

# Vetch productions and use in Australian farming systems

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## Background

The National Vetch Breeding Program (NVBP) is based on conventional breeding methods to provide farmers in different areas with improved vetch varieties for production and end use. Vetch has been adopted by Australian farmers as a legume rotation crop where drought is the major environmental stress. Farmers perceive vetch as a reliable, versatile legume, which can be used to manage cereal diseases and grass weeds, improve soil fertility and contribute to increased yield and protein content in subsequent crops. Also, vetch hay as a crop in the farm rotation is one of the best methods to reduce herbicide resistance weeds and to avoid chemical contamination of paddocks.

## Project Objectives

Over many years, the NVBP has tested vetch germplasm for production of grain and dry matter, as well as grazing palatability and the benefits of green manuring. Currently the NVBP has 8 sites in SA; four of them in lower rainfall areas at Minnipa, Peake, Lameroo and Morchard as well Walpeup in Victoria.

These sites have focused on testing vetch for:

- adaptation in lower rainfall areas where other legume crops perform poorly;
- Grain and dry matter yield in low rainfall areas;
- Resistant/tolerant to the main diseases, rust, Ascochyta and Botrytis;
- Soft seed to not be 'weed' in following crops;
- Lower toxin in the grain to include grain as a stock feed; and,
- The best end use of vetch crop on farm.

## Project Outcomes

NVBP released 4 new common vetch varieties with following characteristics and recommendations.

Variety	Maturity	Rainfall <350mm/yr		Rainfall >400mm/yr		Disease reaction		
		Grain	Dray matter	Grain	Dray matter	Rust	Ascochyta	Botrytis
Blanchefleur	Mid	Mod	Mod	Mod	Mod	VS	MR	S
Morava*	Late	Low	Mod	Mod	V. high	R	MS	VS
Rasina*	Early-mid	Mod	Low	Mod	Mod	R	MR	S
Volga*	Early-mid	High	High	High	High	R	MR	S
Timok*	Mid-late	Mod	High	High	V. high	R	MS	S

\* Varieties released by Australian National Vetch Breeding Program

## Key Messages

Vetch is versatile in terms of its potential end-uses: grain, hay/silage, pasture or green/brown manure.

- Grain and hay/silage from Common vetch varieties can be used to feed ruminants without limit.
- The grain can also be used in up to 20% of the ration with cereal grains in a diet for pigs.
- Vetch in crop rotations is an excellent tool to reduce problem weeds, diseases and insects.
- Vetch is one of the best crops to improve soil fertility and contribute to increase yield and protein content in following crops.

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