SUGARCANE VARIETY DLM24 IN SOUTH CENTRAL COASTAL REGION

DLM24 sugarcane variety was derived from America, selected in Vietnam from 1993, and tested under conditions of unirrigated grey soils in Southeast region (2002) and acid sulfate soils in Mekong Delta (2004).

DLM24 was carefully examined in South Central coastal region from 2002 to 2005. The genotype exhibited its wide adaptability, vigorous elongation, slight susceptibility of borers and diseases, moderately good ratooning, high yield, fair sugar content, little flowering, yielding above 70 tons/ha equal to 90 tons 10 CCS/ha – exceeding 24, 28, 36% as compared to K84-200, ROC10 and My5514, respectively. However, the variety is recommended to be planted with high density of cuttings.

In Vietnam, sugar cane breeding research has recorded achievements and contributions to creating better genotypes with high cane yield and sugar content, adapted to various sugarcane ecosystems. However, most of sugarcane production areas need more good varieties, suitable to farming techniques. Especially, in South Central coastal region, one of main traditional sugarcane regions, there are 60,000 ha, which belonged to nine sugar mills (Quang Phu, Pho Phong, Binh Dinh, Tuy Hoa, KCP, Ninh Hoa, Cam Ranh, Phan Rang, and Binh Thuan). Here, natural conditions are unfavorable such as exhausted fields, low rainfall (800 – 1500 mm), prolonged dry season (7 – 8 months), and limited water supply. High-yielding and drought-resistant sugarcane varieties are not sufficient, and My5514, a leading variety has covered more than 60% of cultivated areas. In 2001-2002, cane yield and quality were still very low (45 tons/ha and 12 cane/sugar). It is imperative that the sugar cane breeding must be promoted to meet the demand of sugar industry in the region.

Experimental system consisted of basic test, productive test, and model test of intensive cultivation.
Performance locations included four provinces as Quang Ngai, Binh Dinh, Phu Yen, and Khanh Hoa.
Performance period was from December 2002 to December 2005.

In Quang Ngai

Table 1: Cane yield of basic test in Quang Ngai (tons 10 CCS/ha)

Treatments	Plant crop	1st ratoon	2nd ratoon
ROC10 (the check)	112.25	96.31	79.38
DLM24	133.44	131.92	103.45
VN84-422	97.54	96.66	75.83
VN85-1859	121.78	109.06	85.05
VN85-1427	130.03	128.27	102.34
ROC22	134.57	133.28	113.27
ROC23	145.72	121.84	92.30

Varity DLM24 at harvesting stage

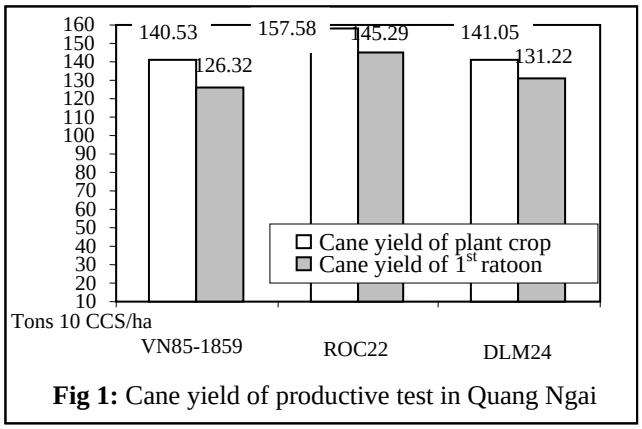

Fig 1: Cane yield of productive test in Quang Ngai

In Quang Ngai, DLM24 was characterized medium abilities of germination and tillering, rather flowering but passable good rationing and stem elongation, pest resistance, and good yield components, especially weight of stalks. Hence, it offered above 122 tons 10 CCS/ha/season of average yield even in the economic cycle of three seasons.

