Sugar Research Australia

Information Sheet IS17010

Variety Release Process

Varieties form the foundation of SRA's work to improve the productivity, sustainability and competiveness of Australia's sugarcane industry. Every year SRA plants around 100,000 new seedlings as potential varieties for the future. In each region, the local industry plays a critical role in identifying and releasing the top performers.

Although it takes between 10 and 12 years for a seedling to progress through the program, every year new varieties are assessed for their suitability for release. These varieties are continually compared to the major commercial varieties of the region to ensure they improve the overall industry profitability. Each variety is assessed on three areas before release: performance, disease and industry needs.

Performance

TCH, CCS, millability

Disease ratings

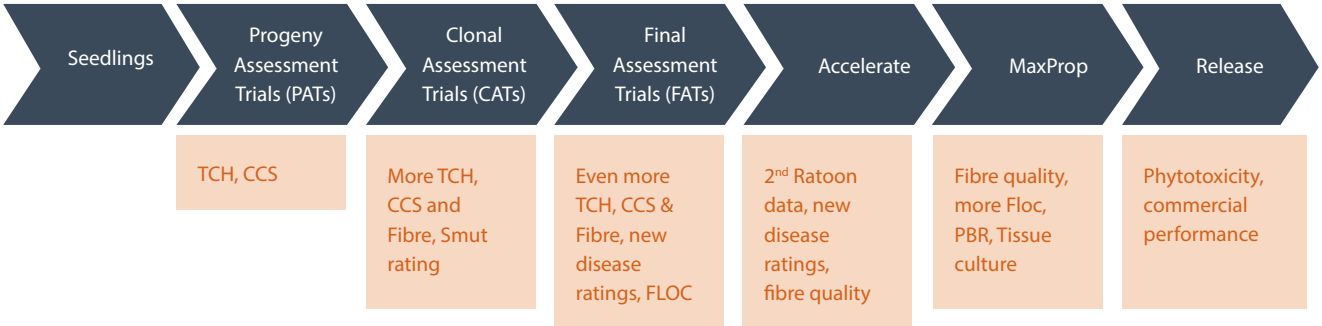
Pachymetra, Smut, Leaf scald

Industry needs

Does the variety fit a niche within the region?

Plant breeding program

In the early stages of the plant breeding program, there is a large number of clones – but we also don't yet understand how they might perform. Which ones have good tonnes? Which ones have disease resistance? This is information we learn as the program progresses. This process whittles down the number of clones as we learn more. SRAs regional plant breeders manage the early stages of selection, interpreting and analysing the information available. This information is then presented to the Regional Variety Committees, who make the decision on the final stages of the variety release pipeline (accelerate, max-prop and release).



Regional Variety Committees (RVCs)

The Australian sugarcane industry has a long history of involvement with the release of varieties and the information and experience of the industry is critical to ensure the needs of the diverse growing environments continue to be met.

The RVCs are made up of industry representatives of growers, mills and productivity service organisations and they provide this vital role. Formerly known as VACs, the RVCs make decisions on the final stages of the breeding pipeline, and most importantly the decision about whether a variety is released to be grown commercially. Varieties will be first introduced to the committees as FATs and the decision on whether to progress will be made every year until the variety is either released or removed from the program.

Variety Release Process *(continued)*

Each of the RVCs is linked to a regional SRA plant breeding program and provides input specific to that program, drawing on how the clones have performed locally and the needs of the region.

Disease Thresholds and the SIBC

Disease thresholds form a critical step in the industry's disease management plan and are an unseen aspect of the SRA breeding program. These thresholds restrict and prevent the movement of diseases throughout the industry by the Sugarcane Biosecurity Zones (SBZ). These disease thresholds also filter the clones coming into the region to ensure genetic disease resistance levels are maintained relative to the risk posed by a particular disease.

SIBC
Sugarcane Industry Biosecurity Committee

Each Regional Variety Committee (RVC) manages the region's disease thresholds with the Sugarcane Industry Biosecurity Committee (SIBC), who act as the industry committee for biosecurity matters.

Released variety

Prior to Biosecurity legislative changes in 2016, a released variety was referred to as an 'approved' variety, which applied to specific biosecurity zones. With the changes, once a variety is released it is referred to as a recommended variety for the region. Importantly the use of a recommended variety is seen as meeting one aspect of every growers General Biosecurity Obligation/Duty. When the RVC decides to release a variety it will be published on QCANESelect™.

Accessing new varieties

With new varieties continually entering the industry it is important that growers are able to access clean planting material and that they have the information to identify the varieties that best suit their farming system.

There are a number of ways to access released varieties and it is imported that when accessing new varieties that you do not also access new diseases for your farm. Clean cane can be easily sourced through local productivity services organisations and SRA's tissue culture program.

Further information

For more information on SRA's plant breeding or tissue culture program visit www.sugarresearch.com.au.