

More Food and Drink (Nitrogen and Water) Boost Flax Yields

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A little extra nitrogen and water on a crop of flax can increase gross returns as much as \$42 per acre. This is the conclusion drawn from an experiment conducted on The University of Arizona Experimental Farm in the Yuma Valley in 1962.

Similar experiments at the Mesa Branch Station conducted by D. D. Rubis and Rex Thompson over a two-year period showed that timely irrigation and nitrogen applications resulted in yields over 60 bushels per acre. In 1962 four extra irrigations in May and June and 40 pounds of nitrogen per acre resulted in an increase of over 17 bushels per acre.

Eight nitrogen and two irrigation treatments were imposed upon a field of New River flax planted Dec. 7, 1961. Nitrogen rates of 0, 75, 150 and 225 pounds per acre were applied in both single and split applications. The field was irrigated uniformly until April 27, when irrigation was terminated on half of the plots. The other half received four more irrigations during May and June, with the last one on June 21.

Based on \$3 Price

The \$42 figure is based on an average increase of 14 bushels per acre at an average price of \$3 per bushel. This is the current quotation to farmers at Yuma.

The increased yields resulted from a second and even a third blooming period brought on by the addition of nitrogen and moisture during the first two blooming periods. The fact that both nitrogen and moisture are necessary at this time is shown by the graph in Figure 1. This graph also shows that at a low level of nitrogen, the late irrigations were of lim-

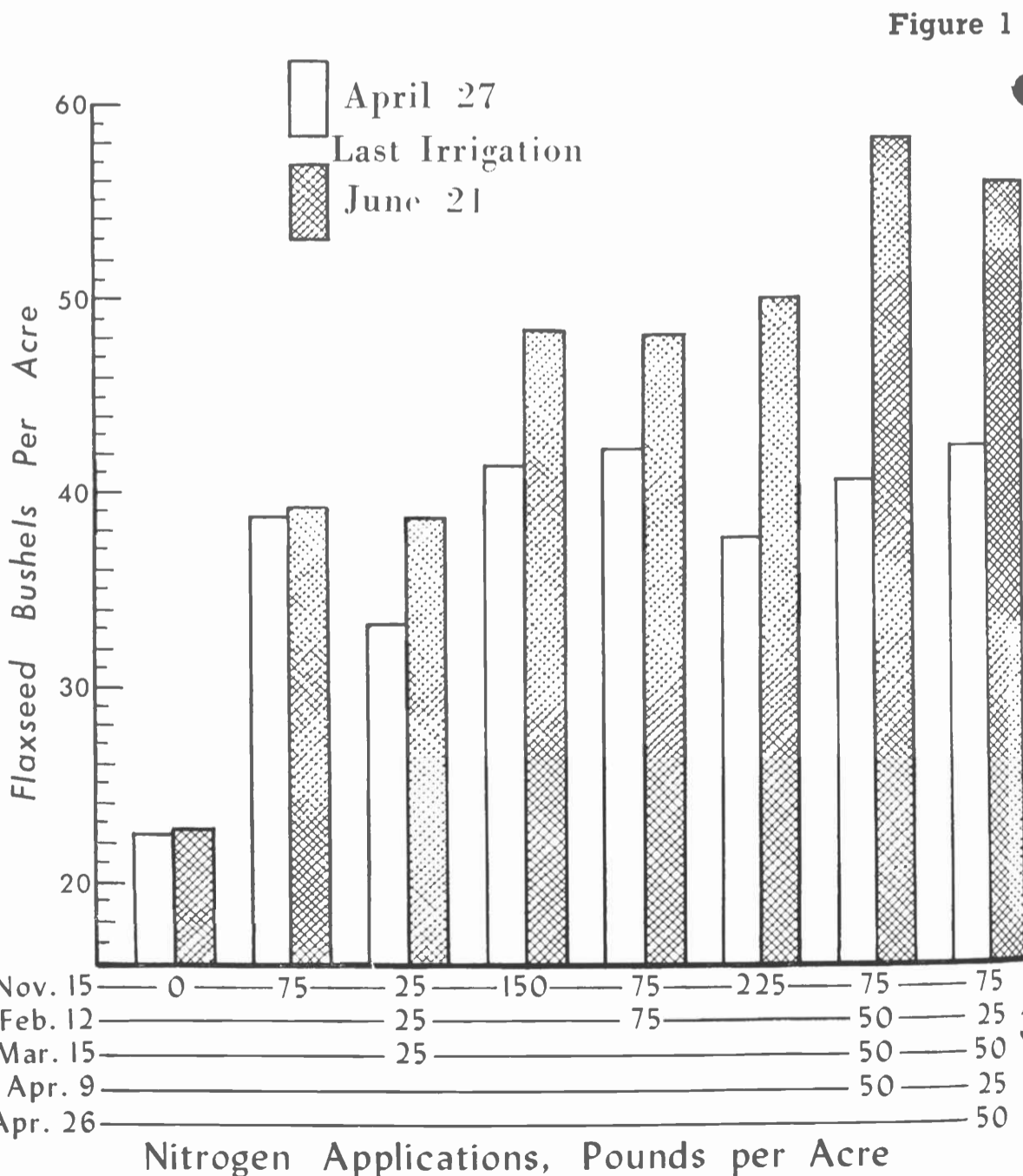
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ited benefit in increasing yields. On the other hand, high levels of nitrogen were ineffective when the irrigation was terminated early. It is also shown in Figure 1 that when a total of 225 pounds of nitrogen was applied, split applications properly timed were more effective than a single application.

