

# **OCCURENCE OF VIRUSES IN GARLIC GROWN IN ISRAEL AND METHODS FOR THEIR DETECTION IN ORDER TO PREPARE VIRUS-FREE PROPAGATION MATERIAL**

**R. Salomon<sup>1</sup> and M. Koch<sup>2</sup>**

**O**nion Yellow Dwarf Virus (OYDV) is known to reduce yields by 25 – 30%. This virus was found present in all local garlic material tested.

Purified potyvirus from garlic leaves was used to produce antibodies for an ELISA test to detect OYDV. Tests show that the ELISA results decrease linearly with the log<sub>10</sub> of the antibody concentration. Good detection was obtained when the antibody was used at a dilution of 1:10,000. Young top leaves of garlic plants contain lower levels of OYDV than more mature leaves.

OYDV was detectable in leaves of originally OYDV-free plants two weeks after aphid inoculation. The test will be used to detect OYDV in plants grown from excised meristems, in order to produce OYDV-free planting material. The procedure will be adopted to analyse garlic cloves before planting.

<sup>1</sup> Dept. of Virology, ARO, Bet Dagan.

<sup>2</sup> Dept. of Vegetable Crops, ARO, Bet Dagan.

# **INVESTIGATIONS ON WATER USE IN CARNATIONS IRRIGATED BY MINI-DIPPING AND DRIPPING AT REDUCED RATES**

**Esther Mor<sup>1</sup>, E. Koenig<sup>2</sup> and Y. Mor<sup>3</sup>**

**A** field trial was conducted on carnations to determine the contributions to water use of mini-dripping through pulsators.

This was done in winter 1991/92 under unusually severe winter conditions. We did not find this new technology to offer any advantages compared to conventional drip irrigation as far as water economy was concerned, nor was the horizontal distribution of water improved. However, concentrations of salts in the top 20 cm of soil, was lowered by mini-dripping compared with irrigation by conventional dripping. The moisture content in soil under mini-irrigation was low during the entire growing period. This finding points to a possible advantage of mini-dripping in irrigation with saline water.

The moisture conditions of soil irrigated by mini-dripping markedly boosted development of moss on the soil surface, and this indicates the moisture level in the upper soil layer.

These effects of mini-dripping are further studied in the 1992/93 season.

<sup>1</sup> Field Service, Raanana, Extension Service.

<sup>2</sup> Dept. of Irrigation Technology, Field Service, Extension Service.

<sup>3</sup> Chief Instructor for Carnation and Gypsophila, Extension Service.