

# AGRICULTURAL NEWS LETTER

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## *Increasing Profits from Broilers*

Raising broilers is a specialized business, requiring a knowledge of feeds and feeding methods, poultry diseases, and methods of selling, as well as the ability to manage a business in a highly competitive field.

Profits—and even a major part of the investment—can be lost in a few days if proper precautions against diseases are neglected. Failure to maintain proper ventilation or lack of timely attention to the young chicks may result in heavy losses from crowding and suffocation or from respiratory diseases. The profits of the operation also can be lost by untimely marketing.

Thus, a review of factors affecting the efficiency and profits of broiler production should prove valuable to broiler producers of the Southwest, as well as to those persons who may contemplate entering this business.

Studies in Texas during the war indicate that high mortality and large amounts of feed required per pound of broiler produced were the two most important factors in reducing profits. A more recent study by the

University of Delaware substantiates these facts and provides some additional information that is applicable generally to conditions in the Southwest. A summary of these findings, which are based upon actual experience with 102 flocks in Delaware during the 1948-49 season, is shown in the accompanying table.

Pounds of feed required per pound of broiler produced was the most important single factor in determining profits, accounting for 60 percent of the variation in the cost of producing broilers. Each additional pound of feed per pound of broiler was associated with an increase of 4.7 cents per pound in the cost of production. Efficiency in the use of feed can be obtained by feeding a properly balanced ration, low in fiber and high in energy value, and by eliminating unnecessary waste through use of properly constructed feed troughs.

Mortality rate was the second most important factor in determining profits, accounting for 30 percent of the variation in

### GUIDES TO PROFITABLE BROILER PRODUCTION

(Based on a study of 102 flocks in Delaware, 1948-49)

	<i>Most profitable flocks</i>	<i>Average 102 flocks</i>	<i>Range</i>	
			<i>Low</i>	<i>High</i>
Mortality rate.....	6.4% or less	15.9%	2%	44%
Feed required per pound of broiler produced.....	3.1 lbs. or less	4.0 lbs.	2.7 lbs.	6 lbs.
Weight gained per week.....	0.25 lbs. or more	0.23 lbs.	0.18 lbs.	0.27 lbs.
Broilers cared for per man.....	13,000 birds	10,620 birds	6,502 birds	20,335 birds
Weight of birds at selling.....	3.0 lbs.	3.1 lbs.	2.9 lbs.	3.3 lbs.
Age at selling.....	12-13 wks.	13.6 wks.	12.0 wks.	16.4 wks.
Size of flock.....	20,000 to 25,000 birds	12,222 birds	4,040 birds	40,500 birds

costs of production. Purchase of healthy chicks, strict sanitation practices, and proper care of the birds at all times paid big dividends by keeping death losses at a minimum.

These two factors—pounds of feed required per pound of broiler produced and mortality—accounted for 90 percent of the variation in costs of production. Other factors, such as number of birds cared for per man—a measure of labor efficiency—and size of flock, were important but to a much smaller degree.

Above-average efficiency in several phases of the business is more important than an unusually high degree of skill in any one, according to the Delaware study. Thus, the benefits of a low mortality rate can be quickly lost through the use of an above-average amount of feed per pound of broiler produced. Likewise, failure to maintain a profitable size flock would limit the total profits on even the most efficient operation.

The results of this study suggest that overall management—the ability of the operator to handle a business successfully—is perhaps the most important single factor in determining the profits of broiler production. In addition to managerial ability, of course, the operator must have the necessary technical knowledge of poultry, feeds, and markets pertinent to broiler production.

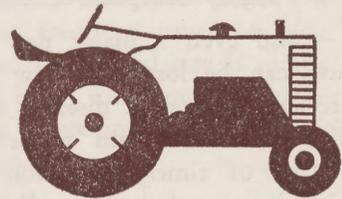
Broiler producers in the Southwest should give close attention to these major factors affecting profits in this enterprise. Moreover, persons who contemplate raising broilers should study these facts carefully and, if possible, gain some practical experience in the field before investing in the business on a large scale.

Efficiency in production is likely to become increasingly important in the broiler business, in view of the narrowing of profit margins and the increasing competition for the consumer's meat dollar from pork, beef, and veal. The fact that broiler production in the Southwest has increased 300 percent during the past decade suggests that competi-

tion in this industry will become keener and profits more dependent upon an efficient operation. The very favorable price relationships of the past few years, which have made even inefficient production profitable, are not likely to continue during the next decade.

### *Keep the Tractor Cool*

Keeping the tractor's cooling system functioning properly is a major factor in reducing breakdowns and repair bills, according to W. L. Ulich, extension agricultural engineer of Texas A. & M. College.



Mr. Ulich says that the most frequent cause of an overheated tractor engine is overloading. The size and type of equipment used should be suited to the capacity of the tractor. If it is necessary to use larger equipment for short periods, shifting to a lower gear will sometimes eliminate overheating.

A second cause of overheating is the use of a low-grade fuel. Use of a higher-octane fuel will usually correct this difficulty.

Other factors that may cause tractor engines to overheat include:

- (1) Badly worn or loose fan belts.
- (2) A clogged water pump or a worn water pump bearing.
- (3) Faulty timing and improper carburetor adjustments.
- (4) Clogged radiator fins—accumulation of trash, dirt, weeds, and other debris on the front surface of the radiator, reducing the volume of air passing through the radiator grill.
- (5) Failure to adjust radiator shutters with changes in tractor load.

(6) Worn or damaged hose connections—the inside as well as the outside of the hose connections should be checked.

(7) Improper lubrication of the engine—using improper weights of oil.

(8) Failure of the thermostat to operate correctly.

(9) Lime deposits on the inside of the block and in the head of the cooling chamber.

