

THE EFFECT OF LYGUS CONTROL ON SEED CLEANING

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Since the beginning of the sugar beet seed industry in Arizona and New Mexico, it has been recognized that a direct correlation exists between the viability of field-run seed and the percentage of tare it contains. Figure 3 shows the average Lygus populations entering the beet seed fields in the Salt River Valley in April for the years 1939-45 during which there was no effective Lygus control and for the years of effective Lygus control (1946-47). The percentage tare for these two periods is also shown. From this chart it is apparent that had Lygus not been controlled the past two seasons, the average tare would have exceeded that of the 1939-45 period, whereas it was actually one-third less than for that period.

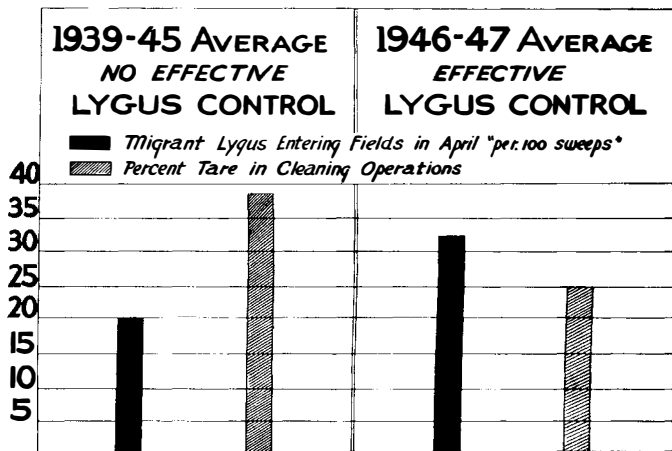


Figure 3.--Effect of lygus control on tare in field run seed.

In those years of low germination and accompanying high tare it has been necessary to reclean or blend large amounts of seed in order to bring the germination of the final product up to the acceptable point. For example, in 1945, a year of high Lygus populations, high tare and low germinations, over 1½ million pounds of seed were blended. Some blending was required every season prior to 1946, but during the past 2 years, owing to the improvement in germination resulting largely from the Lygus-control program, no blending has been necessary.

The improvement in germinations has been accompanied by an increase in weight per cubic foot of seed. In those years of high *Lygus* populations and no control, seed averaged 12 to 14 pounds per cubic foot. With *Lygus* control this has been increased to 15 to 18 pounds per cubic foot.

The control of *Lygus* has reduced the tare of field-run seed by one-third. It has also been responsible for the elimination of blending and an increase in weight of the seed, which has increased cleaning capacity by approximately 50 percent.

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