

# Plant protection activities in the orchard in May

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The expected precipitation at the end of May may lead to fruit cracking, especially in cherries and sour cherries, as well as to an increase in fungal and bacterial infections in fruit trees. Due also to the warm weather, preventive fungicide sprays will definitely be necessary at that time. Insecticide treatments are also imperative, as higher temperatures favour the development of insects.

For perennial plantations affected by hail, treatments with copper-containing fungicides are recommended to reduce the risk of secondary infections by pathogens.

## **In fruit nurseries**

Control of diseases and pests on fruit trees in nurseries and seedbeds continues. Against apple and pear scab, 2-3 sprays are carried out with one of the following copper products – 1% Bordeaux mixture, Funguran OH 50 WP - 150-250 g/ha, Champion WP - 0.3%, Copper Key – 180-300 g/ha; against powdery mildew on apple and peach – 3-4 sprays at 8-10 day intervals with a sulphur-based product - Sulphur WG 600 g/ha, Solfo 80 WG – 750 g/ha or one of the products - Systhane 20 EW – 0.03%, Luna Experience – 50-75 ml/ha, Flint Max 75 WG – 0.02%; against shot-hole disease (cylindrosporiosis) with Syllit 544 SC – 125 ml/ha; against aphids and leaf-feeding insects with an insecticide based on deltamethrin - Dekka EC – 30-50 ml/ha, Decis 100 EC - 7.5-12.5 ml/ha, Delmur – 50 ml/ha, Meteor – 0.06-0.09% or another pyrethroid product.

### **In fruit orchards**

Trapping bands soaked with pyrethroid insecticide – Decis 100 EC - 7.5-12.5 ml/ha, Sumicidin 5 EC (0.02%), Aficar 100 EC (15 ml/ha), Efcymerin 10 EC (15 ml/ha) are placed on the trunks of apple, pear, plum and walnut trees against codling moths. Corrugated cardboard strips 15-20 cm wide encircle the trunks below the first scaffold branching, after cleaning the old bark from the entire trunk. The band is tied only at the upper edge.

Non-poisonous trapping bands made of corrugated cardboard are placed in order to monitor the flight of the second generation of codling moths.

Wormy fruits damaged by cherry fruit fly are collected and placed under frame isolators to trace its development during the following year. A total of 500-1000 fruits are needed – 50-100 fruits under each of 5-10 cages.

From mid-month, every 8-10 days, apple orchards are inspected to determine the population density of leaf-mining moths, mites and aphids.

Plum orchards are inspected for sharka disease (plum pox virus). Infected trees, if not of tolerant cultivars, are marked for uprooting in autumn.

Fruit trees suffering from chlorosis are fertilised with ferrous sulphate (green vitriol) - 150 g/10 l water.

Fruits containing false caterpillars of the plum sawfly are collected and placed under frame isolators to trace its development in the spring of the following year. Between 500 and 1000 small fruits are taken and distributed equally under five isolators.



*Caterpillar of the fall webworm (white American butterfly)*

Plantations attacked by the fall webworm are treated with Dipel 2X (0.1%) or another product based on *Bacillus thuringiensis*.

Stone fruit plantations attacked by the small shot-hole borer (black buprestid) are treated several times at 8-10 day intervals with one of the following pyrethroid products - Decis 100 EC (7.5-12.5 ml/ha), Sumicidin 5 EC (0.02%), Aficar 100 EC (15 ml/ha), Efcymerin 10 EC (15 ml/ha). Spraying is aimed at the adult insects when they emerge from their shelters.

The third post-bloom spraying of pear orchards is carried out 10-12 days after the previous one against scab, brown rot, white leaf spots, rust, pear sawfly and pear psylla respectively with one of the products – Curatio (200 ml/ha), Chorus 50 WG (50 g/ha), Captan 80 WG (150-180 g/ha) and with one of the following pyrethroid products - Decis 100 EC (7.5-12.5 ml/ha), Sumicidin 5 EC (0.02%), Aficar 100 EC (15 ml/ha), Efcymerin 10 EC (15 ml/ha).



