

P.29 - Influence of micro-fertilizer 'Lile' on the energy of onion culture germination, skills' breeding and endurance towards diseases

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The problem of global pollution of the environment is a dilemma for civilisation and especially in agriculture, through the intensive use of chemical pesticides. The result is not only the destruction of pests but also a negative impact on human beings and useful flora and fauna. Our main focus is the use of the ecologically safe micro-fertiliser "Lile", consisting of natural compounds and thus not leaving residues in the soil or harvested crops and which is completely safe for human beings as well as for flora and fauna. This fertiliser improves the structure of the soil and increases the qualitative and quantitative parameters of crop, which is fostered by living processes in plant organisms and activating protection reactions towards infections. Optimal concentration and exposition duration has been selected according to planting and germination standards for onion. A 3% "Lile" solution was applied to onion seeds for 30 minutes, and then seeds were placed under controlled temperature conditions (24°C). After 24-48 hours, germination of "Lile" treated seeds exceeded by 30-50% those of control seeds (untreated). Shoot and root length and diameter were 2 or 3 times greater than control plants. Diseases symptoms were revealed intensively in control variants (25-35%), whilst in treated plants they didn't exceed 5-8%. Disease intensity reached about 20-25% in control plants, and in the treated plants didn't exceed 2.5-4%. Content of Ascorbic acid -vitamin C- in treated plant shoots was 319.1 ± 2.5 and in control plant shoots it didn't exceed 307.4 ± 5.1 . Peroxide activity in treated plant shoots was 9.75 ± 0.5 , in non-produced plant shoots it didn't exceed 7.1 ± 0.01 . Activation of catalyst in treated seeds was 207 ± 5.9 Oml and in control seeds it exceeded 197.7 ± 7.1 Oml/4minute.