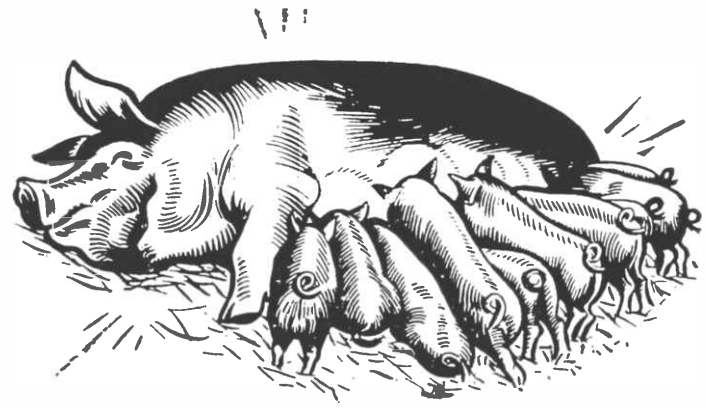
Arizona Hog Production

Triples in Six Years:



Organization & Management Factors Important to Economic Success

*by Elmer L. Menzie, Timothy Wolfe and C. Curtis Cable, Jr.**

Production of hogs in Arizona has tripled during the past six years. In 1965, there were 5,700 farrowings with a total of 41,000 pigs saved. In 1970, farrowings numbered 16,100 with 126,000 pigs saved. The number of sows in the fall farrowing increased from 2,800 in 1965, to 8,500 in 1970.

An economic study begun in 1970, in the Department of Agricultural Economics, University of Arizona, and nearing completion, reveals a number of facts about the industry. The study involved a sample of 45 producers, 32 of which had farrow-to-finish operations and were analyzed in detail. The total sample included about 50 per cent of Arizona's producers and 80 per cent of the breeding sows.

About 75 per cent of the Arizona hog operations were located in four counties: Maricopa, Pinal, Graham and Cochise. Over 60 per cent had less than 100 sows and there were only 12 producers as of July 1970, with over 200 sows each. Nine of the largest operations in the sample had nearly 40 per cent of all the farrowing sows in the state. (Since July 1970, several operations have expanded in size.)

The major cost item in production of hogs is feed. Feed costs ranged from 13 to 16 cents per pound of hogs sold, and accounted for 60 to 80 per cent of all costs. The wide range is largely a function of variations in such factors as labor use, investment costs and feeding efficiency.

Considerable variation existed in feeding practices. Some of the larger producers bought feeds at lower prices by doing their own trucking. The largest percentage of the producers mixed their own rations and thus had lower feed costs than those buying a pre-mix. The amounts fed per animal per day and the number of days fed on a particular ration varied significantly from producer to producer. For example, the estimated intake for finishing rations ranged from four to eight pounds per day, and boar rations varied from three to six pounds per day.

Almost all of the hog operations in Arizona are family owned and operated. About one-third of the operators interviewed had no hired labor, one-third had at least one full-time laborer and the remainder hired only part-time help. Management and much of the labor was supplied by the owner and his family. Many of the smaller operations were a part-time occupation for the owner.

Labor costs are difficult to estimate under the above conditions. Based on total pounds of live hog sold, the range in labor cost was from 1.3 to 6.2 cents per pound and accounted for from 6.4 to 27.1 per cent of the total costs. Efficiency in labor use is thus important in terms of net returns. The same is true of management. A major factor in reducing these costs is having the correct combination of plant and livestock in re-

*Professor, former Graduate Assistant, and Extension Marketing Specialist, respectively, Department of Agricultural Economics, The University of Arizona.

lation to labor and management available.

The initial outlay as well as annual cost of investment in Arizona hog operations is sizable and subject to considerable variation. Operations studied had estimated investments ranging from $200 per sow to over $900. Buildings and improvements constituted the major part of the investment. Some had excessive plant facilities, others were inadequate. Some operators had low investment costs because of special circumstances such as availability of existing buildings or low cost materials. In some instances estimated labor charges for construction were low thus giving a lower investment figure.

