Beech, Paul M.*, Tarrol A. Lunde, Tom D. Knudsen, Agriculture Department, Minn-Dak Farmers Cooperative, 7525 Red River Road, Wahpeton, ND 58075. <u>Sugarbeet</u> root maggot survey, 1991-1992.

In 1991 and 1992, Minn-Dak Farmers Cooperative conducted a survey to evaluate the extent and scope of the sugarbeet root maggot (Tetanops myopaeformis Röder) in the southern end of the Red River Valley. Objectives of the survey were to determine sugarbeet root maggot (SBRM) adult fly emergence and activity. Secondly, to identify times of peak populations (largest number of adults trapped/day). Fields were selected based on past history of SBRM pressure. Three sticky stake traps/field located approximately 100 to 200 yards apart on the edge of the field. Adult fly counts were recorded once/week and 2 to 3 days/week in 1991 and 1992 respectively, starting May 1st to July 8th. Adult fly emergence and activity began to increase towards the end of May, 1991 in all locations. Time period for peak fly population occurred on June 3, 1991 followed by a second peak on June 17, 1991. Cool, windy conditions slowed the buildup of fly activity in 1992. Early flushes of adult files emerged starting June 8. Emergence continued through June 14 followed by a single population peak during the period of June 15 through June 17, 1992. Fly activity gradually decreased by June 18 although, small numbers continued to emerge from old beet fields through early July. This survey does not necessarily indicate where maggots are located. Several fields were observed having maggot pressure where there was little or no fly activity based on sticky stake traps.

maintained in the greenhouse at 20-10 C. Routs were removed from the rail and astaved weakly for BNTVT at weeks 3 through 7. In another experiment, soil storties (100 ml soil - 1.6 ml water) produced with the same dilution sectes as above ware batted with 4 week old sugarized accillings. The seciling baits were produced in sterilized and. These alurries were maintained at 27 C in an incubator. The routs of the baits were astayed after 1 and 2 weeks. One work long soluting experiment: were also created in greenhouse conditions, and with or without the addition of two rates of fangicides (Hymesteed), PC NB, and MeralaxyD to the slutters.

pour with andluted sail at 3 weeks, and down to a dilution of 1.25 by week 7. BNSVV was detected in the two plants in the soil durdles after 1 week, even at 6.100 dilution. Higher ELIS 6 values were planned after 2 works. The ELISA values for the wedlings in the slurnes were less that for the wealings grown in pore for 7 weeks. The sectings in the slurnes were less averafity rue, due to infection by wedling disease fung. The majority of replicates folded to five over the two weeks using Negative controls using seedings in water or activities had a high averaging the weak tests. The percentage of positives was significantly lower in balactive soil all survived it either level, and it battings done under the growning lower in balactive with fungiordes a cities tests. The percentage of positives was significantly lower in balactive to hispiteles.