

Cover Crop Species Evaluations

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OBJECTIVES: To evaluate several plant species for their potential as winter cover crops in a cotton production system. Two dates of cover crop planting were investigated.

PROCEDURES: Eleven cover crops¹ and a control were planted on 30 inch beds on October 26 and November 27, 1990 (Table 1). The seed were broadcast by hand and raked into the soil. Visual observations of the percent of each plot covered with the cover crop, weeds, and bare ground were made in Mid-February, 1991.

Table 1. Cover crop species planted, code, planting rate, and inoculation in the 1990 evaluations at Shafter, CA. 1990-1991.

<u>Cover Crop Species</u>	<u>Code</u>	<u>Planting Rate</u>	<u>Inoculation</u>
Lana Vetch	LV	80	YES
Foenugreek	FG	50	YES
Annual Rye Grass	AR	50	
Green Manure Mix ¹	GM	125	YES
Austrian Winter Peas	WP	120	YES
Hairy Vetch	HV	60	YES
Berseem Clover (Top Cut)	BC	25	YES
Dryland Clover Mix ²	DC	35	YES
Medic Mix ³	MM	20	YES
Sub Clover (Mt. Barker)	SC	30	YES
Sweet White Lupine	LP	125	YES
Control	CT		

¹ 40% Bell Bean, 20% Austrian Winter Pea, 20% Vetch, 20% Annual Rye Grass.

² 16% Crimson Clover, 15% Kondinin Rose Clover, 15% Kenland Red Clover, 9% each of Geraldton, Nungarin, Mt Barker, Trikkala, and Woogenellup Subterranean Clovers, and 9% Jemalong Barrel Medic.

³ 20% Sephi Barrel, 10% Paraggio Barrel, 15% Circle Valley Burr, 15% Paragosa Gama, 15% Sava Snail, and 15% Koala Subclover.

Results: These are results from a single growing season so the data are tentative. Significant differences in the amount of ground coverage were observed on both planting dates (Fig. 1). Lana Vetch and Annual Rye Grass were

¹Seed purchased from Peaceful Valley Farm Supply, PO Box 2209, Grass Valley, CA 95945.

top performers for early and late planting. The Green Manure Mix did well in the early planting but dropped off slightly in the late planting. Foennugreek did well in the late planting. Sweet White Lupine suffered from seedling diseases and did very poorly.

Future Plans: The plots have been turned under and will be planted to cotton this spring. We would like to re-establish the test next Fall with new entries to replace some of the entries which failed dismally.

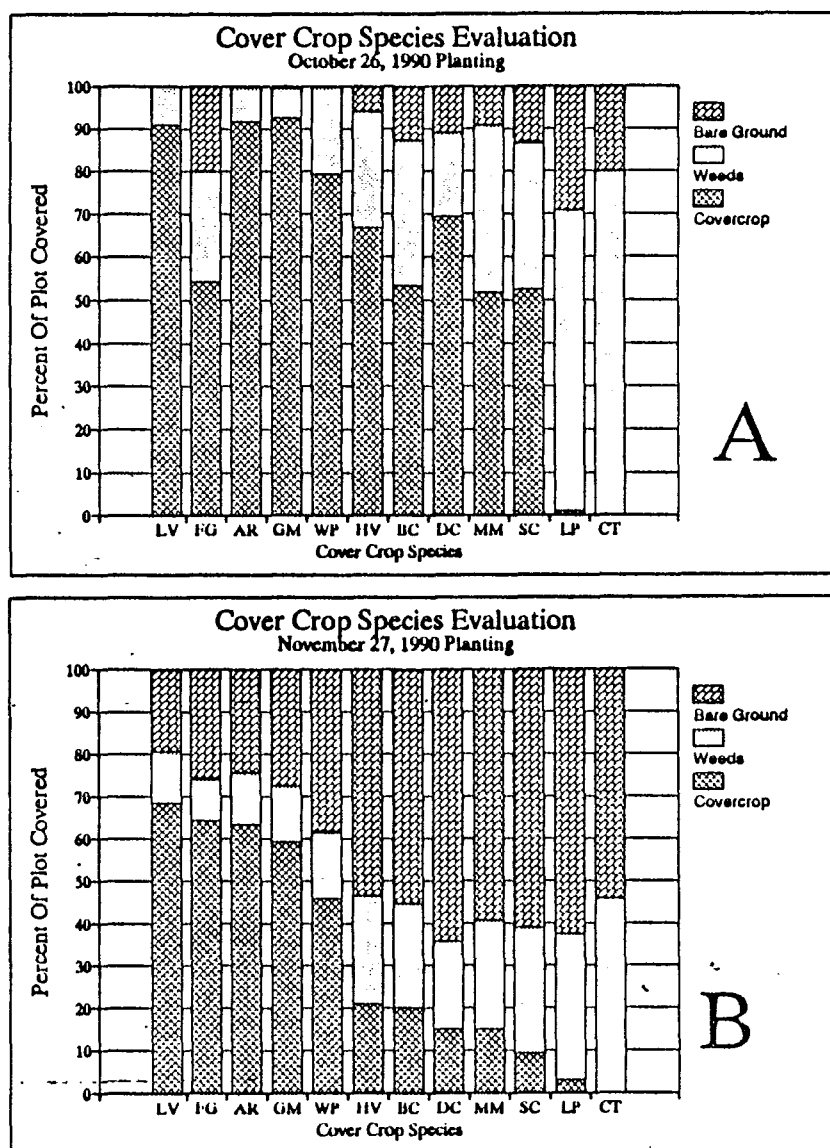


Figure 1. Proportion of plot covered in mid-February by the cover crop species, weeds, and bare ground for the October 26 planting (A) and the November 27 planting (B).