

GRIFFIN, G. D. USDA, Agricultural Research Service, Forage and Range Research, Utah State University, Logan, UT 84322-6300. - Efficacy of single and combined applications of aldicarb and ethoprop to control *Heterodera schachtii*.

Split applications of aldicarb at preplant and ethoprop at post plant were effective in controlling *Heterodera schachtii*, as observed by nematode invasion of sugarbeet, *Beta vulgaris* L., seedlings and sugarbeet yields. Because the greatest inhibition of sugarbeet growth by *H. schachtii* occurs at soil temperatures over 20 C, the initial nematode population density (Pi) and soil temperature at planting affects nematicidal control of *H. schachtii*. A split application of 2.24 + 2.24 kg a.i./ha of aldicarb plus ethoprop was as effective as a preplant treatment of 4.48 kg a.i./ha of aldicarb in controlling Pi of 4.2-6.8 eggs/cm³ at a soil planting temperature of 8 C, but not at a soil planting temperature over 12 C. A split application treatment of 3.36 + 3.36 kg a.i./ha of aldicarb and ethoprop was as effective as a preplant treatment of 5.6 kg a.i./ha of aldicarb in controlling *H. schachtii* Pi of 8.4-11.4 eggs/cm³ at a soil planting temperature of 8 C, but not at a soil planting temperature over 12 C. Phytotoxicity from post plant treatments of ethoprop was minimal, whereas preplant treatments of 4.48 and 5.60 kg a.i./ha of ethoprop were highly phytotoxic and adversely affected sugarbeet yields.

DUFFUS, JAMES E.*, and R. T. LEWELLEN. USDA-ARS, 1636 E. Alisal St., Salinas, CA 93905. - Planting and harvesting alterations for the control of lettuce infectious yellows virus.

Lettuce infectious yellows virus (LIYV) has become a major disease inducing agent of sugarbeet in the southwest desert region of U.S.A. Losses as high as 20-30% have been reported. Monitoring of whitefly (*Bemisia tabaci*) populations and LIYV incidence indicate that they peak in August through October. The effects of altering planting and harvesting dates on whitefly incidence, LIYV incidence and sugarbeet yield were studied in an effort to design an agronomic control for the disease. Young plants at each observation had significantly higher whitefly numbers. There was a significant decrease in whitefly populations as the season progressed. This resulted in progressively less infection at the later planting dates. The cultivar US H11 had a higher infection rate than HH 41. The percentage of infection on US H11 was 45% at the late August planting date and was 12% at the late October planting date. Gross sugar yields under these relatively light infection rates were greater with increased growing periods indicating that delayed planting under relatively light LIYV infection pressure is of no value.