

Section III.

Root-Feeding Maggots, Soil Arthropods and Other Problems

EXCLUDING CABBAGE FLIES FROM RUTABAGA PLOTS USING FINE MESH
NYLON EXCLUSION FENCES.

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Fences were constructed from 1 mm nylon black window screening material, and erected around 5 by 5 m square plots containing transplanted rutabagas. At the top of the fences, the mesh formed an 8" overhang, angled downward at 30-35 degrees from the vertical axis of the fence, pointing away from the inside of the enclosures. The fence and overhang were designed to intercept low-flying cabbage flies, and to collect the intercepted flies as they moved upwards. Enclosure fences were 0, 30, 60 and 90 cm in height.

As measured by catches on yellow sticky traps, numbers of cabbage flies entering the enclosures dropped linearly as enclosure height increased. Females captured inside the 90 cm high enclosures were 80% lower than the number captured in the open check plot enclosures. Mean root maggot damage to rutabagas in the open check plots was in the severe range, with only slight damage, on average, occurring in the 90 cm enclosures. Only 1% of rutabagas sampled in the check plots were considered marketable, as opposed to 54% in the 90 cm enclosures. These data indicate that the efficacy of the fence structures would further improve with an increase in height above 90 cm, and with larger crop plantings. This will be tested in 1992. The fences are also likely to work in excluding other pests with similar low flying behaviours, such as onion flies, seed corn flies, turnip flies, carrot rust flies, flea beetles, Colorado potato beetles, and click beetles.