

In the vegetable garden during September and October

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Seedling Production. During this period, seedlings of tomatoes and cucumbers for early production and lettuce and salads for autumn-winter production are grown in glass greenhouses. They most commonly develop "**damping-off**". Control measures include: removal of diseased plants along with adjacent healthy ones; "burning" the spots by watering with a 2% solution of copper sulfate or ammonium nitrate; watering the remaining plants with a solution of 0.15% Proplant 722 SL + 0.1% Topsin M or with 0.3% Bordeaux mixture + 0.1% Topsin M, at a rate of 3-4 L/sq.m.

On **cucumbers**, an attack by **downy mildew** and **powdery mildew** is possible. Against the first, 0.15% Verita WG; 0.04% Equation Pro; 0.25% Ridomil Gold MZ 68 WG; 0.25% Cursite M DF; 0.3% Aliette Flash; 0.25% Galben 8 M 65; 0.12% Infinito SC; 0.075% Quadris 25 SC; 0.25% Mancozeb

80 WP are applied. Against **powdery mildew**, treatment is applied preventively with 0.5% Timorex 66 EC (500 ml/decare), and after appearance – with 1% (1 L/decare), as well as with 0.025% Topaz 100 EC; 0.02% Bayfidan 250 EC; 0.02% Vivando; 0.05% Domark 10 EC; 0.05% Collis; 0.1-0.15% Sistan Ecosome EV; 0.075% Quadris 25 SC (Amistar 25 SC), 0.02% Flint Max 75 WG; 0.02% Shavit 25 EC.

For **tomatoes**, there is a danger of attack by **late blight**, against which treatment is applied with: 0.25% Acrobat R; 0.2% Acrobat Plus WG; 0.15% Verita WG; 200 g/decare Vinker WG; 0.04% Equation Pro; 0.25% Ridomil Gold; 0.25% Cursite M DF; 0.2% Dithane M-45; 0.2% Dithane DG; 0.25% Copper Oxychloride 50 WP; 500 g/decare Pergado M 27 WG; 0.2% Polyram DF. **Black leaf spot (Alternaria)** is also a problem. For control, 0.2% Dithane M-45, 0.2% Dithane DG, 0.04% Score, 0.25% Cursite M DF and 0.25% Ridomil Gold are used. The appearance of **powdery mildew** is also possible, against which the products listed for cucumbers are applied.

Seedlings of **lettuce and salad** can be attacked by **downy mildew and anthracnose**. Against the first, spraying is done with 0.25% Ridomil Gold, 0.3% Cursite M DF, 0.15% Verita WG, 0.2% Dithane M-45, 0.2% Dithane DG. Against the second, a double application of 0.2% Dithane M-45 or 0.2% Dithane DG is used, with the second treatment being particularly important - before transplanting.

Among pests, the most commonly observed are **greenhouse whitefly, aphids, thrips, leafminer flies, caterpillars**, and sometimes **mites (spider mites, tomato russet mite)**. If possible, it is good to hang colored sticky traps in the seedling areas to detect the appearance and catch the flying forms of most of the insects mentioned above: yellow – for greenhouse whitefly, aphids, sciarid flies; sky blue – for thrips; orange-yellow – for leafminer flies. Do not omit treatment 3-4 days before moving out with 1 g/plant Vidate 10 G, strictly adhering to the developed technology to avoid phytotoxicity. Against the **greenhouse whitefly**, spraying is done with 0.1% BI-58, 0.15% Actellic, 0.02% Mospilan, 0.03% Actara, 0.08% Confidor Energy, 0.02% Fury, 0.12% Lyrosekt, 0.12% Brave 1.8 EC, 0.05% Decis 2.5 EC, 0.03% Bomican-Alphacypermethrin. For control of **aphids**, spraying is done with 0.0125% Mospilan, 0.007% Actara, 0.05% Picador, 0.05% Kohinor 200 SL, 0.06% Confidor Energy, 0.05% Warrant, 0.06% Biskaya, 0.05% (cotton aphid) – 0.075% (peach aphid) Danadim Progress, 0.02% Nexide, 0.015% Fury, 0.1% Lyrosekt, 0.1% Brave. The insecticides listed so far are to a certain extent effective against **thrips** as well, so in most cases separate treatments are not necessary. For control of **leafminer flies**, spraying is done with 0.12% Lyrosekt 2 EC, 0.02% Trigard, 0.05% Picador, 0.03% Talstar, 0.03% Vaztak New 100 EC. Against **caterpillars**, 0.15% Actellic, 0.025% Talstar, 0.05% Decis, 0.025% Supersect Mega, 0.025% Vaztak New 100 EC are effective. Upon detection of **mites**, spraying is done with 0.1% BI-58, 0.1% Lyrosekt, 0.1% Brave, 0.06% Nissorun, 0.1% Omite, 0.075% Sanmite, 0.03% Talstar, 0.3% Neem Azal, 0.25% Bionim Plus.

Greenhouse Production. In glass greenhouses, the cultivation of early-season tomatoes and cucumbers continues, which are subject to attack by the same complex of diseases and pests mentioned for seedlings. Control is carried out with the already recommended products, observing

the pre-harvest intervals, which is particularly important for crops still bearing fruit and in plastic greenhouses.

In September, conditions are suitable for disinfecting vacant areas in glass greenhouses. The following are used: Basamid Granulate, (45-50 days before transplanting) at 40-50 kg/decare for light soils and 60-70 kg/decare for heavy soils; Nemasol 510 at 80-100 L/decare. Only against **root-knot nematodes**, one week before transplanting, the soil is treated with 8-10 kg/decare Vidate 10 G or 6-8 kg/decare Mocap 10G.

Field Production. Usually during this month, more rain falls, there is morning dew, and air humidity increases. Favorable conditions are created for the appearance of **late blight** on tomatoes and **downy mildew** on cabbage (head, cauliflower, broccoli). In the presence of favorable conditions or upon appearance, the products listed for seedlings are applied. On parsley, celery, and okra, there is a danger of **powdery mildew**, against which 0.025% Topaz 100 EC; 0.02% Bayfidan 250 EC; 0.02% Vivando; 0.05% Domark 10 EC; 0.05% Collis; 0.02% Shavit 25 EC are effective. Against **caterpillars** on cabbage crops, in addition to those listed for seedlings, 80 ml/decare Confidor Energy, 2.5 kg/decare Bactocin, 100 g/decare Dipel 2X are also applied. During this period, a high-density multiplication of **aphids** is observed on cabbage, late tomatoes, okra, against which the products listed for seedlings are effective.

Due to intensive harvests in the field and greenhouses, carefully select plant protection products. If treatment is necessary, apply products with a short pre-harvest interval. Furthermore, when spraying cabbage crops, do not forget to add a sticker to the working solutions at a concentration of 0.05%. All requirements for the application, transport, and storage of toxic substances must be observed.