There was excessive investment in boars on some hog farms. The number of sows per boar ranged from 8 to 38. Larger operations generally had higher ratios, but the ratio of sows to boars for operations with at least 100 sows was from 12 to 38. Operations with more boars than necessary added both to investment costs and to operating costs, especially in feed use.

Annual costs were estimated for depreciation, building and machinery repairs, and interest on all capital involved. These costs varied from one to over four cents per pound live weight of marketed hogs. The largest number had less than two cents per pound investment costs.

The number of pigs produced per sow per year was also a major factor contributing to variations in returns. This ranged from 12 to 18. Only 12 of the 32 hog farms studied produced more than 16 pigs per sow per year. The majority of producers reported to 12 pigs born per liter, but from one-fifth to one-third died at some stage prior to being finished for market.

While inadequacy of plant facilities may have been a factor in some instances contributing to lower yields, the main cause appears to have been management in general. Selection of the breeding herd as well as proper feeding and handling of sows prior to and after farrowing are very important. Sanitation is also a major factor in maintaining higher ratios of marketable hogs to sows. With proper management both the numbers of pigs raised per litter and the frequency of farrowings may be increased.

The major addition to cost in raising one more pig per sow per year is in feed. When market prices for hogs are 19 to 20 cents per pound the addition of one more pig could increase returns for a 100 sow operation by about $1000 per year. Thus improvements in management resulting in more pigs per sow are very important to the owner.

Management practices varied considerably for the producers with farrow-to-finish programs. Twenty producers indicated they did not begin with SPF pigs (Specific Pathogen Free) and most of them did not buy SPF boars. Fourteen producers followed both of these practices.

Twenty-five of 42 producers responding said they had no disease problems. The remainder indicated the most common problem was scours; Rhinitis or "crooked nose disease" was mentioned by five producers. Other disease problems indicated were sore feet, leg stiffness, pneumonia, and leptosprirosis but these were only in individual isolated cases. Only four of those indicating disease had begun operations with SPF pigs.

Almost all producers worm their pigs but the frequency varied from one time to monthly. Eleven respondents vaccinated sows for leptospirosis, and five for erysipelas, while 23 did not vaccinate. Only four producers indicated pigs were vaccinated for erysipelas. Most producers gave iron shots to pigs at two to five days of age.

While no attempt was made to formally determine producers reactions, many expressed the feeling that the lack of availability of veterinary services was a problem. Most producers seemed to handle their own veterinary needs.

Weaning dates for pigs ranged from three to eight weeks. Variations in conditions suggest a fixed weaning period for all producers would not be appropriate. However, the longer the period before weaning, the lower the frequency of farrowing which in turn reduces the number of pigs available to be raised per sow.

In general producers farrow on a continuous basis. Both sows and boars are replaced at intervals ranging from one to five years. The most common practice seemed to be replacement in two or three years based on an established policy.

Most Arizona hogs are sold to one packing plant in Phoenix. About 70 per cent haul their pigs in their own trucks. During the hot season hauling is generally done at night but producers still feel there is a problem of shrinkage during transport resulting in estimates of weight losses from 0.5 to 5 per cent.

Arizona hogs are priced on the basis of Kansas City prices for a given weight and standard of lean cut. Depending on the weight and lean cut standards premiums or discounts are paid to individual producers. The larger producers generally seemed to be satisfied with the marketing system, though they expressed a desirability for more competition. A larger percentage of smaller operators expressed dissatisfaction with the system.

The variability in plant facilities, organization, managerial practices, and results of hog operations in Arizona suggests a need for both technical and managerial assistance by many growers. While some variation can and should be expected some of the differences in operations found in the study are considered excessive for sound management and success. When prices are relatively high, all types of producers may appear to be successful. However, when prices fall to 18 or 19 cents per pound as they have in the past year, efficiency in all aspects of the operation become important for survival. As a minimum producers need to be aware of standards of efficiency in costs and returns. In order to apply these to their own operations, they need and should maintain records to permit effective analysis of their operations and to determine areas where improvements can and will result in higher returns.