

THE PROGRESSIVE FARMER.

THE INDUSTRIAL AND EDUCATIONAL INTERESTS OF OUR PEOPLE PARAMOUNT TO ALL OTHER CONSIDERATIONS OF STATE POLICY.

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AGRICULTURE

Economical Pork Production.

The Agricultural Experiment Station of Tennessee has just issued a bulletin giving the results of using corn wheat, and soy bean meal with skim milk for pork production. The following are the conclusions arrived at:

1. Where the ration fed was corn meal it took 4.6 pounds to make 1 pound of gain in 1901, 2.8 pounds in 1902, and 7.1 in 1903, or an average of 4.1 pounds for the three years.

2. From the data presented under the table of rations used it would be an easy matter to estimate the amount of food required for hogs of varying weights. Hogs fed in the ratio of 1 pound of grain to 3, 6, 9 and 12 pounds of skim milk made the largest gains on from 9 to 12 pounds of skim milk. The consumption of skim milk reduced the consumption of concentrates considerably, though the cost of a pound of gain was lowest with a consumption of 1 pound of grain to 3 pounds of skim milk. This shows that animals will often consume larger quantities of food than they can digest and assimilate with the greatest economy.

3. The largest gain per head per day was made by Groups III and IV, 1.40 pound, followed closely by Groups I and VI, with a gain of 1.35 pound. The other groups all gained 1.30 pound with the exception of the lot fed corn meal and water. The largest gains were made by the groups receiving corn meal and wheat meal, mixed in the ratio of 2 to 1, with skim milk. The ratio of grain to skim milk was 1 to 9 with Groups III and 1 to 12 with Group IV. This ratio made the best gain but was not the most economical.

4. It required 140 pounds of concentrates and 1,640 pounds of skim milk to make 100 pounds of gain with Group IV, which received 1 pound of grain and 12 pounds of skim milk. As the ratio between the skim milk and gain decreased the consumption of concentrates increased.

5. Group I, which received 1 pound of grain to 3 pounds of skim milk consumed 80 pounds more grain than Group IV and 990 pounds less of skim milk, which makes it evident that the ratio of grain to skim milk was too wide in the latter group.

6. The value of skim milk as an adjunct in hog feeding is shown by the fact that Group V consumed 4.1 pounds of corn meal for 1 pound

of gain, whereas, Groups VI, VII and VIII consumed only 1.6 pounds of concentrates with approximately 12 pounds of skim milk per pound of gain. In other words, 12 pounds of skim milk saved 2½ pounds of corn meal.

7. The experiment indicates that a bushel of corn produced 13.6 pounds of pork, which at 6 cents would give it a feeding value of 81 cents a bushel; at 5 cents, 68 cents a bushel, and at 7 cents, a feeding value of 95 cents. A farmer often sells his corn at 40 to 50 cents, when fat hogs would bring him 5 to 7 cents per pound, under the mistaken idea that he cannot afford to feed it. Corn has been purchased at 80 cents a bushel and fed at a profit at the Station.

8. In the case of Group VI, it was possible to secure 35 pounds of gain with a consumption of 416.5 pounds of skim milk. On the basis of the gain made from corn meal and water 416.5 pounds of skim milk made 21.4 pounds of gain when fed with corn meal. This would give it a feeding value at 31 cents when pork sells at 6 cents, of 26 cents when pork sells at 5 cents, and 36 cents when pork sells at 7 cents.

9. The manure from animals constitutes a part of the legitimate profits from any feeding experiment, as it takes the place of purchased commercial fertilizers, which are not so satisfactory. When 75 per cent of the fertilizer value of the food-stuffs consumed was credited to the animal, the average cost of a pound of gain for all groups was 3.7 cents; when no allowance was made for the manure, 5 cents. There is no reason why at least 75 per cent of the manurial constituents of the food-stuffs should not be returned to the soil under proper management, which according to these figures would reduce the cost of a pound of gain by 1.3 cent.

10. The highest gross cost of a pound of gain was with Group V, fed corn meal alone, 5.8 cents, or 1.4 cent more than Group I. The cost of a pound of gain was close in all instances and in no case was excessive.

