

In the vegetable garden in July

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The development of late blight in tomatoes and potatoes is year-round. Conditions for its harmful activity are particularly favourable in plastic-covered structures, where abundant dew is formed. The incubation period, depending on the conditions, is 3–10 days. The fungus develops under a specific combination of meteorological conditions – “critical periods”, which are:

- steady rainfall lasting two or more days;
- relative air humidity during the period above 75%;
- cloudiness above 8 oktas;
- average daily temperature – about 16°C (min 10–12°C; max 18–25°C).

Retention of water droplets for more than 4 hours on the surface of the plants is also a precondition for new infections.

In the presence of these periods, the crops are treated with: 0.25% Acrobat R; 0.2% Acrobat Plus WG; 0.15% Verita WG; 200 g/da Vincare WG; 0.04% Equation Pro; 0.25% Ridomil Gold; 0.25% Corsate M DF; 0.2% Dithane M-45; 0.2% Dithane DG; 0.25% Copper Oxychloride 50 WP; 500 g/da Pergado Copper 27 WG; 0.2% Polyram DF. Some of the listed plant protection products are effective against brown leaf spots and late blight rot in tomatoes. Against brown spots, treatment with 0.04% Score 250 EC is also effective, and against late blight rot – 0.15% Funguran OH and 0.15% Champion WP. The soil surface is also sprayed with them. Under favourable conditions and in the presence of bacterioses, 0.3% Champion; 0.3% Kocide; 0.3% Funguran OH are used, and for cucumbers – 0.15% of the same plant protection products. Against downy mildew (Cuban) in cucumbers, 0.15% Verita WG; 0.04% Equation Pro; 0.25% Ridomil Gold MZ 68 WG; 0.25% Corsate 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. When growing tomatoes, the crops must be monitored for the appearance and damage from cutworm caterpillars and tomato leaf miner. Against the caterpillars, treatment may be carried out with 0.05% Decis 2.5 EC; 0.025% Vaztak New 100 EC; 0.0125% Supersect Mega; 25 ml/da Avant 150 EC; 8–12 g/da Altacor WG; 20 ml/da Coragen 20 SC; 0.1% Dipel 2X; 150 g/da Affirm 095 SG. Against the tomato leaf miner, the following insecticides may be used – 25 ml/da Avant 150 EC; 8–12 g/da Altacor WG; 150 g/da Affirm 095 SG; 0.05% Decis 2.5 EC; 0.08% Confidor Energy OD; 0.1% Alverde 240 SC; 0.05% Picador 20 SL; 0.02% Mospilan 20 SP; 75 ml/da Voliam Targo 063 SC; 40 ml/da Ampligo 150 ZC; 10–25 ml/da Cyneis 480 SC; 0.3% NeemAzal T/S.

In pepper, during this period the first diseased plants from pepper blight (*Phytophthora capsici*) appear, especially in parts of the crops where water is retained. The first diseased plants are “burned” together with the neighbouring healthy ones with a 2% solution of ammonium nitrate or copper sulfate. After that, the crop is sprayed with 0.25% Ridomil Gold, also wetting the root collar. Against bacterial leaf spots, the plant protection products indicated for tomatoes are applied.

Upon the appearance of downy mildew in brassicas and onions, spraying is carried out with plant protection products indicated for downy mildew in tomatoes, excluding those containing copper. On onions, no products containing metalaxyl (Ridomil Gold) are applied, because it delays ripening.

In cucurbits, carrots, parsley, celery, an attack of leaf blight can be expected. Upon its appearance, treatment is carried out with 0.2% Dithane M-45 or 0.2% Dithane DG. In watermelons and melons, the first anthracnose spots appear in July. After the spots are established, watermelons are sprayed with 1% Bordeaux mixture or 1% Copper Oxychloride, and melons with 0.2% Dithane M-45; 0.2% Dithane DG.

There is still a risk of infection with stolbur in tomatoes, peppers, eggplants, etc., caused by a phytoplasma transmitted by the leafhopper *Hyalesthes obsoletus*. Control is carried out on the basis of warnings from the forecasting services, by performing several sprayings at 10–12-day intervals with 25 g/da Mospilan 20 SP; 125 ml/da Eforia 045 ZC. Against tomato, pepper and

eggplant bronze, control is directed against the vector – the tobacco thrips, with the insecticides 0.02% Mospilan 20 SP; 0.02% Vaztak New 100 EC; 0.015% Fury 10 EC; 10–25 ml/da Cyneis 480 SC.

The harmful activity of the Colorado potato beetle continues, especially in eggplant, for the control of which the following are applied: 10 ml/da Vaztak New 100 EC; 30 ml/da Nexide 015 CS; 10 ml/da Fury 10 EC; 50 ml/da Nurelle Dursban; 20 ml/da Biscaya 240 OD; 6 g/da Actara 25 WG; 6 g/da Mospilan 20 SP; 10 ml/da Calypso 480 SC; 20 ml/da Alverde 240 SC; 6 ml/da Coragen 20 SC and 4–6 g/da Dantop 50 WG.

During this month, conditions are usually favourable for the multiplication and strong harmful activity of spider mites on pepper, eggplant, tomatoes, cucurbits, leek, etc. Against them, spraying is carried out with 0.1% Ortus 5 SC; 0.06% Nissorun 5 EC; 0.075% Sanmite 20 WP; 40 ml/da Floramite 240 SC; 60 ml/da Vertimec 018 EC; 0.3% NeemAzal T/S.

Towards the end of the month, as soon as the pods of beans begin to yellow, spraying against the bean weevil must be carried out: three times at 7-day intervals with 0.025% Vaztak New 100 EC; 50 ml/da Decis 2.5 EC.

During this month, hail often occurs. Therefore, after 2–3 days an assessment of the damage is made and the crops are top-dressed with 10–20 kg/da ammonium nitrate, and after about a week they are sprayed with 0.15% Champion. A 0.05% adjuvant is added to the solutions and, if necessary, a foliar fertilizer. Do not spray with Bordeaux mixture!