

Environmentally sustainable silage practices now critical to agriculture

Silage, an ancient agricultural practice, has become one of the most cost-effective ways for farmers to ensure animals have high-energy, nutrient-rich feed all year round, especially in regions with seasonal rainfall, but has also become a critical component of the agricultural industry - its importance has given rise to Plaas Media's annual Santam Agriculture National Silage Competition.



Source: lilou via [Pxabay](#)

Now in its ninth year, the competition sets an industry benchmark, fostering better-quality feed – and milk and meat production – which benefits the entire agricultural value chain, says Hanlie Kroese, Santam Agri Segment Solutions.

"As Santam, we are the name sponsor of the competition, which sees producers compete for the title of top silage producer or 'Silage King'. Importantly, the data garnered creates a standard for producers to measure against, giving vital insights into how to improve production. Plaas Media received in excess of 100 competition entries this year, with many producers having entered for a number of years.

"The sampling section of the competition has just concluded, and we look forward to excellent results again this year," says Kroese.



Finalists announced in the 2021 Santam Agriculture National Silage Competition

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Four students from various South African universities are trained in accordance with a published protocol and take turns to sample in different areas in South Africa. The students selected this year are Jaydi Stemmet and Timothy Chilemba from the University of Pretoria, and JG Els and Andries van der Merwe from the University of the Free State.

The students are trained by Richardt Venter of Agsci Unlimited. Professor Robin Meeske of the Outeniqua Research Farm

in the Western Cape oversees the competition protocol and analyses the data received from the laboratory. He also comments on each entry, which is a valuable addition to the silage reports that all entrants receive once the competition has concluded.

Environmentally sustainable practice

Kroese explains that, in a nutshell, silage is an environmentally sustainable practice that involves fodder fermentation, a process whereby a crop like maize, oats or sorghum is harvested when still green, put into bags or a bunker, compacted and then purged of oxygen, and covered for fermentation to occur. The idea is to harvest in times of abundant rain, then have feed reserves during the rest of the year and during annual dry spells or drought, as silage can be stored for up to 10 years or longer.

"Having control over silage quality and quantity gives farmers a way to ensure ruminants – animals like cows and sheep that have a specialised digestive system to extract nutrients from plant-based food, via fermentation – receive optimal roughage. Ruminants find silage extremely palatable and tend to prefer it to hay."



Why we should all take silage seriously

Gerhard Diedericks 2 Oct 2019



According to Kroese, the silage judged in the competition includes maize silage, small-grain silage (oats), forage sorghum silage and silage bales. Maize is the main silage crop in South Africa and many other countries and has the highest quality and yield. "Forage sorghum is drought tolerant so there's a lower risk of crop failure, but its energy value is lower. And oats are great for a winter rainfall region like the Western Cape, where farmers follow rainfall patterns.

"These silages are also appropriate for different animals, for example, a high-quality milk-producing cow needs high-energy silage, as a crop with higher fibre, lower digestibility, lower protein and/or lower energy will lower her milk production levels. Although silage is but one part of an animal's diet, it's a very important part.

Cost-effective option for farmers

"History has shown that silage has helped some producers survive very tough financial years. By producing good-quality silage, farmers save on costs as they themselves grow the nutrients needed to feed their animals. This impacts the profitability of the farm as farmers don't have to buy so much feed, which can also be of poorer quality than silage."

Aside from financial sustainability, silage is also environmentally sustainable, a fact consumers are increasingly conscious of as awareness of climate change increases. Think of pasture-based production in the Eastern Cape using surplus grass to make silage. It's a very natural and ancient process, where nothing is added to the feed apart from lactic acid bacteria

(inoculants), which are 100% natural.

Ultimately, silage is a way for farmers to take control of their own risk management, plan for years of reduced rainfall, and ensure their animals have the best possible diet, Kroese concludes. "This competition is also about raising awareness of the importance of this ancient art, especially among South Africans, who are becoming increasingly conscious of the origin of their food."

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