

IRRIGATING ALFALFA FOR PROFIT

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Alfalfa growers have been faced with increasing costs of production for several years

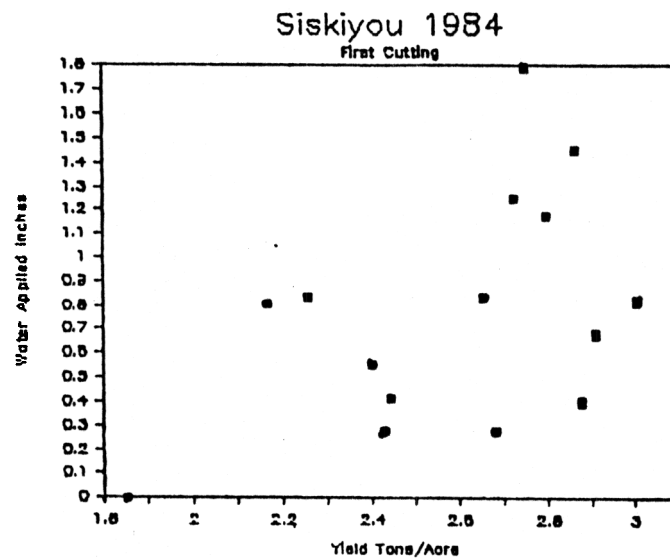
The costs of electrical energy have risen considerably in all alfalfa growing areas.

UC Davis Irrigation Specialist Blaine Hanson, and Farm Advisors Roger Benton, Siskiyou County, and Don Lancaster, Modoc County, conducted an irrigation trial to measure yield versus water applied.

Caught cans were placed every five feet perpendicular to wheel line travel. Two lines had 15 cans, the other line had 10 cans. Rainfall was also measured in an official rain gauge.

The first cuttings were taken in late May in Siskiyou and in early June in Modoc.

The Siskiyou data has more data points where the plots received less than one-inch of water.



The data from both areas suggest that the winter rainfall supplied enough soil moisture to make the yield potential for the first cutting. Growers don't jump to conclusions that the first cuttings do not need to be irrigated. Growers know that irrigation during the first cutting is more important to the third cutting in August than for the first. As the moisture use goes up during the summer, many growers discover that the crop becomes drought stressed when irrigation of the first crop is shorted.

Four to five inches of water were required to produce the highest yields for the second cutting. Second cutting yields were lower due to a boron deficiency. Boron was applied between the second and third cuttings. Third cutting yields were highest when five to six inches of water was applied. Six to seven inches of water was required for top yields during the fourth cutting.

Maximum yields were achieved when 18 to 20 inches of irrigation was applied during the April to October growing season. Measured rainfall of 3.67 inches occurred during the growing season.

The Modoc County data from Don Lancaster was not presented due to the large variability of the stand.

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