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AN INVESTIGATION OF THE "TRIAL" STAGE IN THE ADOPTION PROCESS: COMMENT

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In his recent study of aerial topdressing in the Clarence Valley, Duncan has recorded the year of initial use of superphosphate on pastures in a survey made of 42 farms.[1] A further inference relating to social interaction and the adoption of new practices can be drawn from Duncan's data.

When initial use of superphosphate on pasture is plotted as the cumulative level of adoption over time, an S-shaped curve is produced. The rate of adoption increases at first and eventually diminishes (see figure 1).

The finding that the rate of adoption increased slowly at first then accelerated rapidly supports the idea that adoption is not merely a function of the individual but a function of social interaction. For instance if an adopter of an innovation influences two others to adopt the innovation and each of these influences two more to adopt, and so on, the resulting expansion follows a normal growth curve. The explanation of the eventually diminishing rate of adoption is that, after half the individuals in the community have adopted, each new adopter is less likely to communicate with people who have not already adopted the practice. The interaction effect thus levels off. It has been demonstrated repeatedly that the curve expressing the cumulative level of adoption over time of a particular innovation is S-shaped.[2]

The conceptual device of classifying adopters according to time of adoption has been used to account for individual differences in innovativeness. The value of this categorization of farmers as innovators, early adopters, laggards or whatever depends upon the relationship between these classifications and other observable farmer characteristics[3].

One such characteristic, farm size, appears to be a significant factor influencing time of initial use of superphosphate on survey farms in the Clarence Valley. From Duncan's data, of the "probable trial" group

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[1] R. C. Duncan, "An Investigation of the "Trial" Stage in the Adoption Process: Aerial Topdressing in the Clarence Valley", this *Review*, Volume 37, No. 4 (December, 1969), pp. 207–216.

[2] G. E. Jones, "The Adoption and Diffusion of Agricultural Practices", Review Article No. 6, *World Agricultural Economics and Rural Sociology Abstracts*, Vol. 9, No. 3 (September, 1967), p. 11.

[3] E. M. Rogers, *Diffusion of Innovations* (New York: Free Press, 1962), pp. 150–151.

(average property size 4,371 acres) over 50 per cent commenced topdressing prior to 1964, whereas all of the "probable adopter" group (average farm size 255 acres) commenced topdressing in 1964 or later. Average farm size of "probable trial" group was over seventeen times the average farm size of the "probable adopter" group. I would suggest that the proportion of the farm initially topdressed (the parameter used to separate trial from adoption) may be a function of farm size.

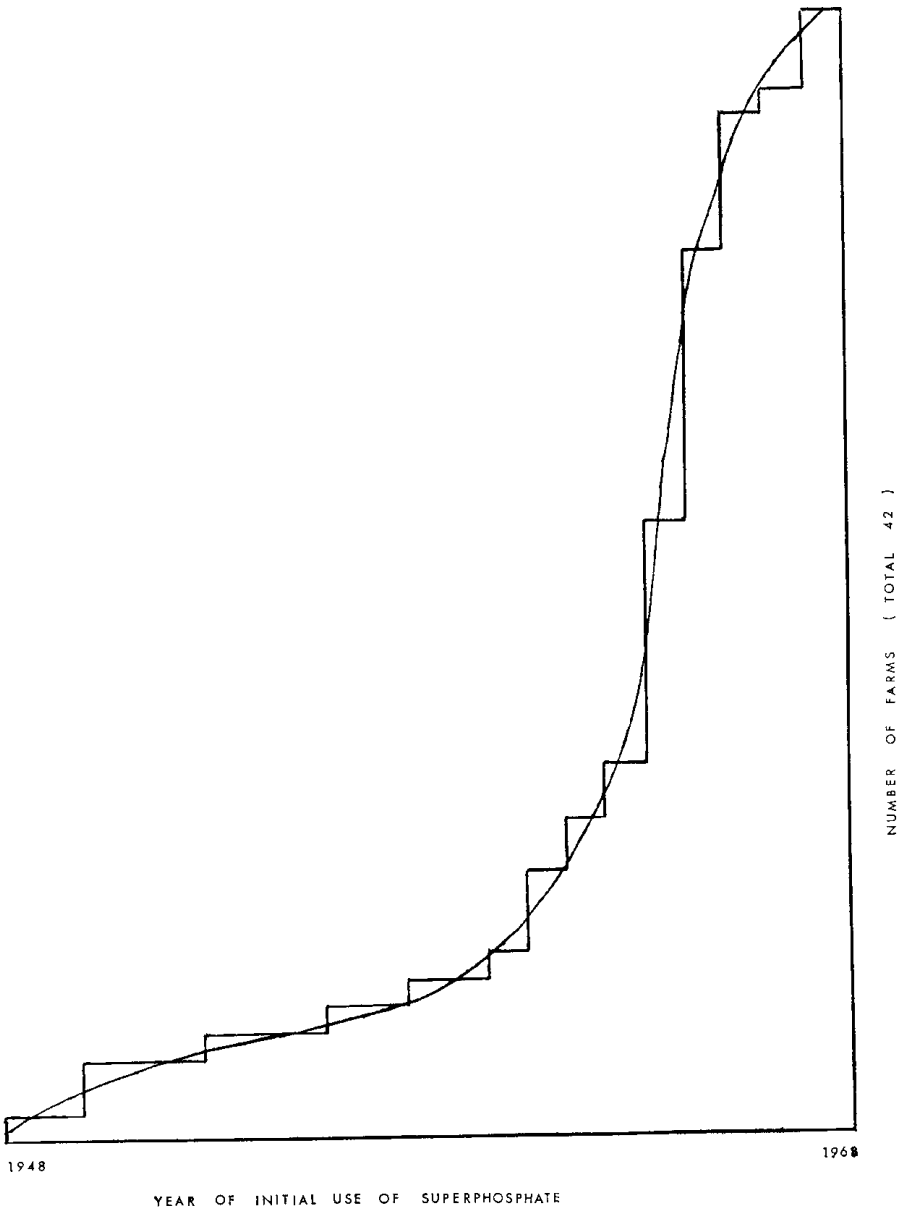

Figure 1

Duncan concludes that the proportion of the farm initially topdressed is a function of the time of first use of superphosphate. There is insufficient data to show the causal nature of the relationship between time of first use of superphosphate, proportion of the farm initially topdressed and farm size. The data do suggest that these three variables are related.