Five-year test of

Planting Dates
with five varieties of beans

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The best dates for planting bean varie-ties have been studied at Davis for five years. Five varieties of beans were planted at dates varying from early spring to late summer.
In 1954, the five varieties were planted four times, at monthly intervals from April 20 through July 20. Four replica-tions were made of each variety at each planting date. Yields increased from the first to the third planting, and declined in the last one.

In 1955,1956,1958, and 1959 the ex-periment was expanded to six replica-tions per planting, and the number of planting dates was expanded to eight, at two-week intervals from late April to late July. The yield data for the four-year period were combined into one statistical analysis and the major results of the four years, with the eight planting dates, are reported. The statistical analysis showed no significant differences between the six replications. Each replication consisted of 160 plots. The average yield of Repli-cation No. 1 was 1,670 pounds per acre; No. 2,1,674; No. 3, 1,696; No. 4,1,654; No. 5, 1,648; and No. 6, 1,716 pounds
per acre.

There were 192 plots of each variety. Differences were highly significant be-tween varieties. The average yield for California Red was 1,965 pounds per acre; Sutter Pink, 1,873; Pinto, 1,714; Red Kidney, 1,632; and Small White, 1,197 pounds per acye.

In each year there were 240 plots. The analysis showed highly significant dif-ferences between years, though not sig-nificant between 1955 and 1958. Average yield for 1955 was 2,035 pounds per acre; 1956, 1,673; 1958, 2,000; and for 1959, 996 pounds per acre.
The yield at each date of planting was based on 120 plots. Differences were highly significant between some planting dates. Planting No. I was significantly the lowest. The difference between plant-ings 2 and 8 was not significant nor were the differences between Plantings 4, 5, and 7. The average yield of Planting I was 1,085 pounds per acre; 2, 1,430; 3, 1,686; 4, 1,860; 5, 1,983; 6, 2,064; 7, 1,815; and Planting 8,1,486 pounds per
acre.

There were significant interactions be-tween dates and varieties; dates and years; and dates, varieties, and years. One of the chief contributors to these interactions was the yield of Small White. Its yields were relatively higher than the other varieties in the first plant-ings, and considerably lower in the last plantings.
Four varieties behaved similarly throughout the season, but Small White showed significant deviation. To obtain a model,