**Breeding faba bean for sub-tropical region of Australia**

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Faba bean (*Vicia faba* L.) is an important rotational crop in Australia providing $50-$100/ha indirect benefit to growers through break in disease cycle, change of weed spectrum and the nitrogen fixation. It is primarily gown as an export commodity to the Middle eastern countries, mainly Egypt, Saudi Arabia and United Arab Emirates. Its production in sub-tropical region is constrained by biotic stresses, such as rust (*Uromyces viciae-fabae* (Pers.) Schroet.)*,* chocolate spot (*Botrytis fabae* Sard.) and certain viral diseases [1], but sufficient resistance has been developed in new varieties to combat these constraints. Likewise, breeding is also targeted for better seed quality, tolerance to frost and certain herbicides, such as imidazolinone (Imi) (Group B) and metribuzin (Group C). Faba bean is a favoured grain for protein fractionation, but the grain contains vicine and convicine (vc) which can cause favism to people lacking glucose-6-phosphate dehydrogenase enzyme in their body system [2]. This can cause acute haemolysis causing death in the absence of a proper medical care. Breeding has commenced on avoiding the risk of favism by developing low vc breeding lines. Molecular markers linked to Imi tolerance and low vc content are being used regularly for selection. Tanin present in the seedcoat gives bitterness while feeding to livestock including monogastrics. This can be reduced by developing white seeded varieties as white seed is linked to a creamy white flower colour. The current status of breeding with respect to the above traits will be discussed in the presentation.

***References:***

[1] Adhikari, K. N. et al, (2021). Conventional and Molecular Breeding Tools for Accelerating Genetic Gain in Faba Bean (Vicia Faba L.). https://doi.org/10.3389/fpls.2021.744259 Frontiers in Plant Science 12 (2174).

[2] Khazaei, H. et al, 2021. Recent advances in faba bean genetic and genomic tools for crop improvement. Legume Science. https://doi.org/10.1002/leg3.75