Mr. Ulich points out that flushing the cooling system once or twice a year with a lye flushing compound or with a solution of 1 pound of common soda to a gallon of water will aid materially in keeping the cooling system clean and go a long way toward prevention of overheating.

### ***Dairy Bulls May Be Source of Brucellosis***

Dairy bulls may transmit brucellosis, commonly called Bang's disease, to cows, even when artificial insemination is practiced, according to a recent study by Dr. C. A. Manthei of the United States Bureau of Animal Industry. In a test using 12 susceptible cattle—six cows and six heifers—two of the cows and all of the heifers developed active brucellosis following insemination with semen from an infected bull.

According to Dr. Manthei, "This is conclusive evidence that a bull infected with brucellosis is a possible spreader of the disease and should not be used in the artificial insemination ring. To avoid possible danger to the clean herd, such a bull should not be kept even for natural breeding."

### ***Sprays for California Red Scale***

Citrus growers in the Lower Rio Grande Valley of Texas are urged to be on the lookout during July and August for infestations of California red scale, particularly in groves that have been interplanted with cotton or vegetables. An oil emulsion spray should be applied promptly if this parasite appears in large numbers.

In recent years some growers have been planting cotton or vegetables between young citrus trees and have dusted these crops frequently with DDT and other organic insecticides. These dusts have tended to destroy the natural enemies of the California red scale, and the young trees frequently have been stunted or in some cases killed by a heavy infestation of the scale.

As indicated, the red scale infestations usually are most severe in young groves which are interplanted with other crops and in older groves adjacent to vegetable and cotton fields. Thus, scale control is usually necessary only in these areas, and spraying is not recommended until the insects have built up to damaging numbers. Natural parasites and predators, such as ladybird beetles and "Aphidius," will give good control in most of the older groves.

Where spraying is necessary, Texas A. & M. College specialists recommend using an oil emulsion spray containing at least 2 percent oil. In experiments carried out by the Lower Rio Grande Valley Experiment Station at Weslaco, the spray was applied under a pressure of 200 pounds, and the trees were drenched thoroughly.

Parathion used at a concentration of 0.45 pounds per hundred gallons of water did not give good control, and the additions of DDT, parathion, and chlordane did not increase the effectiveness of the oil emulsion spray.

### ***Clover Seed and Bees***

Most of the clovers will not set seed satisfactorily without cross pollination—the transfer of pollen from one plant to another. This mixing of the pollen is usually done by insects, and clover seed producers are finding that it pays big dividends to have several colonies of honey bees near their clover fields to insure adequate pollination of the plants for a heavy set of seed.

While some clovers will be partially pollinated by wind, White, Ladino, Red, Crim-

son, and Alsike clovers are almost entirely dependent upon insects for pollination.

If there are from 60 to 100 colonies of honey bees located within  $\frac{1}{4}$  to  $1\frac{1}{2}$  miles of the clover fields, pollination should be adequate for profitable seed production. In areas where this situation does not exist, growers are advised to place several colonies of bees in or near the clover fields.

Beekeepers are usually glad to place their colonies near clover fields, since this practice increases the yield of honey. Some seed producers prefer to own a few colonies of bees, since bees require very little care and the sale of honey provides an additional source of income.

### ***Range Deferment Pays***

Deferred grazing has proved to be a profitable range management practice. Keeping livestock off the range for a few months permits the more productive grasses to grow and develop an extensive root system and produces a seed crop, whereas on ranges and pastures that are continuously grazed these grasses never have the opportunity of producing the maximum amount of feed and of propagating themselves through the production of a seed crop.

In north and west Texas A. H. Walker, extension range specialist of Texas A. & M. College, suggests that ranges be rested from May to November. He points out that the experience of ranchers in recent years shows that more beef can be produced per acre when deferred grazing is practiced than with continuous grazing.

Deferred grazing is an effective method of aiding nature to rebuild the productive capacity of our ranges and to make maximum use of the moisture received during the growing period.

### ***Louisiana Jersey Sale***

The Louisiana Jersey Cattle Club and Dairy Association will hold a sale of dairy heifers on June 24 at the A. G. and J. T.

Compton dairy farm on Highway 71 south of Alexandria. About 60 choice heifers from Louisiana and out-of-state breeders will be offered for sale.

### ***Tomato Market News Available***

Tomato market news, including prices paid at the various packing sheds throughout the east Texas area, as well as wholesale prices at the terminal markets, are issued daily by the Production and Marketing Administration. Persons interested in obtaining these reports may have their names placed on the mailing list by writing to the Fruit and Vegetable Branch, Production and Marketing Administration, United States Department of Agriculture, Jacksonville, Texas.

### ***Publications***

Oklahoma Agricultural Experiment Station, Stillwater:

*Southeast Oklahoma Pasture-Fertility*, Progress Report, 1945-1949, by Horace J. Harper and others.

Texas Agricultural Experiment Station, College Station:

*Cotton Variety Tests in the El Paso Valley, 1943-48*, Bulletin 719, by P. J. Lyerly and others.

*The Cleaning of Mechanically Harvested Cotton*, Bulletin 720, by H. P. Smith and others.

*Recent Developments in the Chemical Control of Brush on Texas Ranges*, Bulletin 721, by Vernon A. Young and others.

*Experiments with Guar in Texas*, Circular 126, by L. E. Brooks and Clark Harvey.

*Storing Sorghum Grain in South Texas*, Progress Report 1240, by M. G. Davenport and others.

*Sugar Beet Variety and Strain Tests in the Lower Rio Grande Valley*, Progress Report 1243, by C. A. Burlison and others.

*Tarnished Plant Bug Control*, Progress Report 1246, by W. L. Owen and J. C. Gaines.