

agriculture & rural development Department: agriculture & rural development PROVINCE OF KWAZULU-NATAL

Research & Technology BULLETIN

DRYBEAN CULTIVAR RECOMMENDATIONS

JAMES ARATHOON

The Agronomy Section, Research and Technology Development of the KwaZulu-Natal Department of Agriculture and Rural Development, the Agricultural Research Council – Grain Crops Institute and seed companies, conducted dry bean cultivar evaluation trials at various localities in KwaZulu-Natal. These trials formed part of the national cultivar trial, which was conducted in the major production areas of South Africa. The cultivars included small-whites and red speckled sugar beans.

The trials were planted in 0.75 m wide rows at a seeding rate of 180 000 seeds/hectare. The crops were grown under dry-land conditions and were fertilized for optimum yields, based on soil analysis recommendations conducted by the Cedara Analytical Laboratory. Fungicides were applied regularly from flowering to control leaf diseases. Weeds and insects were controlled throughout the growing-season.

Successful dry bean production is based on:

• Fertilizing the crop according to the soil

analysis recommendations. Thorough land preparation.

- Optimum planting period.
- Cultivar selection.
- Control of weeds, insects and diseases.

Due to differences in the climatic conditions at each locality and within each season, individual cultivar may performance be affected. Cultivar recommendations are therefore based on three or four seasons' data. thus providing more reliable information. Tables 1 and 2 indicates the mean yields recorded from the highest yielding small white and red speckled dry bean cultivars at each locality.

Although the cultivars were only evaluated at these four sites, farmers intending to plant dry beans in other areas should consider selecting those cultivars with consistent performances at all the evaluated sites. Selections could then be confirmed by advisors with local knowledge or seed company representatives.

TABLE 1 Dry bean cultivar yields recorded at the various localities											
CEDARA*		KOKSTAD [#]		LOSKOP*		GREYTOWN *					
Cultivar	(t/ha)	Cultivar	(t/ha)	Cultivar	(t/ha)	Cultivar	(t/ha)				
SMALL WHITE BEANS											
TEEBUS RR1	3.16	TEEBUS RR1	3.98	PAN 123	3.07	TEEBUS RR1	2.06				
PAN 123	2.80	PAN 123	3.91	TEEBUS RR1	2.99	PAN 123	1.82				
TEEBUS	2.73	TEEBUS RR2	3.89	TEEBUS	2.63	TEEBUS	1.41				
* Seasons 2010/11 to 2013/14 # Seasons 2009/10, 2010/11 and 2012/13											

TABLE 2 Dry bean cultivar yields recorded at the various localities											
CEDARA*		KOKSTAD [#]		LOSKOP*		GREYTOWN *					
Cultivar	(t/ha)	Cultivar	(t/ha)	Cultivar	(t/ha)	Cultivar	(t/ha)				
RED SPECKLED SUGAR BEANS											
DBS 830	3.64	OPS-RS 2	4.17	TYGERBERG	3.33	DBS 840	2.00				
PAN 9213	3.50	RS-5	4.00	RS-6	3.25	PAN 9292	1.98				
PAN 148	3.47	TYGERBERG	3.93	PAN 9213	3.25	JENNY	1.93				
RS 5	3.44	WERNA	3.92	SEDERBERG	3.19	PAN 9249	1.91				
RS 6	3.42	PAN 116	3.86	KRANSKOP HR1	3.04	RS 6	1.91				
SEDERBERG	3.37	SEDERBERG	3.84	KRANSKOP	3.04	WERNA	1.88				
DBS 830	3.37	PAN 148	3.81	DBS 840	3.02	OPS-RS 4	1.85				
OPS-RS 4	3.31	UKULINGA	3.81	OPS-RS 4	3.00	PAN 116	1.85				
TYGERBERG	3.25	RS-6	3.79	JENNY	2.96	PAN 9213	1.85				
JENNY	3.23	OPS-RS4	3.72	DBS 310	2.91	TYGERBERG	1.85				

* Seasons 2010/11 to 2013/14

Seasons 2009/10, 2010/11 and 2012/13





FIGURE 1 The two types of dry bean types evaluated, small white beans on the left and red speckled beans on the right

Contact

James Arathoon Control Scientific Technician Tel: (033) 355 9495 James.arathoon@kzndard.gov.za KZN Department: Agriculture & Rural Development Research & Technology Crop Production, Agronomy, Cedara

Published October 2015