Points on producing better pigs

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Points on

PRODUCING BETTER PIGS

by

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Dairying Division

There are many factors to be considered in the production of quality pigmeat which today is the demand of the housewife. Poor quality means two things, bad advertisement for the industry and low returns to the producer.

It is not sufficient to pay attention to one or two of these factors only. Well-bred pigs can be unprofitable if they are badly fed or inadequately managed. Good feeding and housing cannot overcome all the disadvantages arising from unsuitable breeding stock, and faulty management can nullify most of the advantages gained by careful attention to other factors.

Breeding

Choose your breeding pigs from stock that is not only pure-bred but is backed by records of large healthy litters of pigs which showed good food conversion rates—in other words, pigs which showed the maximum increase in body weight for the poundage of food consumed.

Do not choose breeding stock with inherited defects such as hernia and blind, inverted or irregularly-spaced teats. Choose sows with 12 or more evenly-spaced teats extending well forward. Do not tolerate any tendency towards weakness in the legs of breeding stock, and make sure that the boar has two evenly-suspended and equal-sized testicles.
Always use a pure-bred boar and maintain him in good condition by feeding him according to the amount of work he is required to do. One boar to 20 sows is the maximum ratio. Hand-mating is preferable to allowing the boar to run with the sows. (Use breeding records and aim at two litters in approximately 13 months.)

FEEDING

Perhaps the most important single factor governing growth is protein which, in pig-raising, is usually provided by foods of animal origin such as skim milk, meat-meal, whalemeal, etc. Young pigs have the greatest relative need of this material, as it is during the early periods of life that the greatest growth of lean meat and bone is made.

To facilitate this and ensure rapid growth in the young pig, an adequately balanced ration, containing the ideal proportions of protein of an animal origin to carbohydrate material, must be provided by creep-feeding a high protein ration (approx. 18 per cent.), from three weeks of age. This proportion is reduced gradually until market weight, when a higher percentage of carbohydrate to total protein in the ration is required for finishing off with the desirable proportion of fat coverage to lean meat. (See feeding table.)

Minerals and vitamins form an important part of the diet. Where no green feed is available, a vitamin A supplement, especially for in-pig sows, is required. The calcium part of the diet should be made up by providing limestone fines at the rate of 1 lb. per 100 lb. of grain. (When feeding skim milk, the calcium supplement may be deleted from the ration.) Where the salt content of water is above 100 grains per gallon, salt need not be provided; otherwise it should constitute ½ per cent. of the ration, (½ lb. salt per 100 lb. grain.)

Experiments have indicated that the feeding of antibiotics is not warranted except in the case of backward types of pigs which have become unthrifty through sickness. Feeding of antibiotics full-time as part of the ration becomes costly and may not be compensated in the returns.

Where sows and litters are run on concrete, provision should be made, as prevention against anaemia in the young pigs, to allow access to grazing for a short period each day, otherwise, a clod of fresh clean earth from a pig-free area must be placed in the pen to ensure the iron requirements of young pigs. The sows' milk is deficient in this element.

When hand-feeding baconers, 6½ lb. of concentrate meal per day should not be exceeded, or if self-feeding, market pigs at slightly lower weights as they fatten earlier on unlimited food. A 100 lb. grain ration could be constituted as follows:

1. 50 lb. wheat; 50 lb. barley.
2. 40 lb. wheat; 40 lb. barley; 20 lb. oats.
3. 40 lb. wheat; 30 lb. barley; 30 lb. oats.

