FARM RECORD DATA

When Do Managers Really Need It?

by

By AARON G. NELSON

At a recent meeting of the Arizona Society of Farm and Ranch Managers and Rural Appraisers one of the speakers made the point that, with electronic data processing equipment, summaries of farm record data can be made available to management currently throughout the year, within three days following receipt of the raw data.

Questions were then asked: Why all the hurry in getting the summaries? Is the added value to management sufficient to justify the added expense? Answers to these questions depend upon the type of management decisions to be made.

A self-evident fact that should be kept in mind is that data are of maximum value at the time decisions are made. Thus, analysis of the timing of management decisions will indicate when farm record data will be of greatest use to management.

Based on Three Terms

The analysis presented in this paper is primarily in terms of (a) using factors to produce a product, (b) the combination of factors used in producing a product, and (c) the combination of enterprises included in the farm business. Some attention also is given to financial management, including income tax management. *Basic assumptions underlying the entire discussion are that management is dealing with a commercial farm or ranch business and that the objective is to maximize income.*

The timing of decisions in producing a product depends upon the nature of the product and of the factors of production employed. First, consider the case where the flow of both factor and product is fairly continuous such as milk production with an established dairy herd. Management needs current record data on feed fed and milk production to facilitate making adjustments in feed-milk ratios to maximize income. A similar situation prevails with fuel and tractor power produced, and with fuel and irrigation water produced. In such cases the manager can use current data to advantage in appraising current performance. If performance is not what it should be, management has the opportunity to make changes without delay.

It should be recognized, however, that the range within which adjustments can be made may be limited in some cases. For example, if too large an adjustment is made in feed fed to a milk cow, the level of her production may be reduced for the remainder of the lactation period, thereby precluding the possibility of heavier feeding and higher milk production, should such become profitable.

Piled Up Costs, Harvests

Now consider the situation where the factor or the product is "lumpy," such as is the case with cotton production. Fairly large amounts are spent on land preparation, fertilizer, water, insecticide and the like, at various times during the cropping season. The product also is "lumpy," received in a few large amounts at harvest time. In such cases management decisions are made when plans for the crop are formulated on the basis of existing knowledge, (experience, record data from earlier years, experiment station data, and the like) and estimated production.

Modifications of initial plans may be made throughout the year as the crop progresses. Water applications may be adjusted somewhat according to the amount available and progress of the crop. If the crop is unusually weedy, more labor or herbicides may be applied than had been planned. But such modifications of initial plans will be based upon observed conditions relative to the current and prospective condition of the crop, rather than on the amount which had been spent.

Current record data would be of little value in making these types of decisions, except possibly for fertilizer and water, where a record of amounts applied may serve as an indicator of the nutrient or moisture content of the soil. However, in these cases a direct test of the soil would be far more reliable.

Third Kind of Relationship

Managerial decisions relative to purchase of capital items such as land, machinery, milk cows, breeding stock and improvements may be considered as a third type of factor-product relationship. Purchase of such items involves a relatively large amount or "lump" of funds. Annual summaries of record data would be useful to management in deciding whether it would pay to purchase the item, or how much he could afford to pay for it. However, current record data would have little direct value to management in decisions of this type.

What combination of factors will be most economical in producing a given product? Current record data are of limited use to management in making decisions of this type. Livestock rations, man-machine ratios, man-irrigation water ratios, land-irrigation water ratios, land-fertilizer ratios, etc., are determined upon the basis of knowledge existing (experimental data, experience, record data from earlier years, etc.) at the time the decision is made. However, with repairs versus a new machine, current record data on repairs may be useful to management in determining whether it would pay to buy a new machine.

Combining Enterprises

Most farmers have limited resources and must make a decision regarding the combination of enterprises which will be most profitable. Obviously, there can be no current record data at the time the initial enterprise selection is made. Thus, current record data are of limited usefulness in such decisions. When product flows of the various enterprises are continuous, the manager would be able to make use of current record data in determining adjustments which would be profitable, as was outlined above.

Current record data can be of considerable value to management in managing current finances, and also in income tax management if the business is on a cash basis, as are most farms and ranches. Current record data enable the manager to keep track of current in and out-cash flows, together with accounts and notes payable and receivable.

Such data also facilitate monthly cumulative totals throughout the year, a further aid in financial management. These data are needed for analyzing income and expenses during the year to determine whether a savings could be made in income taxes by shifting income and expenses from one year to another.

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