In Binh Dinh

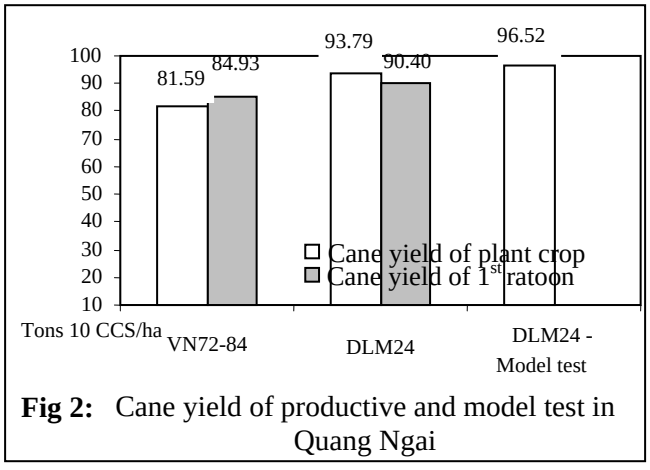

Fig 2: Cane yield of productive and model test in Quang Ngai

In Binh Dinh, DLM24 obtained the same result as in Quang Ngai. The variety obtained high and stable cane quality, and cane yield offered above 90 tons 10 CCS/ha, although suffering longer drought stress

In Phu Yen

Table 2: Cane yield of basic test in Phu Yen (tons 10 CCS/ha)

Treatments	Plant crop	1st ratoon	2nd ratoon
K84-200 (the check)	68.45	115.06	63.82
DLM24	84.04	134.85	89.23
C126-78	54.11	112.50	57.78
CP70-1133	85.50	123.70	64.24
Q68	58.12	97.09	53.89

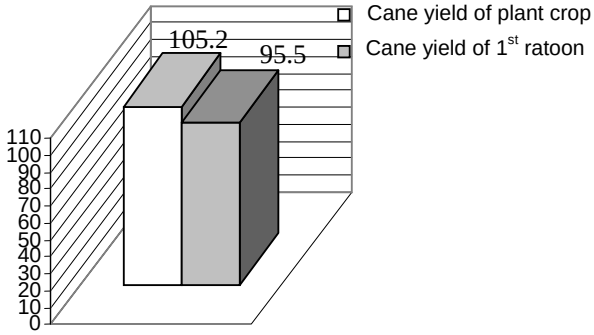

Fig 3: Cane yield of DLM24 in productive test in Phu Yen

In Phu Yen, DLM24 exhibited good growth. Can yield offered above 100 tons 10 CCS/ha. DLM24 was medium-ripened variety.

In Khanh Hoa

Table 3: Cane yield of basic test in Khanh Hoa (tons 10 CCS/ha)

Treatments	Plant crop	1st ratoon	2nd ratoon
My514 (the check)	101.17	124.45	60.98
DLM24	128.01	137.55	83.75
VN85-1859	142.87	91.69	36.26
C91-115	81.26	36.95	52.65
RB72-454	98.41	53.66	58.20

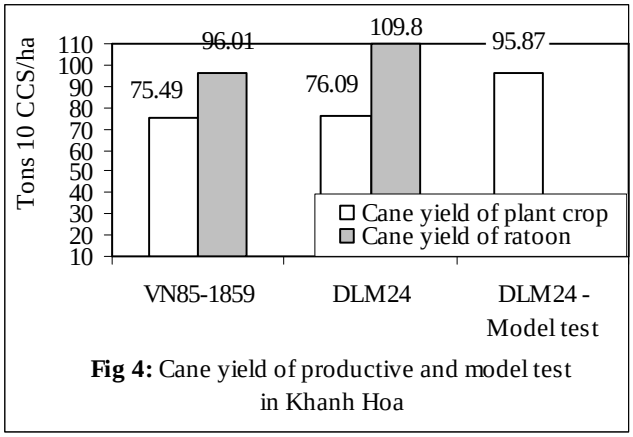

Fig 4: Cane yield of productive and model test in Khanh Hoa

In Khanh Hoa, cane yield of productive test was not high due to severe drought stress for long-term. DLM24 exhibited good ability of stem number until harvest period. In large-scale production, DLM24 obtained above 90 tons 10 CCS/ha of cane yield.

DLM24 is a sugarcane variety suitable to South Central Coastal region. It is necessary to carry out test production for DLM24.