

# UPM develops cost-effective animal feed option

**KUALA LUMPUR:** Malaysia's heavy reliance on imported animal feed is among the biggest challenges faced by its livestock industry in supplying affordably-priced meat to the public.

The rising prices of major grains such as corn and soybeans – the main components of monogastric animal and ruminant feeds – which are entirely imported from countries like Argentina, Brazil and the United States, have increased livestock farming operational costs as feed make up more than 60% of expenditures.

The dependence on imported feed is no longer sustainable for the country, especially as the global market becomes increasingly uncertain due to factors such as supply chain disruptions caused by climate change and global political instability.

The urgent need for a cheaper and more sustainable local alternative has led researchers to conduct multiple studies, and one that has gained attention is sorghum, a hardy cereal grain crop capable of withstanding extremely hot and dry weather.

According to studies conducted by Universiti Putra Malaysia (UPM), the use of sorghum as animal feed has shown very positive results as its protein and energy content is comparable to that of corn.

Sorghum can be used in two forms – as grain or fodder. However, its grain contains tannins, which are astringent compounds that can impair digestion, making it less suitable for monogastric livestock such as poultry.

However, UPM has successfully developed the Putra SB2 sorghum variety, which has abundant leaves and high levels of carbohydrates and sugars, making it suitable for use as fodder for ruminant livestock such as cattle and goats and as a replacement for Napier grass.

Fodder refers to animal feed such as corn, grasses and plant-based proteins that are specially formulated to meet the nutritional needs of animals, whether in dry, fresh or pellet form.

In a recent interview with Bernama, UPM sorghum fodder lead researcher Dr Nazatul Shima Naharudin said the variety developed by her team offers several advantages over corn and Napier grass, one of which is its low water requirement.

"Unlike corn, Putra SB2 can regrow up to three times without needing the soil to be ploughed again after each harvest. This directly reduces farm management costs and saves time.

"So, Putra SB2 can be seen as a sustainable local solution. It is also more stable in terms of



Nazatul said Putra SB2 can be harvested as early as 60 days after planting, compared with the 90 days required for corn. – **BERNAMAPIC**

costs," said Nazatul, who is also an associate researcher at the UPM Institute of Tropical Agriculture and Food Security (ITAFoS).

She added that Putra SB2 can be harvested as early as 60 days after planting, compared with the 90 days required for corn.

"This allows for faster crop rotation and more efficient land use. From an agronomic standpoint, the Putra SB2 sorghum variety can also thrive with minimal fertiliser input. In terms of yield per hectare, Putra SB2 can produce nearly 70 tonnes per hectare," she said.

ITAFoS director Prof Dr Anjas Asmara Samsudin pointed out the need for farmers to be

given knowledge and training in sorghum cultivation and management.

"Our innovation also aligns with government policy to strengthen national food security through increased local production. We cannot be overly dependent on imported animal feeds as it makes our industry vulnerable to external crises like wars or pandemics," he said.

Anjas added that although the benefits of sorghum are clear, there are still some challenges in adopting it as a primary fodder crop in the country.

"One of the challenges is the attitude of farmers, who are reluctant to switch to another

fodder crop. They are more comfortable using corn because they are already familiar with it.

"Sorghum requires a slightly different management technique, which can be a barrier for farmers who are less exposed to the new technology," he said.

Another issue is the availability of sorghum seeds in the local market.

He said to overcome this, the government and agricultural agencies need to provide more support, such as supplying quality seeds to farmers, offering them training and providing financial incentives to expand the use of sorghum. – Bernama