

**Raspberry breeding program variety
assessment, Trento, Italy, September
2009**

Australian Rubus Growers Association

Project Number: RB09003

RB09003

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HAL Project RB09003

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Trento, Italy, September 2009**

30th October 2009

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Purpose of Project: This proposal was scheduled to obtain a more thorough assessment of raspberry material of interest for possible commercial introduction to Australia, as first observed during the 2008 study tour FR07002.

Funding: This project has been facilitated by HAL and has been funded by the Australian Rubus Industry levy. The Australian Government provides matched funding for all HAL's R&D activities. Their support is gratefully acknowledged.

Date: 22nd October 2009

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SUMMARY:

The study tour RB09003 to Trento, Italy, is a follow up investigation from the 2008 FR07002 trip, where a particular raspberry trial selection was noted for its potential for Australian markets.

Observations of the variety in question proved to be consistent with what was viewed in Tongeren, Belgium, in 2008, and to be superior to varieties presently available to the Australian industry. It is recommended that further research – primarily assessing the variety within Australia to more accurately determine the suitability to our climate – is undertaken to progress to commercialisation in Australia.

Whilst viewing this variety, two other varieties came to notice, one primocane-fruiting and one florican-fruiting type. Possibilities for licensing of these new varieties by ARGA, for commercialisation by Australian growers, was discussed with the owners.

Sant Orsola is an Italian grower cooperative that has established its own rubus breeding program.

The program has been developed in collaboration with the Italian research body ISPLF, and focussing on the development of new varieties that have:

1. Potential for good yields
2. Well structured, good tasting fruit with good colour
3. Reasonably firm fruit
4. Strong upright canes
5. Medium to large fruit size.

A representative from ARGA was invited to visit the breeding program to evaluate new varieties and potentially set up a licensing agreement for trialling of the new varieties in Australia.

A key benefit of introducing new varieties into Australia is the improvement of the quality and quantity of fruit grown locally for Australian, and potentially, for export markets.

INTRODUCTION:

Since the demise of the DPI (Vic) and HAL -funded Australian Raspberry Breeding Program, the industry has been seeking to improve the existing standard of plant varieties within our country.

It is important to continually source new plant varieties as existing varieties can deteriorate and become unproductive.

During the 2008 European Study tour FR07002, a potentially viable variety was observed at fruit trials demonstrations at Belgium's Tongeren Research Station, which led to this trip being undertaken to visit the breeding program from which it came.

Since the costs of funding an independent breeding program in Australia have been concluded to be prohibitive given the size of the industry, ARGA, with the support of HAL, has endeavoured where possible, to investigate international breeding programs with the view to license and introduce new material to our growers.

ARGA is currently seeking testing rights to evaluate suitability for Australian conditions.

METHOD AND ACTIVITIES:

A short study tour, RB09003, was undertaken by an industry representative, on behalf of ARGA and HAL.

The main focus of the study tour included visiting the site of an overseas breeding program, visiting farms where varieties from the breeding program were being grown commercially, and meetings with directors of the governing body regarding licensing and testing agreements.

Several varieties within the Sant Orsola breeding program were evaluated according to the ARGA *New Variety Assessment Summary* which follows

strict criteria for both plant quality and fruit quality to determine its comparative rating to an industry.

Evaluation:

This Study tour was successful in that the representative of ARGA was able to view new prospects of rubus varieties and deem them suitable for trial and assessment here in Australia, using the ARGA Assessment Summary.

Whilst viewing the breeding program, two new varieties came to notice, one primocane and one floricate-fruited type, and the possibility of licensing of these new varieties by ARGA was discussed with the owners.

The benefit to the Australian Rubus Industry is to enable all growers to have access to the latest and best plant varieties. This will allow growers to competitively provide the best possible fruit to both local and international markets.

IMPLICATIONS:

One of the challenges to our industry is to access new plant material and as it no longer has an active domestic breeding program, the only opportunity for variety improvement for the majority of growers in the industry is to source such material from overseas.

The plant material has to then pass quarantine and be grown in various locations to assess its suitability to the diverse range of growing conditions in Australia. The industry representative body ARGA recognises the limitations that restrict individual growers to undertake these processes, but that they remain critical components of its strategic plan for the industry. New varieties allow growers to improve both fruit quality and productivity. This helps the growers to remain economically viable.

DISSEMINATION:

This study tour assessment will be reported to the Variety Improvement Subcommittee of ARGA, for consideration of entering an agreement with the intellectual property owners. Its public dissemination will be posted on

the industry website arga.net.au following successful completion of the agreement to secure access to the material.

RECOMMENDATIONS:

As a result of this study tour, the representative would recommend ARGA, proceeding with signing a testing agreement to enable plant material to be brought to Australia for assessment.

ACKNOWLEDGEMENTS:

HAL- advisory support, additional to funding
Brialey Brightwell – booking and confirmation of itinerary, report assistance

BIBLIOGRAPHY:

HAL Project FR 07002 Global Berry Congress and IRC Meeting
Philip Rowe et al. Aust. Rubus Growers Association

APPENDICES:

ARGA New Variety Assessment Summary template

New Variety Assessment Summary

Variety:

Date:

Parentage:

Primocane

Floricane

Dual Crop

Other:

Harvest Season:

Breeder:

Distributor:

Yes / No

Head License Agreement

Details:

Location:

Assessed by:

KEY SELECTION CRITERIA:

Give each criterion a score out of 5 where:

1= unacceptable 2= Poor 3= Acceptable – equivalent to Standard 4= Better than Standard 5= Excellent

Industry Standard Variety:

Criteria for Plant Quality:

| Criteria | Rating | Score | Comments |
|--------------------------------|---------------|--------------|------------------------------------------------------------|
| Yield | x2 | | |
| Cane vigour (cane height etc) | | | |
| Number of fruit per lateral | | | |
| Length and quality of laterals | | | |
| | TOTAL | | Must score 15 or greater Acceptable/Unacceptable |
| Capability of tissue culture | Yes/No | | |

| | | | |
|-------------------------------------------------|--------|--|--|
| Thornless or spineless | Yes/No | | |
| Upright / whippy | Yes/No | | |
| Susceptibility to PFR | Yes/No | | |
| Pest & disease resistance | Yes/No | | |
| Where else is it grown? | | | |
| How does it compare with other known varieties? | | | |

Criteria for Fruit Quality:

| Criteria | Rating | Score | Comments |
|--------------|--------------|-------|------------------------------------------------------------|
| Size | | | |
| Architecture | | | |
| Firmness | | | |
| Pickability | | | |
| Taste | | | |
| Colour | | | |
| Gloss | | | |
| | TOTAL | | Must score 20 or greater Acceptable/Unacceptable |

Breeder's Comments:

Your assessment:

Importation Issues:

Bare-rooted only TC

Blackberry weediness indexing and documentation

Other:

RECOMMENDATION:

Signed:

Date:

ARGA VARIETY IMPROVEMENT SUB-COMMITTEE RECOMMENDATION:

Signed:
Chair, Variety Improvement Sub-committee

Date: