# Pig Owner's News for the Hunter

## Pig Nutrition

April 2021

There are Seven Rules to managing pig nutrition to ensure that you have healthy and productive pigs:

1. **Pigs need more than just pasture**
   Pigs are monogastric omnivores and eat plants, grain, fruits and insects. They love to dig and can destroy pasture if not rotated regularly. Several factors affect the nutritional value of the pasture, including the plant species, seasonal conditions and stage of growth of the pasture. Pasture is high in fibre, and the pig digestive system is not designed for lots of fibre. Pasture can only replace 3-15% of the ration of growing pigs. Young pigs need at least 90% of their dry matter from a grain based ration. Adult dry sows, gilts and boars can get up to 50% of their dietary requirements from good quality pasture, but still need a grain based ration. A mature dry sow of 250kg requires 2.5 – 3kg of grain-based ration for maintenance if fully housed. Requirements increase by 15% if the pigs live outdoors. Lactating sows require a full grain-based ration regardless of pasture availability.
2. **Process cereal grain**
   Grain needs to be processed for efficient digestion. If fed whole, the grain will pass straight through the pig and be visible in their manure. Processing the grain changes it to a form that is easily digestible – rolled/ground/hammer milled. Soaking whole grains soften them and make them easier to chew. Troughs or bulk feed bins should be used rather than feeding on the ground.
3. **One diet doesn't suit all pigs**
   For each stage of the pigs' life, they will have different nutritional needs. Piglets need a good intake of colostrum in the first 24 hours to provide antibodies to protect them against diseases and assist with gastrointestinal tract development. Good colostrum in the first 24 hours can double the survival rate of piglets that weigh less than 1.2kg at birth. From about 3 weeks old, piglets need more nutrients than they can get from milk alone. Creep feed should be introduced from about 10 days old, and creep feeders should be used from 3 weeks of age. Lactating sows should be fed as much as they can consume. This can be more than 6kg per day. Better fed sows leads to better fed piglets. Weaning can be done from 3-8 weeks. Weaning is stressful for the piglets and they must be fed at least twice a day. Feeders must be large enough so that all piglets can feed at the same time.
4. **Formulate diets to suit pigs**
   A well formulated diet means the required amino acids, energy, vitamins and minerals are available to the pig. Most commercial pig diets are based on cereal grains and provide

almost 40-50% of the required dietary protein. These cereal grains must have a protein supplement added that can supply the required lysine, threonine or tryptophan. Protein supplements can be plant based (eg. Soybean, lupin, canola meal) or animal based (eg. Meat meal, blood meal, milk powder). Amino acids cannot be synthesised by the pig, therefore they must be provided in the diet. Lactating sows are particularly susceptible to dietary deficiencies. Different feed ingredients provide different nutrients. Cereal grains (wheat, barley, oats, sorghum, corn) are a good source of energy, but are low in lysine. Protein meals (soybean meal, canola meal) provide lysine and some energy, but are low in methionine. A good vitamin and mineral premix should be added to all diets at the recommended label rate. Poor diets can affect the health of you pigs. Lameness and cracks in the outer wall of the toes can indicate zinc and biotin deficiency. Calcium/phosphorus ration imbalance can lead to rib fractures.

| | Age (weeks) | Approx feed intake daily (kg) | Energy MJ DE/kg | Lysine/MJ DE |
|---|---|---|---|---|
| Weaner | 4 - 10 | 0.3 - 1.5 | 14.5 - 15.0 | 0.80 |
| Grower | 10 - 17 | 1.7 – 1.9 | 14.0 | 0.67 |
| Finisher | 17 - 24 | 2.4 | 13.2 | 0.50 |
| Dry Sow | | 2.5 – 3.0 | 13.0 | 0.40 |
| Lactating Sow | | 6.0 + | 14.0 | 0.55 |
| Lactating Gilt | 1st litter | 5.0 + | 14.2 | 0.72 |

Energy: Mega Joules (MJ) of Digestible Energy (DE) per kilogram of dry matter (DM) = MJ DE/kg DM

An example of a basic diet for growers/finishers would include a cereal grain (60-80% of total ration), one or two protein supplements (eg. Soybean meal and canola at 5-10% of ration), synthetic amino acids (1-2% if needed), salt (1% - depends on water quality) and calcium plus phosphorus supplement (dicalcium phosphate, lime).

5. **Cool water available at all times**

Pigs drink between 2.5-3.0 mls of water for every gram of food eaten. If troughs supply the water, ensure they are cleaned regularly. Pigs should have a clean water source that they can't wallow in. Pigs drink more in hot weather. In summer, provide shaded wallows for outdoor pigs where possible. Ensure small piglets have access to clean drinking water and are not forced to drink the wallow water. Water must be kept cool. If using black polypipe, delivery lines must be insulated or buried at least 30mm deep. The ideal drinking temperature of water for pigs is 16 to 18°C and below 20°C in hot conditions. The water should be tested annually (kits can be obtained from your LLS Office) or whenever there is a change in the colour or turbidity and you suspect there may be a problem.

6. **Prohibited substances legislation / Swill feeding laws**

Swill feeding = Prohibited pig feed = feeding of food scraps containing prohibited pig feed = illegal. Prohibited pig feed includes anything that contains or has been in contact with meat. This includes household table scraps, commercial restaurant waste, carcase material and bakery waste such as pies and sausage rolls. Feeding infected prohibited pig feed (swill) can spread infectious disease which do not occur in Australia. These include foot and mouth disease, African swine fever, classical swine fever and swine vesicular disease. Foods that can be fed to pigs include: dairy products of Australian origin, eggs, non-meat bakery

products, fruit and vegetable waste and properly rendered (compliance with Australian Standards AS 5008-2007 Hygienic Rendering of Animal Products) stock-feed meals.

7. **Hazardous substances in feed and pasture**

   Hazardous substances are anything that is in the feed or pasture which may make the animal sick or cause injury or death. This includes mycotoxin contamination of mouldy feed, which may occur if the feed is stored in warm humid conditions, from grains from wet weather at harvest, hay or straw that was wet during hay making and grass or fodder silage. Mouldy feed should never be fed to pigs. Mycotoxin binders can also be added to their feed. Always check all feed carefully prior to feeding it to your pigs. Always ask for a vendor declaration whenever purchasing feed. Feed testing can be undertaken if you ever have any concerns (feed test kits are available from your LLS offices). Become familiar with all plant species on your property as some plants are toxic to pigs. The seeds and flowers of two common shade trees, the white cedar tree (Melia azedarach) and the peppercorn tree (Schinus mole) are both toxic to pigs. Plants with sharp pointy seeds can cause injury and may result in abscesses.