

# THE TON LITTER AS A TEACHER

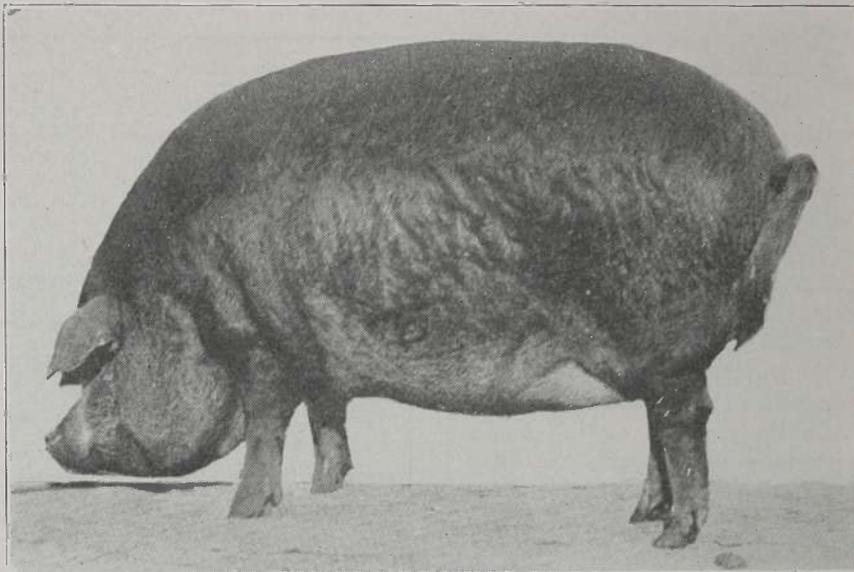
By ORVAL KNOX, '28

## Breeding, Management, and Feeding the Chief Factors in the Production of 2000 Pounds of Pork Per Litter

**T**HE trend of the age is one of economy. Maximum production with minimum expenditure is the beacon light of modern industry. Greater efficiency is being sought in every line of endeavor and is being manifested in the swine raising industry in the form of the Ton Little Movement. One has only to realize that the period of extensive land colonization is a matter of historical reference, that farm lands following this period increased in value, that farm operating costs have advanced materially during the past decade, to understand the economic need for more intensified agricultural production. And because of the great scope of our swine industry the fundamental lessons involved in the Ton Litter Movement are applicable to the entire agricultural world and more especially to the production of livestock.

The Ton Litter Movement was inaugurated through the efforts of the Agricultural Extension Service less than three years ago. This idea was conceived as a means of stimulating interest in swine raising and to encourage more improved methods of hog production. The plan of the movement, briefly, was to raise a litter of pigs to weigh a ton in 180 days. Country wide interest was soon attracted to this novel plan. Breeders and feeders were quick to accept the plan as a challenge to their industry and set out with a determined spirit to try their stock and match their ability as feeders. In a minimum time ton litters were announced from different sections of the hog world. Present report states that the two ton mark has been passed. What will be the limit? Will this movement awaken a broader realization and understanding of a more efficient swine production? An analysis therefore of the principles on which these record performances are based should lead to a definite conclusion as to the merit of the ton litter as a teacher.

The Ton Litter Movement teaches three principles which are fundamental, practical, and within the reason of every swine raiser; namely, breeding, management, and feeding.



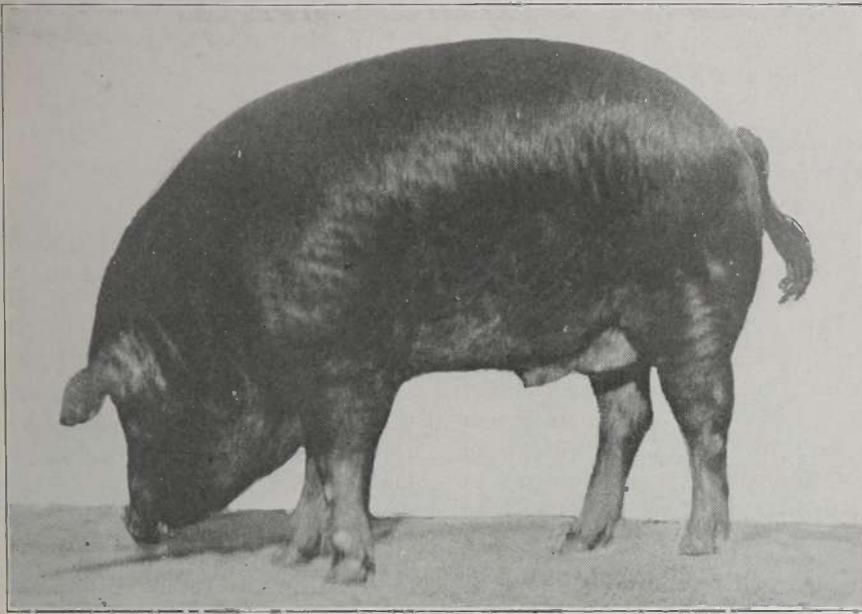
One of the Prize Winners at the 1920 Arizona State Fair.  
Exhibited by the Southwest Cotton Company.

There may be some difference of opinion as to the relative importance of these principles, but they shall be considered as of equal importance. The degree of efficiency with which these three principles are carried out by the individual swine breeder will essentially determine the degree of success which he may expect from his operation.