A look at the table on page 13 will show that the nitrogen treatments had a small effect on per cent of oil in the seed, with a slight reduction at the high nitrogen levels. In spite of this slight reduction in per cent of oil, the highest yield of oil per acre was obtained at the highest nitrogen levels as shown in Figure 2. These results show that timely nitrogen

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applications and irrigations can be very effective in increasing yields of flax.

Repeated Bloom Periods

This characteristic of the Imperial and New River varieties to go into a second and even third bloom period has been bred into these varieties. Varieties grown in Arizona 10 to 15 years ago did not possess this characteristic and were managed like small grains. However, today growers using proper fertilizer and irrigation practices have an opportunity for greatly increased flax yields.

The principle involved in producing a second and third bloom period or, as is often the case, a continuous blooming period, is dependent on timely applications of nitrogen and maintenance of adequate soil moisture. By adding nitrogen at the time of full bloom, or near the end of a blooming period, new vegetative growth is initiated in the leaf axils. This new branching then produces a new blooming period. If adequate moisture is not maintained the flax plant will become "hot" and go into final maturity with no extra blooming. Feeling the flax plants to determine whether they are cool is a good method to determine the need for an irrigation.

MYSTERY PICTURE

The mystery picture on Page 9, a fence corner set of ranch listings, is on the Sunset Valley Road. It is just west of Bonita, which in turn is just beyond Fort Grant.

It is about 24 miles west of the turnoff of the Fort Grant road, where it leaves Highway 666, between Willcox and Safford.

