

Coloured Bean Variety Market Introduction Yield and Quality Evaluation

(Huron SCIA Major Grant Project)

Purpose:

Evaluate newly released lines of coloured beans from University of Guelph and AAFC, Harrow for maturity, yield, quality and adaptability. Second objective was to compare these varieties to new or advanced lines available in the US.

Methods:

In 2008, three new coloured bean varieties were released: OAC Redrider cranberry bean, OAC Redstar dark red kidney, and OAC Lyrik light red kidney. Seed production issues limited variety selection for the project to OAC Lyrik. Red Kanner, a standard for light red kidney beans, along with four promising light red kidney lines from New York State, were selected for comparison. Three sites were selected for planting field length strips of each variety. Yield and moisture, pick and dockage information was collected at harvest. A sample of each variety was rated for seed quality by graders and marketing specialists from three major Ontario processors.

Results:

A very wet spring delayed planting and only allowed two trials to be planted; Thamesford (3000 HU) on sandy loam, and Mitchell (2800) on clay-loam soil. Growth was excellent at the Thamesford location. The Mitchell location received excessive rainfall all season, was uneven in growth and yield data was not collected due to harvest delays from wet fall. Yield of the variety OAC Lyrik was only marginally better than Red Kanner, which is quite impressive considering the variety is estimated to be 10-12 days earlier in maturity (Table 1). The varieties 773V98 and 18V96 looked quite impressive and yielded higher than Red Kanner. 773V98 is 10-12 days earlier than Red Kanner and a smaller seed, but shows drought tolerance. 18V96 from Cornell is a large seeded variety with excellent canning characteristics. Visual quality was rated for colour, seed size, and overall appearance which combines, colour and size with seed shape and uniformity (Table 2).

Table 1: Light Red Kidney Strip Trial - Thamesford

Variety	Moisture	Yield lb/ac	Yield lb/ac	Maturity
			+/- Red Kanner	
Red Kanner	18.9	3830		
773V 98	17.3	4356	526	-12
OAC Lyrik	17.4	3883	53	-12
1062V98	17.9	3877	47	-10
18V96	19.4	4533	703	0
1133V96	19.8	3795	-35	-6

Table 2: Visual Quality Ratings

Variety	Visual Ranking 1=highest, 6=lowest score		
	Colour	Size	Overall
Red Kanner	3	3	4
773V98	3	2	2
OAC Lyrik	5	5	6
1062V98	1	1	1
18V96	2	4	3
1133V96	4	6	5

Summary:

The logistics of planting, pulling, windrowing, and the timely harvest of edible beans has limited the ability to conduct strip trial plots. Although weather and seed availability limited the number of sites, the project demonstrated the value of variety strip trials for dry beans. Field trial evaluation along with dealer quality evaluation could assist in providing feedback to plant breeders and in the promotion and early adoption of Ontario coloured bean varieties by the industry.

Next Steps:

Funding is being sought to refine variety evaluation and processes for quality analysis to continue field testing of Ontario bred dry edible bean varieties.

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