The selection of a breed is a primary consideration. It is best to select a breed that is prevalent in the locality. It has stood the test of existing conditions while the introduction of a new breed may involve unexpected difficulties. There are two requirements that swine should possess for breeding use. These are: First, the ability to raise large litters; and second, an economical use of feed. The ability to raise large litters means more than simply the prolificness of the sow. It should include the number of pigs saved by the sow up to weaning time or the number of pounds of pork produced. There are too many sows in the country that are not prolific. One of the biggest leaks in the hog industry is the farrowing of three, four, or five pigs to a litter. This means that a larger number of sows must be kept to meet the demands. The ton lit-

ter movement shows that a large litter is more economically fed up to weaning than a small one. The thing to do is to keep fewer sows of the producing kind and give them better care. The slogan for the nineteen twenty-five ton litter movement "Cull closer and keep fewer" could well be practiced by every breeder.

Lack of management by breeders has been one of the drawbacks the swine industry has encountered. Too many breeders take for granted that "Swine are swine" and require little if any management. This is plainly an erroneous idea for swine require the same degree of care and attention as other animals if a reasonable return is expected. Management is not limited to certain seasons of the year, but is a yearly duty. The care of pigs must start preparatory to the breeding season and continue until time for marketing. Careful management pays no larger dividends than during the farrowing and suckling period. Losses at farrowing time have eliminated many contestants from the ton litter race. A pig saved at farrowing time is a pig saved at marketing time. Management is the prevention of losses through sanitation of quarters and watchfulness and judgment of the herdsman. The ton



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litter has proved that sanitation and proper care have raised the average number of the litter from between four and five to eight pigs. These facts are not based on mere assumptions but on the data received from questionnaires sent out to hundreds of swine breeders.

The third principle taught by the Ton Litter is that of feeding. Failure to properly provide for the nutritional needs of the animals will retard their growth despite faultless breeding and care. Feeding, like management, starts with the sow before breeding and continues to the time when the hogs are marketed. Before weaning, the feeding of a sow requires considerable attention for at this period a sow has a decided influence on the litter. The young pigs should be fed succulent and substantial food, after they are two or three weeks old. The feeding of young pigs other food than milk from the sow is advisable for two reasons: First, the cheapest gains made are while the pigs are young; and second, the pigs will be more able to stand the effects of weaning. There is no fixed or set ration which is to be fed although it is necessary that the feed be properly balanced in its nutritive qualities and that pasture and good drinking water be available. The Ton Litter Movement is demonstrating that extravagant feeding or expensive methods to induce rapid growth are not necessary for practical economic

production. It is merely knowing what to feed and when to feed it.

In that the success of the Ton Litter Movement involves the fundamental principles of swine production, it is only fair to conclude that if these principles—breeding, management and feeding—are adhered to, the swine raisers' endless struggle for greater efficiency will be achieved.

#### KINK FOR PLOWING

When plowing under a heavy growth of green material, you can greatly improve the job if you will fasten one end of a chain to the end of the doubletree and the other end to the plow beam, leaving the chain somewhat slack so that it can catch and hold down the green material the plow covers it up. This method is, I believe, known to practically every farmer but the following kink I have never seen used except on my farm and I am passing it on for what it is worth.

Just about where the main chain would touch the plow point, I wire on a piece of chain a couple of feet long. This short piece of chain drags along in the furrow, and being held firmly by the falling earth, it holds the main chain down to work. Without the short chain, the main chain, being loose, fails to cover many of the large weeds. I have used this extra chain for a long time and find it works no matter how heavy the growth is.

## THE CATTLE INDUSTRY IN ARIZONA

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for grazing on the reservation are not in keeping with conditions on the national forests and do not allow a secure operation. Grazing rates have varied from \$1.00 to \$2.40 and at the present time are \$1.40 for cattle, the amount depending somewhat on the competitive demand. Stockmen using the reservation must of necessity renew their permits and maintain the use of their allotment because of the inadvisability of moving breeding cattle to different ranges. In 1923, there were approximately 84,000 "outside" cattle permitted on the reservations which greatly outnumbers the tribal cattle. The number of "outside" cattle is being reduced gradually to permit an increase in the Indian-owned cattle.

The Enabling Act, which gave to Arizona its State lands affixed a minimum value and rental of \$3.00 and 3 cents per acre respectively on these lands. These prices have not proved commensurate with the actual value of a very large extent of the State lands for grazing purposes. The variable nature of the potential worth of the land makes necessary an appraisal that will fix a rate more in line with its worth for grazing.

Prior to the advent of intensive occupation of the range areas in the State, Arizona was not exceeded as a grazing country. A great abundance of feed was found by early settlers and an abundance of cattle in a country of mild climate were ideal conditions for cattle raising. The news of this new country spread rapidly and within a period of two years, thousands of cattle were brought in. The country soon became overstocked. There were no control or regulatory measures to protect against over-grazing. Ranges were denuded and erosion set in. Arroya cutting was unknown to the old-timer when cattle were first introduced into the State. A specific case of erosion in the Gila Valley is reported in Science (Jan. 15, 1926) by T. T. Swift. In 1884, the Gila Valley consisted of fields of waving grass, the Gila River was confined in a narrow channel lined with willows, brush and sod grasses. In 1896, twelve years after the introduction of cattle, a flood topped the banks of the Gila. Floods have since been an annual

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