Oats, because of their high fibre content should not constitute more than 30 per cent. of the total grain ration, except where finishing pigs at heavier weights on

This carcase is grossly overfat and is the type which causes the pig industry the most concern.
### GUIDE TO HAND-FEEDING

<table>
<thead>
<tr>
<th>Age and Classification</th>
<th>Approx. Liveweight (lb.)</th>
<th>Separated Milk</th>
<th>Meatmeal or equivalent (50% protein basis lb.)</th>
<th>Carbohydrate food crushed wheat or equivalent gal.</th>
<th>Approx. overall percentage protein in total ration %</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-8 weeks sucker</td>
<td>12-40</td>
<td></td>
<td>1-2</td>
<td>1-2</td>
<td>18</td>
</tr>
<tr>
<td>8-10 weeks weaner-slip</td>
<td>40-50</td>
<td></td>
<td>2-3</td>
<td>2-3</td>
<td>18</td>
</tr>
<tr>
<td>10-14 weeks grower</td>
<td>50-80</td>
<td></td>
<td>3-4</td>
<td>3-4</td>
<td>15</td>
</tr>
<tr>
<td>14-18 weeks light porker</td>
<td>80-100</td>
<td></td>
<td>4-5</td>
<td>4-5</td>
<td>14</td>
</tr>
<tr>
<td>18-22 weeks heavy porker</td>
<td>110-140</td>
<td></td>
<td>5-6</td>
<td>5-6</td>
<td>13</td>
</tr>
<tr>
<td>22-28 weeks light and medium backer</td>
<td>140-200</td>
<td></td>
<td>6</td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td>Heavy baconer</td>
<td>200 plus</td>
<td></td>
<td>6-9</td>
<td>6-9</td>
<td>16</td>
</tr>
<tr>
<td>In-pig sows and boars</td>
<td>14-21</td>
<td>1-1½</td>
<td>8-12</td>
<td>8-12</td>
<td>17-18</td>
</tr>
<tr>
<td>Sows and litters</td>
<td>3-4½</td>
<td>2-3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Self-feeders

Self-feeders is practised. Protein supplement of animal origin is added to the grain at varying rates to obtain the desired protein percentage in the ration.

As a guide to hand feeding allow 1 lb. of concentrate meal per 28 lb. liveweight, approximately.

Different breeds of pigs vary in age of maturity. Thus the extent or nature of crossbreeding and the environment in which pigs are fed and raised are the factors which determine the correct time at which to market for prime quality. Do not hold baconers once they begin to show signs of becoming overfat. This is most uneconomical.

Using 100 lb. of crushed grain as the basis of a ration, the approximate overall percentage of protein in the total ration, as shown in the last column of the feeding table, can be achieved as follows, using 50 per cent. protein meatmeal.

- 18 per cent. protein—15 lb. meatmeal, 100 lb. grain.
- 15-16 per cent. protein—10 lb. meatmeal, 100 lb. grain.
- 13 per cent. protein—5 lb. meatmeal, 100 lb. grain.

Separated milk is the most valuable source of animal protein for pigs and its usage is mainly governed by its availability throughout the various seasons of the year.

In the South-West butterfat-producing areas the flush of skim milk and pasture occur together, and it is possible to replace the cereal ration entirely with skim milk and good mixed pasture.

It is advisable to provide lactating sows with up to approximately 4 lb. per day of crushed grain in addition to the grazing.
These middles show excellent lean meat development with a good balance of fat.

and skim milk. Weaners and slips should also be provided with a small grain ration for bulk food requirements.

However, as the quality of the pasture deteriorates and the supply of skim milk slackens off, a gradual replacement with a normal cereal meal must be made. Replacement should be made on the basis of 1 lb. of cereal meal being equal to approximately a gallon and a half of skim milk. It is estimated that approximately 6 lb. of good quality mixed pasture is equal to 1 lb. of cereal meal.

**HOUSING**

The most important feature in housing is hygiene. Clean quarters allow for a maximum in health and growth performance. Dirty, unclean housing retards growth rates and reduces liveability. Pigs in conditions such as these are far more susceptible to disease.

Farrowing facilities are extremely important and can be a deciding factor between good and only marginal profits.

Design of these quarters must be such as to keep piglet mortality at a minimum and to provide a sanctuary for the young pigs to retreat from the risk of crushing or trampling by the sow. Very important indeed is the need for warmth. The farrowing house must be draught and moisture free and the use of radiant heaters in cold weather, even for only three to four days after birth is desirable.

