

Fall Armyworm

Decisions regarding silage crops for the 2021/22 spring and summer



Ross Warren

Senior Extension Officer
Department of Agriculture and Fisheries, Queensland

Deciding which crops to plant this summer has an added consideration - fall army worm. The impact that this pest had on summer crops last season varied greatly, making this summer's planting decisions even more challenging. The observed impact was greatest in maize crops compared with sorghum throughout the sub-tropical region and it was apparent that the pressure from fall army worm increased as the season progressed into 2021.

When determining whether to plant maize or sorghum the following may assist with decision making and risk assessment.

What is the desired outcome for the summer crop? Are you growing the crop for bulk forage or high starch? Are you growing the crop for stock other than milkers? As a single cut maize usually yields more dry matter per hectare, however, sorghum varieties will provide more with a ratoon crop factored in. Last season relatively unaffected crops in the Mary Valley yielded the following - maize 16.15t DM/ha and grain sorghum 22.1t DM/ha from two cuts. In the same region a fall army worm affected maize crop yielded 12.75t DM/ha.

What does your feed inventory look like and what is your feed plan – do you have any carry over silage, what is it and how will the summer crop fit into your inventory? How much silage are you likely to require and considering drought or flood do you need to store more? A feed budget will help in determining what the herd silage requirements will be. There are tools available through sub-tropical dairy to assist in this area.

For irrigation or high rainfall farms what is your water availability, soil moisture profile and what is the seasonal outlook? Maize requires more rainfall/irrigation and suffers more in relation to yield and quality when the crop is stressed than sorghum. The BOM three monthly forecast is for above median rainfall across the sub-tropical region, this is positive for all crops, however, there is a high probability that maize crops will still require irrigation if planted in August/September.

What are the growing costs for each crop? There is a higher up-front cost with maize than sorghum. As an example, the following costs on one farm for this season were \$742/ha grain sorghum, \$1280/ha maize. This includes seed, fertiliser, chemicals, and planting.

When do you intend to plant? In 2020/21 the pressure from fall army worm increased as the season progressed. Maize planted in August/September was less affected than maize planted in December, sorghum was more resilient through the whole season.



Last season showed that fall army worm was persistent. Are you prepared to monitor the crop for fall army worm populations on a weekly basis and adopt an integrated pest management program to reduce the population? This may involve baits, predatory wasps, and sprays. If you must spray do you have the required spray rig, are you able to use a contractor? Our chemical options are limited and fall army worm is resistant to numerous products, a strategic approach is required.

If you plant maize and your yields and quality are impacted by fall army worm, what options do you have and at what cost to replace the deficit? It is useful to determine if crops may be available to purchase either locally or further afield. Are there other fibre sources available to fill the gap?

What does your ration look like with maize vs sorghum? What costs are associated with the total ration? What are the costs of protein meals or starch alternatives? What are your production goals?

We are expecting the fall army worm to impact crops this summer throughout the region. Assessing the risk and having a plan in place to minimise the impact of fall army worm will be useful to optimise forage this summer.