

Plant protection activities in the orchard in April

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In April, more suitable conditions for carrying out plant protection treatments will occur at the beginning and at the end of the first ten-day period, during the second half of the second, and in the middle of the third ten-day period.

Many of the pests on fruit crops – aphids, scale insects, etc. have 2-3 or more generations, and infections by some diseases – apple and pear scab, powdery mildew, shot-hole of stone fruits, brown rot, etc., depending on rainfall, are repeated many times during the growing season. In order to prevent strong development of diseases and pests, it is necessary to reduce to the possible minimum the populations of the first pest generation and to limit the primary infections by diseases. This can be achieved through timely and well-organized control in April, when their development begins. The preservation of fruit crops during the season depends to the greatest extent

on the effectiveness of plant protection activities in April. For pests – plum sawfly and others, which develop one generation per year, and diseases – red leaf spots and others without a secondary development cycle, the plant protection measures in April completely solve the issue of protecting fruit crops from them.

In fruit nurseries

Removal of plants with unaccepted buds and budded plants attacked by powdery mildew during the period of bud burst in apple.

If it has not yet been done, spray with a copper-containing product – 1% Bordeaux mixture, Funguran OH 50 WP -150-250 g/da, Champion WP - 0.3%, Copper Key – 180-300 g/da the apple, pear and quince rootstocks in the mother plantations and the apple and pear budded plants in the nurseries against scab, grey leaf spot, brown leaf spot, etc. Upon appearance of leaf-feeding caterpillars, aphids, woolly apple aphid, pear psylla, weevils, apple blossom weevil, add to the fungicide an insecticide with active ingredient deltamethrin – Deka EC – 30-50 ml/da, Decis 100 EC - 7.5 -12.5 ml/da, Delmur – 50 ml/da, Meteor – 0.06 -0.09%.



Powdery mildew on apple

Upon appearance of powdery mildew on apple and peach budded plants in the nurseries, spray with a product with active ingredient sulphur – Sulphur WG 600 g/da, Solfo 80 WG – 750 g/da or one of the products –

Systhane 20 EW – 0.03%, Luna Experience – 50-75 ml/da, Flint Max 75 WG – 0.02%.