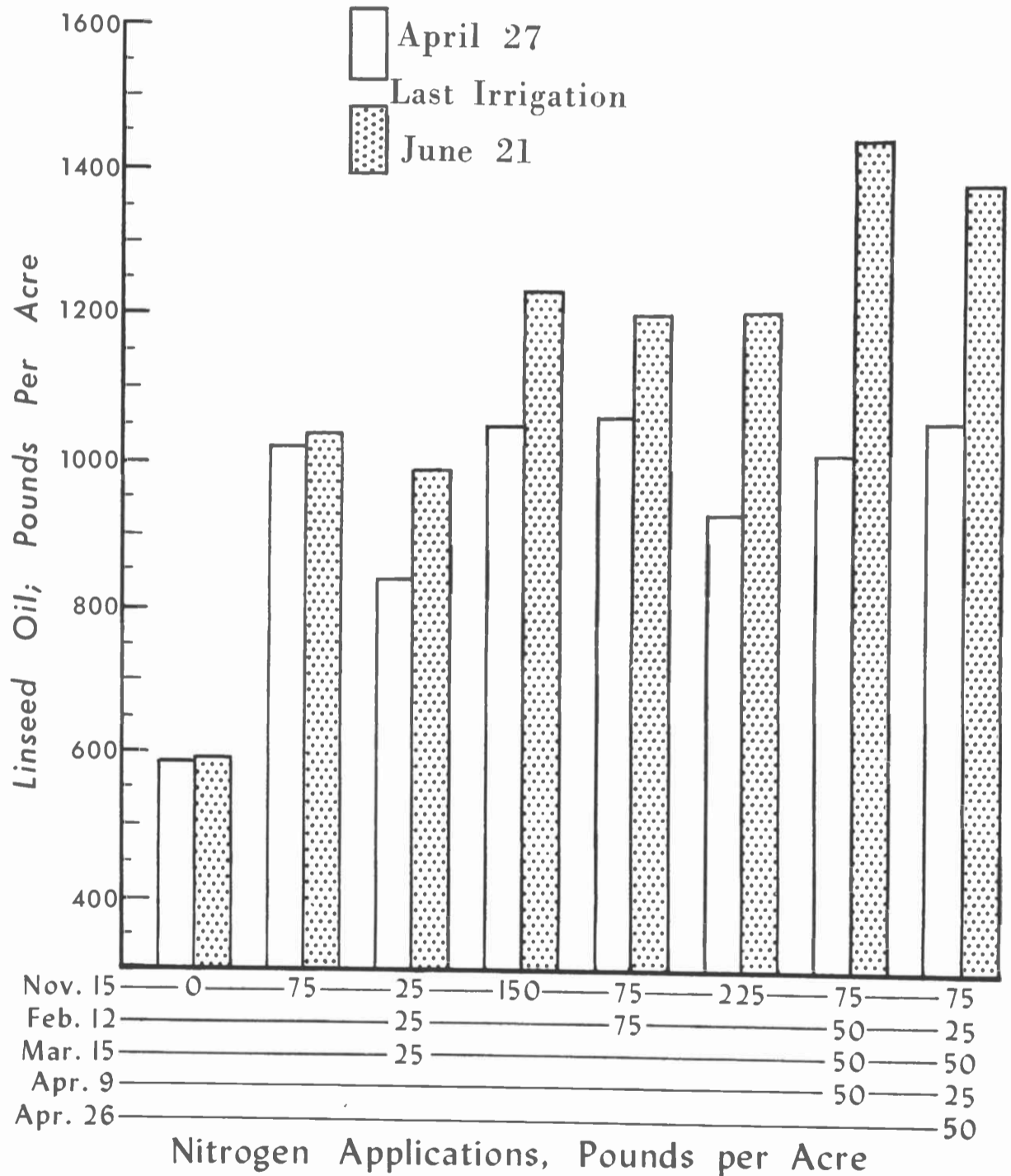
La alimentación artificial de becerras con leche entera no presenta mayores problemas, excepto lo elevado del costo de la leche. Se recomienda que la becerria pase 2 ó 3 días con la madre para que tenga acceso libre al calostro. Sin embargo en el caso de vacas muy cariñosas con sus crías, con sangre cebú o criolla, es preferible separar inmediatamente las crías o apenas han mamado la primera vez y continuando dando los calostros en balde.—TIERRA

The sex life of coyotes is under scrutiny by Don Balser, a Fish and Wildlife Service scientist in Denver. What he seeks is a chemosterilant which will prevent coyotes from having pups. The idea isn't as far-fetched as it sounds, because a coyote female comes into heat only once, perhaps twice a year, for 10-day periods. Balser's plan is to "bait" her during breeding season and prevent conception.

Per cent oil content of flax seed grown under different irrigation and nitrogen treatments. Yuma Valley Branch Station, 1961-62.

	Nitrogen treatments, pounds per acre									
	Nov. 15	0	75	25	150	75	225	75	75	
Feb. 12				25		75		50	25	
Mar. 15				25				50	50	
Apr. 9								50	25	
Apr. 26									50	
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Last Irrigation April 27		46.5	47.0	44.9	45.0	44.7	43.7	44.2	44.1	
Last Irrigation June 21		46.4	47.1	45.3	44.4	44.5	43.1	44.1	43.7	

Figure 2



Our esteemed friend on The Minneapolis Tribune, Will Jones, points out: "If a Midwest farmer sits on his porch in his undershirt he's a slob; if a Southwestern farmer sits out in his patio in Bermuda shorts it's called 'gracious living.'"

If University of Arizona Holsteins get that dreamy Hawaiian look, you can blame it on a new feeding experiment. Cargill, Inc., has donated 2500 pounds of coconut oil meal and 400 pounds of coconut oil to the Dairy Science Department. This will be used in feeding experiments to determine the nutritive value of coconut oil meal and oil for dairy cattle.