-time farming would lower the productivity of such land. Finally, if a land use can bid any form of land (premium agricultural or otherwise) away from another use then that use would be the one that enables the land to contribute most to the overall well-being of society.

Any policy that impedes desirable transfers of this nature, therefore, would reduce national wellbeing. Such would probably be the case with the policy now under discussion. This is because, in most relevant situations, subdivisional activity is likely to be able to outbid full-time agriculture, even after paying all developmental and external costs and after allowing for the subsidies which currently promote urban development. At the risk of labouring the point, investment in lesser quality land in order to raise its productivity would probably be better use of the nation's resources than preventing the use of prime land in high value subdivisional activity.

Fifth, while the total number of holdings in Australian agriculture has declined, and the average size of farm has increased, there is no evidence that the family farm is losing its comparative advantage over other forms of farm organisation, except for certain minor industries and locations. Concern for the independence of the family farm unit has been expressed, particularly in relation to some industries such as broiler growing. But even there, the inhibition of subdivision does not seem the most effective way of tackling any problem that may exist. Further, evidence is emerging, not only in Australia, but also in the northern hemisphere, that part-time farming can be an important way of sustaining the family farm unit (Giles 1985). Part-time work off the farm diversifies and stabilises family income and improves cash flow. Thus, it is conceivable that the policy does not promote the comparative advantage of the family farm.

Sixth, in general, undistorted markets will promote farm sizes capable of supporting efficient, sustainable production. Much of the small farm problem that has existed in Australia has been created by government through its closer settlement activities, or maintained by government through various policies of agricultural support. The history of the home maintenance area in Australia is such as to generate no faith in the ability of bureaucrats to plan optimal farm size. This is an operation best left to the market, helped by government, to perform as well as it can.

The structure of agriculture is dynamic; what constitutes an optimal form of organ-

isation is continually changing. In such a situation the role of government should be to promote flexibility in agricultural markets and to help the flow of information. Inhibiting subdivision would seem to lessen flexibility, particularly as it would inhibit the establishment of small, perhaps part-time, units which gain the benefits of economies of size not in the conventional way but through the employment of contractors and by syndicating activities in cooperation with other farmers.

Subdivision limitations may be seen by some as a stratagem for preventing the emergence of a small farm problem as agricultural terms of trade continue their long term decline. That is, size restrictions could be seen as preventing the establishment of small farm businesses which, as the terms of trade decline, will come to constitute the adjustment problem of the future. This will probably not be the case, given the likelihood that size limits will be set, as a consequence of political pressure if nothing else, at too low a level to affect the problem in any way. A more suitable role of government with regard to this problem and the related one of adjustment would be to improve the flow of information and thus facilitate the adjustment process.

The stated justification of the NSW Department of Agriculture Policy for the Protection of Agricultural Land – at least insofar as it relates to the restriction of subdivision – is trivial, inappropriate and of little use. As it stands, there appears to be no justification for the taking of exclusive rights from farmers and for creating common property rights of uncertain, seemingly small and perhaps negative benefit.

Despite this, one wonders if, like Chesterton's fat man within whom a thin man is struggling to get out, this seemingly unjustified policy is not prompted by a number of seemingly unvoiced concerns. These concerns could result from real problems associated with subdivision, for part-time farming or for urban development, for which zoning may or may not be the appropriate solution. Rather than zoning, relevant solutions could include reforms to fiscal policy, particularly at the level of local government and involving the use of differential rating and the greater

implementation of user cost pricing principles for the provision of services. Possibly the problem does involve the loss of a public good whose value is worth preserving by zoning but whether this is so is not clear. Even if such a problem does exist, the form of the appropriate zoning solution is not clear. There are many types of problem and there are many solutions. If such a problem does exist and is capable of definition, then the discipline of economics is capable of helping in the development of zoning solutions that are appropriate in terms of practicability, efficiency and equity. The present policy appears to be more of an attempt to ban something which is not liked for various reasons (part-time farming?), rather than a rationally thought out policy designed to cope, in the interests of the State as a whole, with a well-defined problem. The policy under discussion does not appear to stand up to critical appraisal.

## References

- GILES, G. D. (1985), *The New South Wales Department of Agriculture's Policy on the Protection of Agricultural Land: A Case Study of Byron Shire*, unpublished Bachelor of Agricultural Economics dissertation, University of New England, Armidale.
- HAWKINS, C. A. (1986), "The conservation of agricultural land and the realities of farm economics: a case study in the fragmentation of good agricultural land," *Review of Marketing and Agricultural Economics*, 54(3).
- NELSON, R. H. (1984), 'Agricultural zoning: a private alternative', in Baden, J. (ed), *The Vanishing Farmland Crisis: Critical Views of the Movement to preserve Agricultural Land*, University Press of Kansas, Lawrence. 113-144.
- WILLS, I. (1980), "The justification for rural land use controls - an economic appraisal", paper presented at the Workshop on Rural Land Use Planning, Sixteenth Biennial Congress, Royal Australian Planning Institute, Canberra.
- WORLD BANK (1986), *World Development Report 1986*, Oxford University Press, New York.