Cylindrosporiosis on cherry leaves

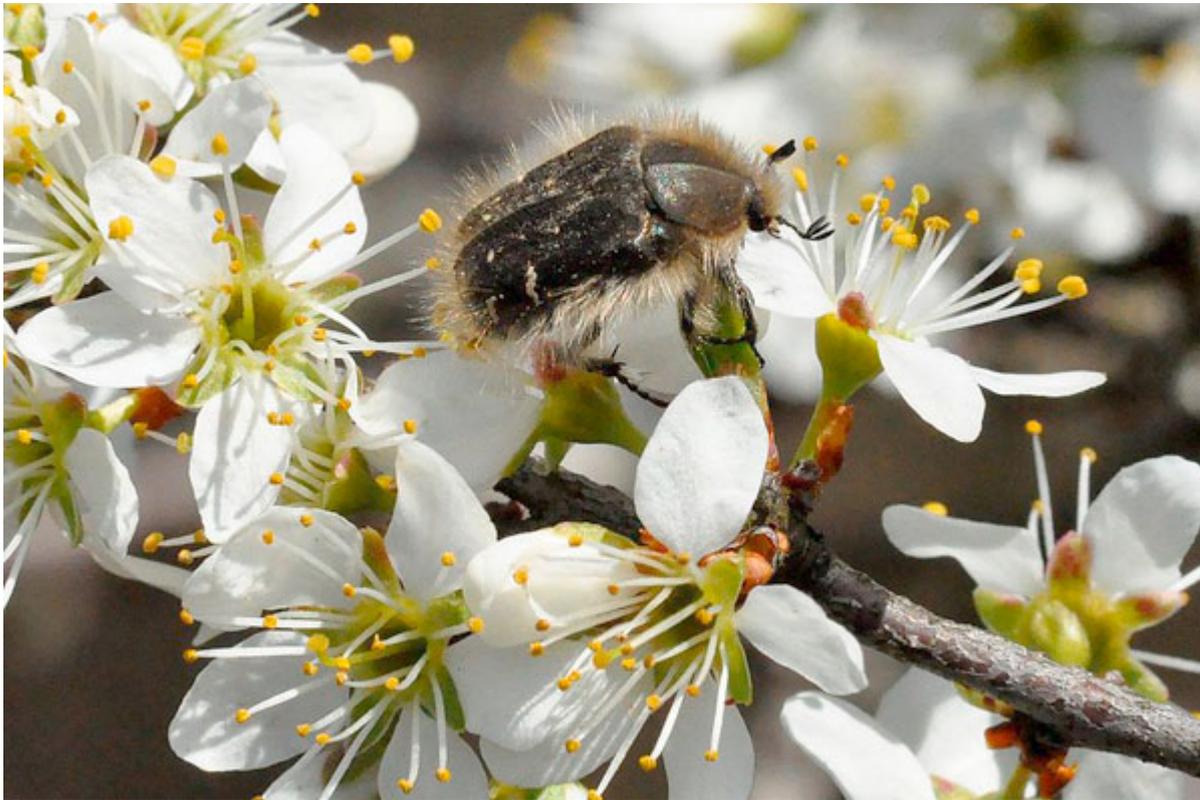
At the appearance of the first symptoms of cylindrosporiosis on the leaves of sour cherry and cherry budded plants in the nurseries and cherry and mahaleb rootstocks in the seedbed, spray with Syllit 544 SC – 125 ml/da or Karamat 2.5 EW – 300 ml/da. When pest density is above the economic injury level (EIL), add to the solution an insecticide with active ingredient deltamethrin – Deka EC – 30-50 ml/da, Decis 100 EC - 7.5 -12.5 ml/da, Delmur – 50 ml/da, Meteor – 0.06 -0.09% against leaf-feeding insects, aphids, stone fruit sawfly, weevils.

In fruit orchards

Shoots infected by powdery mildew, which were missed during the winter pruning of apple trees, are cut out. Buds infected late in the previous year, which outwardly almost do not differ from healthy ones and remain unnoticed during winter pruning, are also detected.

Apple trees, marked during the previous year, whose fruits suffer from corky spots, are fertilized with borax (soil application - 2-3 kg/da or foliar - 0.25-0.5%) or another fertilizer rich in boron.

The hairy and the stink beetle attack the blossoms of fruit trees entirely



Hairy beetle

For control of hairy and stink beetles during flowering, blue sticky pheromone traps are placed, blue canisters with the top cut off filled with water and vinegar, placed on the branches, and blue basins with water and vinegar in the inter-rows. If there is still a risk of crop failure, you may spray in the evening with a broad-spectrum contact insecticide – Sumicidin 5 EC (0.02%), Afikar 100 EC (15 ml/da), Efcimetrin 10 EC (15 ml/da) or others.

For the control of bark beetles, the trunks and thick branches of fruit trees are treated with a broad-spectrum contact insecticide with a longer residual effect – Decis 100 EC (7.5 – 12.5 ml/da), Karate Zeon 5 CS (15 ml/da), Sumi Alpha 5 EC (0.02%) or others. Chemical control can be carried out only against adult females emerging from the trunks. Two treatments are carried out against each generation. Usually the second generation coincides with harvest, therefore measures are mainly focused on the first generation – especially for the small white apple bark beetle.



Plum fruit moth

Around the second ten-day period of the month, species-specific pheromone traps are placed for each species, at a distance of 120-160 m from each other, to determine the beginning, the peak and the end of the flight of the codling moth, plum fruit moth and oriental fruit moth.

It is time for blossom spraying of apricot against early brown rot



Early brown rot on apricot

If flowering of apricot orchards has not finished, treat against early brown rot with one of the products – Score 250 EC (0.02-0.03%), Systhane 20 EW (0.025-0.03%), Difcor 250 EC (20 ml/da), Chorus 50 WG (45-50 ml/da).