*The San Jose scale - *Quadraspidiotus perniciosus* Comst attacks about 200 plant species – it causes severe damage to apple, pear, plum, peach and apricot. It overwinters as a first instar larva on the bark of twigs and the trunk, completing its development during apple flowering. <https://www.plant-protection.com/article/1282>*

Apple trees are sprayed with one of the products – Curatio (200 ml/ha), Chorus 50 WG (50 g/ha), Captan 80 WG (150-180 g/ha) against scab; with a sulphur-based product - Sulphur WG 600 g/ha, Solfo 80 WG – 750 g/ha or one of the products - Systhane 20 EW – 0.03%, Luna Experience – 50-75 ml/ha, Flint Max 75 WG – 0.02% against powdery mildew; with one of the following pyrethroid products - Decis 100 EC (7.5-12.5 ml/ha), Sumicidin 5 EC (0.02%), Aficar 100 EC (15 ml/ha), Efcymerin 10 EC (15 ml/ha) against the first generation of codling moth, woolly aphid, leaf-mining moths and aphids; with one of the products Decis 100 EC (7.5-12.5 ml/ha), Sumicidin 5 EC (0.02%), Aficar 100 EC (15 ml/ha), Efcymerin 10 EC (15 ml/ha), Harpun (30 ml/ha) against San Jose scale and with one of the acaricides - Apollo 50 SC (40 ml/ha), Nissorun 5 EC (0.05%), Naturalis (100-150 ml/ha) against mites.

Pear orchards are sprayed with one of the products – Curatio (200 ml/ha), Chorus 50 WG (50 g/ha), Captan 80 WG (150-180 g/ha) against scab and with one of the following pyrethroid products - Decis 100 EC (7.5-12.5 ml/ha), Sumicidin 5 EC (0.02%), Aficar 100 EC (15 ml/ha), Efcymerin 10 EC (15 ml/ha) and others against codling moth, leaf-mining moths and pear sawfly, pear bug and pear psylla.

The fourth post-bloom spraying of apricot orchards is carried out with one of the products - Carpovirusine (100 ml/ha), Madex Top (10 ml/ha), Dipel DF (50-150 g/ha), Sineis 480 SC (20-37.5 ml/ha), Delegate 250 WG (30 g/ha), Avant 150 EC (33.3 ml/ha), Deka EC (30 ml/ha), Decline 2.5 EC (30 ml/ha), Lamdex Extra (60-100 g/ha) against oriental fruit moth and Anarsia.

Apricot orchards are sprayed with one of the products – Curatio (200 ml/ha), Chorus 50 WG (50 g/ha), Captan 80 WG (150-180 g/ha) against shot-hole disease and with one of the following pyrethroid products - Decis 100 EC (7.5-12.5 ml/ha), Sumicidin 5 EC (0.02%), Aficar 100 EC (15 ml/ha), Efcymerin 10 EC (15 ml/ha) against oriental fruit moth, Anarsia, aphids, leafrollers and with one of the acaricides - Apollo 50 SC (40 ml/ha), Nissorun 5 EC (0.05%), Naturalis (100-150 ml/ha) against mites.



*The mottled umber (small winter moth) causes serious damage to fruit trees. In addition to all fruit species, it also attacks many forest and annual plants.*

The third post-bloom spraying of cherry orchards is carried out with Syllit 544 SC – 125 ml/ha against shot-hole disease (cylindrosporiosis), with one of the products – Curatio (200 ml/ha), Chorus 50 WG (50 g/ha), Captan 80 WG (150-180 g/ha) against shot-hole disease and brown rot and with one of the following pyrethroid insecticides - Decis 100 EC (7.5-12.5 ml/ha), Sumicidin 5 EC (0.02%), Aficar 100 EC (15 ml/ha), Efcymerin 10 EC (15 ml/ha) against cherry fruit fly and Mediterranean fruit fly, weevils, aphids and scale insects, leaf-feeding caterpillars.

It is carried out 10-12 days after the capture of the first cherry fruit flies. Early-ripening cultivars are not sprayed against cherry fruit fly.

About 12-15 days after the third, a fourth post-bloom spraying of cherry and sour cherry orchards is carried out with Syllit 544 SC – 125 ml/ha against shot-hole disease (cylindrosporiosis), with Curatio - 200 ml/ha, Chorus 50 WG - 50 g/ha, Captan 80 WG - 150-180 g/ha against brown rot and shot-hole disease and with one of the following pyrethroid products - Decis 100 EC (7.5-12.5 ml/ha), Sumicidin 5 EC (0.02%), Aficar 100 EC (15 ml/ha), Efcymerin 10 EC (15 ml/ha) against cherry fruit fly, Mediterranean fruit fly, spotted wing drosophila, cherry sawfly, aphids and other pests.

The second post-bloom spraying of walnut trees is carried out with a copper product - 1% Bordeaux mixture, Funguran OH 50 WP - 150-250 g/ha, Champion WP - 0.3%, Copper Key – 180-300 g/ha against anthracnose and bacterial blight and with one of the products – Closer 120 SC – 20 ml/ha, Tepeki 14 g/ha, Mospilan 20 SG – 25 g/ha against aphids.