11. The profit per group without considering the manurial value of the excrements was largest with Group I, \$7.63; Groups II and III made a profit of \$5.27 and \$5.62, respectively; Groups VI and VII, \$4.96 and \$4.13; Group VIII, \$3.38. The cost of soy beans in the case of the

last group was probably responsible for the small profit shown, which indicates the importance of studying and utilizing those gains best adapted for the cheap production of pork. The price of food-stuffs has a marked influence on the profit from a feeding experiment.

12. These experiments clearly demonstrate the importance of skim milk as an adjunct food for hogs. The best ratio is one pound of grain to 3 to 8 pounds of skim milk.

Killing Nut Grass.

Editor of The Progressive Farmer:

What will kill or destroy the old-time nut grass? It makes a nut in ground and grows deep. It is a bad grass, and the bed spreads larger each year and the roots will hang on the plow and drag them over the field, and they keep spreading. I want to kill them in some way. I want some one to tell me through your paper how to destroy them, and oblige
C. V. B. BATTS.
Wilson Co., N. C.

(Answered by W. F. Massey, of the North Carolina Agricultural Experiment Station.)

Eternal vigilance is the only thing that will destroy nut grass. When I took possession of the place where I now live three years ago, the garden was a complete meadow of nut grass—which, by the way, is not a grass at all, but a true seidge (cyperus Hydra)—and some said I would never get rid of it. I have not gotten rid of it yet, but it is very scarce compared with its luxuriance three years ago. One reason why nut grass flourishes so is that people let it go to seed in the fall, and there are thousands of the plants that come from seed to every one that comes from the roots. No plant that makes green leaves above ground can live long if not allowed to make green leaves. I am thinning out the nut grass by keeping it chopped off all summer and fall. Of course you may chop it off to-day, and if the rains comes that night, it will be up and smiling to-morrow, and if you let it alone it will be green as ever in a day or so. But chop it off continually, and you will find it getting thinner all the time. Then keep this up till frost and never let a plant make seed. I have mine under to such an extent that it is no longer a pest in my crops, and another season will nearly see the last of it. Then if it is where you can plow it, turn it up late in the fall and the winter will kill a great of it.

Feeding Cotton Seed Meal.

The Arkansas Station has been conducting some experiments in the feeding to swine of cotton-seed meal, with the object of finding out why it so often proves fatal. A summary of the results of the experiments says:

1. The harmful effects of overfeeding with cotton-seed meal are manifested in all species of animals so far tested. Hogs exhibit no great excess of susceptibility over cattle when fed in doses proportionate to their weight.

2. In a first series of tests embracing nine pigs of thirty to fifty pounds in weight, all died in from thirty-four to sixty-four days on a daily allowance of .6 to .8 pounds of cotton-seed meal in mixture with ground corn or bran.

3. Wheat bran or wheat chops in combination with cotton-seed meal proved less dangerous to pigs than a similar mixture with ground corn.

4. In later tests embracing altogether fourteen hogs, cottonseed meal was fed in mixture with bran, wheat chops and cut cow-pea hay for periods of from three to six months without any evident harmful effects the daily allowance of cotton-seed meal being from .8 to 1.4 per cent of the body weight, or from .4 to .7 pounds to pigs weighing fifty pounds.

5. In one test cotton-seed meal in above doses was fed to a sow during the last eighty days of pregnancy without harm to mother or progeny.

6. In one test embracing three pigs, crude cotton oil was fed for twenty weeks in amount exceeding what is contained in a fatal ration of cotton-seed meal without any evil effects; hence, it is probable that the harmful effects of over-feeding with cotton-seed meal are not attributable to the oil which it contains.

7. The characteristic post-mortem feature of cotton-seed meal poisoning in all our cases was an acute dropsy of the pleural and heart sacs with intense congestion (probably secondary) of the liver and kidneys, immediate cause of death being suffocation from compression of the lungs.

"It will pay to make a little sacrifice for the children, and parents who do so are heading the opposite direction from the poor house, strange as it may seem to some. Keep the schools going."—The Record, Madison County.