

Trial 15

Variety Evaluation of Narbon Bean (*Vicia narbonensis* L.)

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Aim: To identify narbon bean varieties suitable for the Mallee and Wimmera

Results: The trial included 29 varieties of narbon beans and Dundale peas as a control and is the same variety evaluation trial that was grown at nine other locations throughout Australia in 1996. The average yield for the Birchip site was 3.4t/ha. This is comparable with yields obtained at Birchip in 1995 (3.5t/ha) and is a large improvement on 1994 yields (1.1t/ha). Shown below are average yields for the trial at Birchip in 1996.

Variety	Yield (t/ha)	Variety	Yield (t/ha)	Variety	Yield (t/ha)
60099	2.47	60122	3.23	60182	3.14
60101	3.29	60131	3.92	60196	2.67
60105	3.10	60140	2.86	60204	2.67
60107	2.94	60142	3.14	60619	2.74
60111	3.11	60146	3.17	N9027	3.49
60112	3.10	60147	3.17	N9028	3.53
60114	3.32	60165	2.68	N9404	3.02
60116	3.01	60174	2.64	N9405	3.14
60119	3.48	60178	2.81	N9406	2.59
60121	2.47	60180	3.19	Dundale	1.77

Interpretation:

In contrast to previous years and other sites, yields of all narbon bean lines exceeded field pea yields at Birchip. The exceptionally low field pea yields could be attributed to frost damage as peas were observed to flower up to a week earlier than the earliest narbon bean lines. Narbon beans can match field pea yields in most environments. Yields of the best narbon bean lines exceeded field pea yields at eight out of nine sites throughout Australia in 1995.

Narbon beans in evaluation trials have not been affected by diseases such as Ascochyta Blight and Chocolate Spot that affect other pulse species. They are less prone to lodging and possess a vigorous taproot able to extract moisture at depth. In addition, they appear to be more tolerant of high pH soils. For these reasons they may be a valuable addition to the rotation both in areas where legumes are currently grown and also in more marginal environments.

Work continues at Walpeup and elsewhere to develop end uses for narbon beans. It has potential in feed or fodder production, green manuring, production of feed grain and also as a pulse for human consumption. The main limitation to the utilisation of narbon beans are high levels of sulphur compounds in the grain which reduce its palatability and appeal for both animals and humans. There has been some success in breeding lines with improved palatability and the first improved palatability line should be available for commercial production in 1999.