*Anthracnose on walnut*

Walnut trees are treated with a copper product - 1% Bordeaux mixture, Funguran OH 50 WP - 150-250 g/ha, Champion WP - 0.3%, Copper Key – 180-300 g/ha against anthracnose and bacterial blight and with one of the products - Carpovirusine (100 ml/ha), Madex Top (10 ml/ha), Dipel DF (50-150 g/ha), Sineis 480 SC (20-37.5

ml/ha), Delegate 250 WG (30 g/ha), Avant 150 EC (33.3 ml/ha), Deka EC (30 ml/ha), Decline 2.5 EC (30 ml/ha), Lamdex Extra (60-100 g/ha) against codling moths and other fruit-boring caterpillars.

The fourth post-bloom spraying of almond trees is carried out 10-14 days after the third with one of the products – Curatio - 200 ml/ha, Chorus 50 WG - 50 g/ha, Captan 80 WG - 150-180 g/ha against shot-hole disease, scab and cercospora leaf spot and with one of the following pyrethroid products - Decis 100 EC (7.5-12.5 ml/ha), Sumicidin 5 EC (0.02%), Aficar 100 EC (15 ml/ha), Efcymerin 10 EC (15 ml/ha) against almond sawfly and almond seed wasp.

The second spraying after flowering of hazelnut orchards is carried out with a sulphur-based product - Sulphur WG 600 g/ha, Solfo 80 WG – 750 g/ha or one of the products - Systhane 20 EW – 0.03%, Luna Experience – 50-75 ml/ha, Flint Max 75 WG – 0.02% against powdery mildew and with Coragen 20 SC (18-30 ml/ha), but contact insecticides from all groups can also be used - Decis 100 EC (12.25 ml/ha), Sumi Alpha 5 EC (0.03%), Karate Zeon 5 SC (15 ml/ha), Lamdex Extra (100-120 g/ha) against hazelnut weevil.

## **In strawberry plantations**



*White leaf spots on strawberry*

At the end of flowering, a spray is applied with Signum (75 g/ha) against powdery mildew, white and red leaf spots, grey mould (*Botrytis*) and with one of the products - Valmec (60-96 ml/ha), Apollo 50 SC (40 ml/ha), Nissorun 5 EC (0.05%), Naturalis (100-150 ml/ha) against strawberry mite.

After harvesting the fruits, strawberry plantations are sprayed 1-2 times at 7-8 day intervals with one of the acaricides - Valmec (60-96 ml/ha), Apollo 50 SC (40 ml/ha), Nissorun 5 EC (0.05%), Naturalis (100-150 ml/ha) against mites – strawberry mite, spider mite, Atlantic mite.

In case of infestation by slugs, Mesurool Schneckenkorn is broadcast at 300 g/ha.

Strawberry plants attacked by viral diseases and root weevils are uprooted.

## In raspberry plantations



After flowering, raspberry canes are sprayed with Signum (100 g/ha) for control of didymella, coniothyrium, rust, anthracnose and leaf spots and with Decis 100 EC (7.5-12.5 ml/ha) or another pyrethroid insecticide against raspberry moth, aphids and leaf-feeding caterpillars, and with Bermectin (15-100 ml/ha) against raspberry mite and common spider mite.

Raspberry plants attacked by viral diseases are uprooted.

## In blackcurrant plantations



### *Anthracnose on blackcurrant*

The second post-bloom spraying of blackcurrant plantations is carried out 10-14 days after the first with a copper product - 1% Bordeaux mixture, Funguran OH 50 WP (150-250 g/ha), Champion WP (0.3%), Copper Key (180-300 g/ha) or Syllit 544 SC (125 ml/ha) for control of anthracnose and leaf spots, with Topaz 100 EC (0.05%) against American powdery mildew and with Mospilan 20 SG (25 g/ha) against aphids, Bermectin (15-100 ml/ha) against mites.

For control of powdery mildew on blackcurrant, 10-14 days after the second post-bloom spraying, one more spraying is carried out with Topaz 100 EC (0.05%) or a sulphur-based product - Sulphur WG 600 g/ha, Solfo 80 WG – 750 g/ha.

Blackcurrant plantations are treated with Syllit 544 SC (125 ml/ha) against leaf spots, with Topaz 100 EC (0.05%) or a sulphur-based product - Sulphur WG 600 g/ha, Solfo 80 WG – 750 g/ha against powdery mildew and with ... against currant clearwing moth. In case of severe mite infestation, Bermectin (15-100 ml/ha) is added. Spraying against clearwing moth is effective when about 50% of the adults have emerged.

Weeds in blackcurrant plantations are sprayed with Stomp Aqua 250-300 ml/ha.

