'Blesbok' Sweetpotato

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'Blesbok' sweetpotato [*Ipomoea batatas* (L.) Lam.] was developed by the Vegetable and Ornamental Plant Research Institute (VOPRI) at Roodeplaat near Pretoria. This cultivar combines high yield potential, earliness, wide climatic adaptation in South Africa, good storage quality, and low rate of flesh oxidation. 'Blesbok' compares favorably with 'Bosbok' (Bosch, 1982), a cultivar that accounts for >50% of sweetpotato production in South Africa.

Origin

'Blesbok', previously tested as 85-1-2, originated as an open-pollinated seedling of the breeding line 81-27-1204 polycrossed in 1985 to 20 other parental lines selected for appearance, yield, and low oxidation. Breeding line 81-27-1204 originated from seed obtained from the United States in 1981. It has an orange skin and flesh, with almost no oxidation of the flesh, and produced high marketable yields.

Description

'Blesbok' has green, moderately long, thick vines with a vigorous growth habit. The leaves are green and heart-shaped, but truncated at the leaf base. The storage roots are cylindrical with an attractive purple-red skin and white flesh (Fig. 1) with almost no oxidation. Vine production is similar to that of 'Bosbok' and 'Brondal' (Joubert, 1970) and

better than 'White Delite' (Collins and Moyer, 1987). 'Blesbok' was used in polycrosses for 4 years, but no seed was obtained, although it sometimes bloomed.

Performance

'Blesbok' was evaluated at six climatic localities for three consecutive years (Table 1). 'Blesbok' produced marketable yields that compared favorably at most of the localities to those of 'Bosbok', 'Brondal', and 'White Delite', indicating that 'Blesbok' is widely adapted. 'Blesbok' is very similar to, but significantly earlier than, 'Bosbok' (Table 2). 'Blesbok' is more suitable than 'Bosbok' for

early marketing and it can be planted at a later date. 'Blesbok' also produces a higher percentage of medium to large roots (Table 3) and has a better storage quality than 'Bosbok' (Table 4). 'Blesbok' produces fewer culls than 'Bosbok', 'Brondal', or 'White Delite' but tends to give oversized roots (> 1500 g) when harvested after 5 months of growth. A panel of producers found the cooking quality of 'Blesbok' to be very similar to that of 'Bosbok'.

Availability

Foundation planting stock in limited quantities is available commercially. Requests for planting material should be made to the Director, VOPRI, Private Bag X293, Pretoria, South Africa, 0001.

Literature Cited

- Bosch, S.E. 1982. Sweet potato cultivar. Farmer's Weekly, 3 Feb. 1982.
 Collins, W.W. and J.W. Moyer. 1987. 'White Delite' sweet potato. HortScience 22:679.
 Joubert, T.G. la G. 1970. New sweet potato cultivar: Brondal. Fanning in South Africa 46(6):7.

Fig. 1. Roots of 'Blesbok' sweetpotato (Scale: one square on ruler = 1 cm²).

Table 1. Marketable yield (in t-ha⁻¹) of 'Blesbok', 'Bosbok', 'Brondal', and 'White Delite' sweetpotatoes at six localities.

Year	Cultivar	Locality					
		Pretoria (25°35'S 28°21'E)	Bloemfontein (28°57'S 26°20'E)	Port Elizabeth (33°57'S 25°37'E)	George (33°57'S 22°30'E)	Stellenbosch (33°51'S 18°50'E)	Nelspruit (25°27'S 30°58'E)
1986/87	Blesbok	74.2	52.0	46.7	74.2	56.3	55.1
	Bosbok	56.8	48.7	36.2	---	46.2	40.5
	Brondal	61.1	---	42.2	58.6	---	29.6
1987/88	Blesbok	39.6	32.0	66.5	48.2	39.7	59.4
	Bosbok	32.5	13.2	24.5	40.7	41.3	37.0
	Brondal	29.9	---	40.2	42.3	---	43.3
1988/89	Blesbok	60.1	63.8	52.4	47.7	61.0	80.9
	Bosbok	45.1	65.2	36.9	49.8	62.1	62.0
	Brondal	46.3	31.9	40.0	46.9	40.4	45.0
	White Delite	34.4	35.1	19.8	34.2	32.0	58.4
1986/87 LSD _T (0.05)		30.3	18.9	37.5	22.9	38.1	24.3
1987/88 LSD _T (0.05)		21.7	17.9	38.3	27.7	29.9	30.3
1988/89 LSD _T (0.05)		24.2	23.2	25.6	25.8	24.3	30.2

Table 2. Marketable yields of 'Blesbok' and 'Bosbok' at four harvest times at Pretoria, 1988.¹

Harvest time (days from planting)	Yield (t·ha ⁻¹)	
	Blesbok	Bosbok
90	30.8	14.1
119	43.1	29.3
155	51.5	35.0
183	72.7	44.2

¹Cultivar × harvest time interaction significant at $P = 0.05$. Interaction $LSD_T = 14.8$.

Table 3. The percentage roots of 'Blesbok' in different size classes at Pretoria, 1988.

Size class (g)	Blesbok (%)	Bosbok (%)
Extra large (1000–1500)	1	0
Large (500–1000)	14	9
Medium (250–500)	45	36
Small (100–250)	40	55

Table 4. The percentage marketable roots and percentage mass loss after storage for 21 days at 10 to 15C and 50% RH. Roots were not cured before storage. Pretoria, 1989.

	Blesbok	Bosbok
Marketable roots (%)	65	50
Mass loss (%)	30	39