FEED INGREDIENTS

Sorghum vs maize in pig and poultry feed

How sorghum compares with maize as an energy grain in pig and poultry diets: energy value, tannins, pigmentation, grinding and when sorghum makes sense.

By FeedSport Nutrition Team · Published 6 October 2026 · 2 min read

KEY POINTS

- Low-tannin sorghum has an energy value close to maize for pigs and poultry and can replace it fully in balanced diets.
- High-tannin (bird-resistant) sorghum reduces protein digestibility. Ask which type you are buying.
- Sorghum lacks the yellow pigments in maize, so egg yolks and broiler skin will be paler.
- Grind sorghum finely for pigs: its small, hard kernels are poorly digested if coarse.

Maize is the reference energy grain in pig and poultry feed. Sorghum is drought-tolerant, widely grown in Zimbabwe, and often available when maize is scarce or expensive. Here is how the two compare and what changes when you switch.

Energy value

Both are starchy cereals. For pigs, good-quality sorghum typically has an energy value close to that of maize, in the range of about 95–100%. On our specification, sorghum supplies about 3,358 kcal ME/kg for pigs as fed. For poultry, sorghum is usually slightly lower in energy than maize.

In practice, low-tannin sorghum can replace maize completely in pig and broiler diets when the formula is rebalanced for its nutrient profile.

Protein and amino acids

Sorghum usually contains a little more crude protein than maize. Ours is about 8.65% as fed. Like maize, it is low in lysine, so diets still rely on soybean meal or other protein meals, plus crystalline lysine where it is cost-effective.

Tannins: the key quality question

Some sorghum varieties contain condensed tannins, which protect the grain from birds but bind protein and reduce digestibility.

- **Low-tannin sorghum** (most white and many red varieties) performs close to maize.
- **High-tannin (bird-resistant) sorghum**, often darker brown, reduces protein and energy digestibility and can lower growth and feed efficiency, especially in young animals.

Ask your supplier which type you are buying.

Pigmentation

Yellow maize contains xanthophylls, natural pigments that colour egg yolks and broiler skin. Sorghum does not. When sorghum replaces maize:

- **Layer flocks** produce paler yolks.
- **Broilers** have paler skin and fat.

This does not affect nutritional value, but some markets prefer darker yolks. If yours does, keep some yellow maize in the diet or add a permitted pigment source.

Grinding

Sorghum kernels are small and hard. Whole or coarsely cracked kernels pass through pigs undigested, which wastes feed.

- **Pigs:** grind sorghum finely, with a hammer mill screen around 2–3 mm, finer than you would usually grind maize.
- **Poultry:** chickens grind grain in the gizzard, so sorghum can be fed ground or, in some programmes, partly whole.

We supply sorghum whole or hammer-milled.

Quick comparison

	Maize	Low-tannin sorghum
Energy (pigs)	Reference	Close to maize
Energy (poultry)	Reference	Slightly lower
Crude protein	Lower	Slightly higher
Yolk and skin colour	Yellow	Pale

	Maize	Low-tannin sorghum
Grinding for pigs	Standard	Finer
Drought tolerance	Lower	Higher

When sorghum makes sense

Sorghum is worth using when it costs less than maize per unit of energy, when maize supply is tight, or when you want to buy locally grown grain. Compare the two on cost per unit of energy, not price per tonne, and check the full diet in our formulation tool.

To build a complete diet around sorghum, see how to formulate pig feed.

Need a diet checked? Send your ingredients and targets to the FeedSport nutrition team on WhatsApp +263 77 468 4534 or sales@feedsport.co.zw.

Figures in this guide are typical values and general ranges. Confirm targets for your animals, genetics and ingredients, and check batch specifications before formulating.