this basis, a much larger amount of digestible food can be secured from an acre of silage corn than from an acre of hay. The food equivalent of four tons of hay per acre ean easily be produced on an acre of land planted to corn.

"A carelessly constructed silo is an extravagance. A well made one is an economy. Temporary structures are not advisable."

## Danish Experiments in Pig Feeding.

Following is an extended list of pig feeding experiments conducted by the Danish State Agricultural Experiment Station :

### TURNIPS V. WHEY.

Two experiments with thirty pigs were made to study the relative value of turnips and whey. Lot A was fed whey, and lot B was fed half the amount of whey and a like amount of turnips. Both lots received equal amounts of barley in addition. The gains made by the different lots indicate that, under the conditions given, the whey had a higher feeding value, pound for pound, than the turnips.

### BARLEY V. INDIAN CORN.

Five series of experiments with 115 pigs were made.

Lot A received barley throughout.

Lot B received corn, substituted by barley when the pigs weighed 120 lbs.

Lot C received corn, substituted by barley at 140 lbs.

Lot D received corn, substituted by barley at 160 lbs.

Lot E received corn throughout.

The lots fed corn throughout the experiments made somewhat heavier gains than the barley fed lots, but the corn had a tendency to produce a poor quality of pork. Dividing the pigs into four classes, according to quality, 92 per cent of those fed on barley alone were placed in the first two classes, while only 62 per cent of those fed corn throughout came within these classes, and 14 per cent. came within class four (poor carcasses sold at a discount). The softness of the pork increased with the amount fed. Thus taking one as perfection, the softness of the pork from the different lots was as follows: Lot A, 1.4 ; B, 1.6; C, 2.0 ; D, 2. 3 ; E, 2.7.

### FOOD REQUIRED PER POUND OF GRAIN.

In these experiments the relative value of dairy by-products, grains, roots, etc., was also studied. One pound of barley was equivalent to 6 lbs. of centrifugal skim-milk, or 12 lbs. of whey from skim-milk cheese.

The following table shows the amount of "calculated grain," according to the value given above, required for the production of one pound of growth at different periods :

| | |
|---|---|
| At 75 to 115 lbs. | 4.37 |
| At 115 to 155 lbs. | 4.67 |
| At 155 to 195 lbs. | 4.99 |
| At 195 to 235 lbs. | 5.43 |
| At 235 to 275 lbs. | 6.24 |

These figures show a marked increase in the amount of food required to produce one pound of gain, as the age of the animal advanced.

### FOOD REQUIRED PER POUND OF INCREASE IN SUMMER AND IN WINTER.

In these experiments, the average results of 100 winter and 99 summer experiments are given, each of which included from 25 to 30 animals, so that for each season (summer and winter) the averages represent at least 2,500 pigs. The results show that the animals ate but slightly more in winter than in summer, but it required .44 lb. more grain feed for one pound gain in winter than in summer. It is estimated that at current American prices for feeding stuffs it would cost not quite half a cent more in winter than in summer to produce a pound of pork.

### LIGHT VS. HEAVY FEEDING.

Incidentally, the effect of light and heavy feeding on the rate of growth of pigs was observed in a large number of experiments. In a general way, there is no marked difference between the amount of food required per pound of gain on light and heavy feeding.

In two series of experiments with 60 animals, made specially to study the effect of light, medium, and heavy feeding, the results indicate a tendency towards a lower utilization of the food on the heavier feeding. The data obtained at slaughtering showed no appreciable difference between the lots in the shrinkage, thickness of fat, or softness of pork.

### BARROWS VS. SOWS FOR FATTENING.

The data obtained in the fattening of 1,216 pigs have been arranged according to sex. The results show that there was practically no difference in the average data obtained for the two sexes. When the carcasses were graded, 44 per cent. of the barrows and 56 per cent. of the sows fell in the first class, and 77 per cent. of the barrows and 85 per cent. of the sows in the first two classes.

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