

Management Guidelines Cont.

- Calmati-202 is susceptible to cold induced blanking. Water depth should be increased to 8 inches before panicle initiation (50 to 55 days after planting) until heading to protect developing panicles from exposure to low temperatures during cool nights.
- Maximum milling yield is obtained when grain moisture at harvest is 18%. Calmati-202 is susceptible to grain fissuring and should be harvested near optimum harvest moisture. Because of pubescence and a slender grain size, Calmati-202 will dry down significantly faster than medium grains or standard long grain varieties. Calmati-202 will also thrash easier than other varieties, so the harvester cylinder speed should be reduced to promote maximum head rice yield.

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CALMATI-202 RICE: DESCRIPTION AND MANAGEMENT GUIDELINES



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CALMATI-202

Introduction. Calmati-202 is an early maturing, semi-dwarf, basmati type aromatic long-grain rice variety released for commercial production in California in 2006. Grain and cooking quality of Calmati-202 has significant improvement over Calmati-201 and is expected to compete with imported basmati rice. Due to finer grain shape, potential yield of Calmati-202 is 10% lower than Calmati-201. Lower yield potential, however, can be offset by higher value that it can obtain in a basmati rice market. The AB2622 advisory board of the California Rice Commission has designated Calmati-202 as a variety of commercial impact (tier 1).

Description. Agronomic characteristics of Calmati-202 have been compared with L-205 and M-202 in Table 1. Calmati-202 is a photoperiod insensitive, early maturing, semi-dwarf, pubescent long-grain variety. Seedling vigor of Calmati-202 is similar to L-205 and M-202. Days to 50% heading is 6 days later than L-205 and 4 days later than M-202. Plant height is the similar to L-205 and 8 cm shorter than M-202. Lodging potential is significantly less than M-202. Susceptibility to cold induced blanking (Greenhouse blanking score) is significantly higher than both L-205 and M-202. Susceptibility of Calmati-202 to stem rot and aggregate sheath spot pathogens is not significantly different from L-205 and M-202.

Performance. Calmati-202 has shown significantly lower yield potential than L-205 and M-202 at the intermediate/late group of statewide yield performance trials during 2003 to 2005. Average yield of Calmati-202 was

Table 1. Agronomic characteristics of Calmati-202, L-205, and M-202 averaged over three intermediate/late statewide locations during 2003 to 2005.

Character	Calmati-202	L-205	M-202
Seedling .Vigor Score ¹	4.9	4.8	4.9
Days to 50% Heading	91	85*	87*
Plant Height (cm)	94	94	102*
Lodging (%)	21	36	76*
Yield (lb/acre@14%), RES	6740	9230*	9040*
Head Rice Yield (%)	59.4	63.4*	--
Harvest Moisture (%)	16	16	17
Greenhouse Blanking (%)	30	5*	18*
Stem Rot Score ²	6.2	6.3	6.5
Aggregate Sheath spot Score ³	2.7	2.6	2.2

¹ Seedling Vigor visual score where 1= poor and 5=excellent.

² Stem rot score where 0=no damage and 10=plant killed.

³ number of top leaves killed by aggregate sheath spot.

* Significantly different from Calmati-202 (0.05 probability level)

6740 lb/acre, which is 73% of L-205 and 74% of M-202 yield potentials. Three year average milling yield for Calmati-202 was 59.4% compared with 63.4% for L-205. Milled rice kernels of Calmati-202 are significantly longer than Calmati-201 and slightly shorter than imported basmati available in the US market (Table 2). Grain width of Calmati-202 is more slender than Calmati-201 but not as slender as imported basmati rice. L/W ratio of Calmati-202 grains shows a significant improvement over Calmati-201. Cooked kernel length of Calmati-202 is also slightly longer than Calmati-201. The overall appearance of cooked basmati type rice is an important quality feature among basmati rice consumers. Coherence of the cooked grains as well as grain shape and texture of Calmati-202 are distinguishable improvements over Calmati-201.

Table 2. Grain dimensions of milled and cooked kernels of Calmati-202, imported basmati, and Calmati-201

CULTIVAR	COOKED KERNEL				
	LENGTH	WIDTH	L / W	LENGTH	ELONGATION
Calmati-202	7.15	1.95	3.66	14.9	2.1
Basmati import	7.22	1.72	4.19	17.4	2.4
CT-201	6.52	2.09	3.12	13.3	2.0

Area of Adaptation. Calmati-202 is adapted to warmer areas of the California rice growing region. Greenhouse tests indicate that this variety, similar to Calmati-201, is susceptible to cold induced blanking and therefore not adapted to cooler locations

Management Guidelines. The following guidelines are based on research, observation, and experience gained in developing Calmati-202. These suggested cultural practices are intended to assist in the production of optimum yield and quality from Calmati-202.

- Uniform water depth, adequate fertility, uniform seed distribution and good weed control practices are important because they maintain uniform heading and harvest moisture which in turn increase head rice milling yield.
- Fertilizer rates should be managed carefully to avoid blanking, lodging, and reduced grain quality. Preplant nitrogen rates of 125 lbs/acre have been sufficient to produce optimum yield and grain quality of Calmati-202 at RES.
- Preferred seeding dates are May 1 to 15. Calmati-202 should be seeded at a rate of 130 to 140 lbs/acre. Excessive seeding rates should be avoided because of the small seed size of this variety.