Two new wheat varieties from Mexico . . .

SIETE CERROS 66—INIA 66

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Two recently introduced short-statured wheat varieties, INIA 66 and Siete Cerros 66, have shown outstanding performance in University of California tests. Both varieties were developed in Mexico by the Mexican Ministry of Agriculture in cooperation with the International Maize and Wheat Improvement Center. Grain yields are equal or superior to those of the best varieties currently available, and they are adapted to a wide variety of growing conditions. Both have been approved for certification by the California Crop Improvement Association.

SIETE CERROS 66 is a midseason to medium-late spring wheat variety of medium-short to medium height. Its lodging resistance is good. The spike is bronze-colored, fully awned, and erect. The internode area just below the spike has a characteristic S-shaped curve. The kernels are white, semi-hard, and of medium size. Some variations in height and maturity are characteristic of the plants. Siete Cerros 66 was selected from a cross of Penjamo sib with Gabo 55.

Siete Cerros 66 is resistant to many strains of stem rust. It is moderately susceptible to stripe rust and susceptible to bunt and barley yellow dwarf virus. Its reaction to other California wheat diseases is not known. Planting seed should be treated.

Yield trials are summarized in table 1. At all the locations where the variety was tested, Siete Cerros 66 showed a 31 per cent greater yield than Ramona 50 and an 11.5 per cent greater yield than Pitic 62. The table also gives yield data for Sonora 64, Nainari 60, and Lerma Rojo 64. Other characteristics of the variety are shown in table 2.

Under some growing conditions, seed shatter losses may exceed those of Ramona 50, but shatter resistance appears equal to other Mexican varieties currently grown in California.

Siete Cerros 66 is widely adapted to California. The fact that it reaches maturity moderately late provides a definite advantage in locations where early planting is desirable. Where stripe rust has been important, however, this moderately susceptible variety should be used only on a limited basis until the effect of stripe rust on yields is established. Data from tests conducted so far indicate that the variety is unacceptable for milling or baking, and should be considered a feed wheat in California at present.

Seed is currently available commercially in California. Foundation seed stocks are under development by the University of California, Davis, Department of Agronomy and Range Science and will be available for the 1969 crop year.

INIA 66 is an early-season spring wheat, similar to Ramona 50 in time of maturity. The variety has a nodding and semi-lax spike. Glumes and awns are white. Kernels are large and semi-hard. Seed color is red. INIA 66 was developed from a cross of Lerma Rojo 64 with Sonora 64. The variety name was taken from the initials of the Mexican *Instituto Nacional de Investigaciones Agricola.*

The variety is resistant to many strains of stem rust. Resistance to stripe rust is also believed to be good. It is susceptible to barley yellow dwarf virus and bunt. Planting seed should be treated.

In eight trials INIA 66 yielded 28 per cent more grain than Ramona 50 and 8.8 per cent more than Pitic 62. Results of these trials are given in table 1. The bushel weight of INIA 66 is the highest of any wheat variety tested extensively by the University of California. Its kernel weight is second only to that of Ramona 50. Because of its relatively short stature, it is quite resistant to lodging and can be grown in areas of high fertility. Its resistance to seed shatter is comparable to other Mexican varieties currently in widespread use, but its resistance is less than that of Ramona 50. Characteristics of the variety are shown in table 2.

INIA 66 is believed to be adaptable for use throughout the state, except in the intermountain areas of northern California. The originators believe the variety will produce high quality flour with strong gluten. Quality evaluations are underway.

It is expected that there will be some acreage of INIA 66 in California in the 1968–69 crop year. Foundation seed will be available in the summer of 1969.

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TABLE 1. SUMMARY OF YIELD COMPARISONS OF SEVEN SPRING WHEAT VARIETIES
Pounds per acre

Year	Location	Siete Cerros 66	INIA 66	Ramona 50	Nainari 60	Pitic 62	Sonora 64	Lerma Rojo 64	LSD .05	C.V. %
1965	U.C. Davis ISWYN*	4820	—	4190	3890	4840	5450	4330	383	15.2
1966	U.C. Davis ISWYN	3920	—	2840	4040	3260	3300	3500	616	13.7
1967	U.C. Davis ISWYN	6180	5470	4200	5310	5180	4610	5250	687	9.5
	U.C. Davis	5420	—	3630	3960	4170	4800	4480	448	8.8
	Meridian, Sutter County	4270	—	3290	3850	3060	4350	4340	393	8.4
	Walnut Grove, San Joaquin County	3100	—	1480	3140	2630	2940	2220	558	18.6
1968	U.C. Davis ISWYN	6510	6570	5270	5110	6750	6420	6510	783	9.4
	U.C. Davis	2810	3310	2410	1800	2470	3080	2780	380	11.5
	Meridian, Sutter County	5070	5030	3670	4290	5060	4560	4710	350	6.2
	Dunnigan, Yolo County	3600	3680	3190	3430	3570	3460	3590	291	6.5
	Five Points, Fresno County	4430	4750	3550	2950	3460	4460	3850	389	9.2
	Walnut Grove, San Joaquin County	5270	4310	4050	4200	4990	4490	4810	498	8.8
	U.C. Davis— Stripe Rust Test	2430	3730	2450	2020	2410	2730	2790	771	13.3
AVERAGE YIELD										
	All tests per cent of Ramona 50	131	—	100	108	117	124	120		
	Times exceeding Ramona 50 yield	12	8	—	8	10	13	13		

* International Spring Wheat Yield Nursery.

TABLE 2. AVERAGE CHARACTERISTICS OF SIETE CERROS 66 AND INIA 66 COMPARED WITH SEVERAL OTHER VARIETIES

	Maturity	Height	Lodging	Weight
		Inches	%	Bu.
Siete Cerros 66	Midseason to medium late	37	13	60.8
INIA 66	Early	37	15	62.8
Ramona 50	Early	47	44	59.4
Nainari 60	Medium early	44	42	59.0
Pitic 62	Midseason	38	36	58.0
Sonora 64	Early	35	22	61.4
Lerma Rojo 64	Medium early	41	69	61.9