Where pigs are grazed, shelter sheds, preferably portable, for warmth in winter and protection from the sun in summer are essential.

If intensive methods of pig raising are practised, strict hygiene must be carried out. Provision must be made in housing design for coolness during hot weather and warmth in cold weather conditions. Water is an essential nutritional factor, and should be provided in a fresh clean state and be available to pigs at all times.

**GENERAL MANAGEMENT**

Prevention of disease and reduction of worm infestation is most important; use paddocks in rotation and during the resting period cultivate and, if possible, crop the area. This is instrumental in reducing worm infestation and also makes use of the fertiliser value of the manure. Do not allow overstocking, and avoid bare earth yards. They are detrimental to the health of pigs, as disease-causing organisms are harboured in this environment.

Castration of boars should be carried out at three to four weeks of age.

Deworming should be practised initially soon after weaning and periodically thereafter. Care should be taken with deworming powders containing Sodium fluoride as this is a highly toxic compound.

Piperazine-based worm compounds are highly effective and do not cause adverse after-effects.
Wherever possible, green pasture of good quality, grazed early to obtain the highest nutritive value, should be provided as a means of reducing the intake of expensive purchased feedstuffs. Green fodders such as lucerne, kale, rape and maize, also mixed clovergrass pastures and young green oats and barley provide very valuable grazing for pigs.

Start pigs on a correctly-balanced ration and keep them growing rapidly up until slaughter. Do not allow a “store” period and market early to avoid over-fatness.

During periods of prolonged low returns do not dispose of all breeding stock, or go completely “out” of pigs, but retain a small nucleus of good breeding animals.

Buying breeding stock at trade sales is a poor policy.

Practise efficient feeding, husbandry and management, use good breeding stock, and pig raising can be a profitable enterprise.

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PLANT SPECIMENS FOR IDENTIFICATION

By R. D. ROYCE, B.Sc. (Agric.), Senior Botanist, and N. G. MARCHANT, Herbarium Assistant

PLANT names and the naming of plant specimens are of fundamental importance in the science of botany. In applied botany as well, proper identification is of the utmost importance. In agriculture for instance, accuracy in naming poisonous plants and weeds, as well as fodder and pasture species, can save farmers considerable sums of money, and may be responsible for avoiding heavy stock losses.

The most important requirement for the successful naming of a plant is a good specimen to work with.

THE SPECIMEN

When selecting material for the preparation of a botanical specimen, many factors have to be considered.

In the case of small herbs, the whole plant including roots should be taken, and when collecting those which have only one flower per plant, a number of such plants should be gathered and treated as the one specimen. It is particularly important that small plants which have the leaves concentrated in basal rosettes at ground level, and with erect leafless flowering stems, should be gathered with leaves and stems intact.

Grass specimens should be collected in this manner, so that they show the base of the plant, the roots and the barren stems as well as the flowering stem.

When collecting a specimen from a tree or shrub, it is essential that the piece taken should be truly representative of the plant from which it came.

To be of maximum use a specimen should be at least 9 to 10 in. in length and show the arrangement and attachment of the leaves on the stem, and should carry a number of buds, flowers or fruits.

When only one or two specimens are being prepared, no elaborate precautions are necessary. Individual plants, particularly herbs and other slender species, can be laid out between pages of a book, or into the fold of the daily paper. Pressure can then be applied by placing two or three books or newspapers on top.

The most useful size of paper for the average specimen is approximately 10 inches by 12 inches, and this is obtained by folding sheets of the daily paper in halves.

All specimens submitted for naming should be clearly numbered for easy recognition. Two pieces of each plant should be tagged with the same number. One is then forwarded to the State Herbarium and the other is retained for reference and comparison with the list of identification when it is received.

The value of these specimens can be greatly increased if a few notes concerning each plant are forwarded with the pressed material.

Lastly it is most important that the name and address of the sender should be placed inside the parcel.
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