The first post-blossom spraying of apricots is carried out immediately after petal fall with a fungicide based on captan – Captan 80 WG (150-180 g/da), Merpan 80 WG (225 g/da), Scab 80 WG (180-210 g/da) against shot-hole, brown rot, and with an insecticide with active ingredient deltamethrin – Deka EC – 30-50 ml/da, Decis 100 EC - 7.5 -12.5 ml/da, Delmur – 50 ml/da, Meteor – 0.06 - 0.09% against weevils, peach twig borer, leaf-feeding caterpillars, flatheaded borer.

The second post-blossom spraying of apricots is done 10-12 days after the first one with the same chemical products against the same diseases and pests.

The third post-blossom spraying of apricot trees is carried out 10-12 days after the second one with a fungicide based on captan – Captan 80 WG (150-180 g/da), Merpan 80 WG (225 g/da), Scab 80 WG (180-210 g/da) against shot-hole, brown rot, gnomonina and with an insecticide with active ingredient deltamethrin – Deka EC – 30-50 ml/da, Decis 100 EC - 7.5 -12.5 ml/da, Delmur – 50 ml/da, Meteor – 0.06 - 0.09% against Anarsia and oriental fruit moth and other insects.

Immediately after petal fall, peaches are sprayed with Captan 80 WG (150-180 g/da) or Merpan 80 WG (225 g/da) against shot-hole and brown rot, and upon appearance of powdery mildew with one of the products – Sulphur WG (600 g/da), Solfo 80 WG (750 g/da), Difcor 250 SC (20 ml/da), and with an insecticide with active ingredient deltamethrin – Deka EC – 30-50 ml/da, Decis 100 EC - 7.5 -12.5 ml/da, Delmur – 50 ml/da, Meteor – 0.06 - 0.09% against peach twig borer, aphids, leaf-feeding caterpillars, stone fruit sawfly.

The second post-blossom spraying of peaches is carried out 10-12 days after the first with the same chemical products, against the same diseases and pests, as well as against oriental fruit moth. Spraying is also done against peach scab. There are no registered products, but treatment with Syllit 544 SC (165 ml/da) is possible. In regions where peach orchards are damaged by European red mite, add one of the following products – Valmec (60-96 ml/da), Apache EW (100 ml/da), Naturalis (100-150 ml/da), Danitron 5 SC (100-200 ml/da).



Almond sawfly

Immediately after petal fall, almond orchards are sprayed with a copper-containing fungicide – 1% Bordeaux mixture, Funguran OH 50 WP -150-250 g/da, Champion WP - 0.3%, Copper Key – 180-300 g/da against shot-hole, scab, cercospora leaf spot, orange leaf spots and with an insecticide with active ingredient deltamethrin – Deka EC – 30-50 ml/da, Decis 100 EC - 7.5 -12.5 ml/da, Delmur – 50 ml/da, Meteor – 0.06 - 0.09% against almond sawfly, leaf-feeding caterpillars, cherry sawfly, stone fruit sawfly, aphids and scale insects.

The second post-blossom spraying of almond orchards is carried out 10-12 days after the first with the same chemical products against the same diseases and pests, as well as against scab.

Blossom spraying of plum trees against red leaf spots, brown rot and shot-hole. There are no registered products against red leaf spots, but if you find it, since it is already banned, you may use Dithane M 45 (0.2%). Against shot-hole and brown rot you may use Captan 80 WG (150-180 g/da), Merpan 80 WG (225 g/da), or Scab 80 WG (180-210 g/da), and only against brown rot – Score 250 EC (0.02-0.03%), Systhane 20 EW (0.025-0.03%) or Difcor 250 EC (20 ml/da).

Inspect 500 flowers (50 from each of 10 plum trees) to determine the extent of damage by larvae of plum sawflies. When infestation is higher than 5%, spray with an insecticide with active ingredient deltamethrin – Deka EC – 30-50 ml/da, Decis 100 EC - 7.5 -12.5 ml/da, Delmur – 50 ml/da, Meteor – 0.06 -0.09%. In the presence of red leaf spots, add Dithane M 45 (0.2%) to the solution.

The second post-blossom spraying of plum trees is carried out with Captan 80 WG (150-180 g/da), Merpan 80 WG (225 g/da) or Scab 80 WG (180-210 g/da) against red leaf spots, shot-hole, brown rot and with an insecticide with active ingredient deltamethrin – Deka EC – 30-50 ml/da, Decis 100 EC - 7.5 -12.5 ml/da, Delmur – 50 ml/da, Meteor – 0.06 -0.09% against aphids, leaf-feeding caterpillars, caterpillars of plum fruit moth.

The third post-blossom spraying of plum orchards is carried out 8-15 days after the second with Sumi Alpha 5 EC (0.02%), Decis 100 EC (7.5-12.5 ml/da) or another product against plum fruit moth.

Blossom spraying of apple and pear orchards is carried out when flowering is prolonged and the weather is favourable for the development of scab. Apple varieties highly susceptible to powdery mildew are obligatorily sprayed during flowering, since the development of powdery mildew is not influenced by meteorological conditions. You may treat with one of the following products – Chorus 50 WG - 30-50 g/da (against scab), Score 250 EC – 0.015-0.02% (scab and powdery mildew), Sulphur WG – 600 g/da (powdery mildew). Usually, during apple flowering, most of the eggs of European red mite hatch. Therefore, add Naturalis (100-150 ml/da) to the solution.

At the beginning of flowering and during full bloom, quince trees are sprayed against fruitlet drop. There are no registered products, but Score 250 EC (0.03%) may be used. Spraying during full bloom is also against brown rot and brown leaf spot. It is carried out with fungicides based on captan – Captan 80 WG (150-180 g/da), Merpan 80 WG (225 g/da), Scab 80 WG (180-210 g/da).



Larva of pear fruit sawfly

The first post-blossom spraying in pear orchards is carried out immediately after petal fall with fungicides based on captan – Captan 80 WG (150-180 g/da), Merpan 80 WG (225 g/da), Scab 80 WG (180-210 g/da) for control of scab, brown rot, grey and brown leaf spots, and with an insecticide with active ingredient deltamethrin – Dekka EC – 30-50 ml/da, Decis 100 EC - 7.5 -12.5 ml/da, Delmur – 50 ml/da, Meteor – 0.06 - 0.09% against leaf-feeding caterpillars, pear fruit sawfly, pear psylla, aphids, scale insects.



Immediately after petal fall (first post-blossom), apple trees are treated with a fungicide based on captan – Captan 80 WG (150-180 g/da), Merpan 80 WG (225 g/da) or Scab 80 WG (180-210 g/da) against scab, brown rot, with Sulphur WG (600 g/da) against powdery mildew and with a broad-spectrum pyrethroid insecticide such as Decis 100 EC (7.5 -12.5 ml/da) against apple fruit sawfly, aphids, leaf-feeding caterpillars, leaf-mining moths, codling moth, woolly apple aphid.

The second post-blossom spraying is carried out with the same products, upon a warning from the forecast and warning station of BFSA, 8-15 days after the establishment of the beginning of the flight of the moths of the first generation of codling moth. Besides against it, the treatment is also aimed at leaf-feeding caterpillars, leaf-mining moths, San Jose scale, scab, brown rot.

The second post-blossom spraying of pear trees is carried out 10-12 days after the first with a fungicide based on captan – Captan 80 WG (150-180 g/da), Merpan 80 WG (225 g/da), Scab 80 WG (180-210 g/da) or Chorus 50 WG (0.05%) against scab, brown rot, white leaf spot, rust, and with a broad-spectrum pyrethroid insecticide such as Decis 100 EC (7.5-12 ml/da) or Sumi Alpha 5 EC (0.02%) against pear fruit sawfly and others.

Towards the end of flowering, quince orchards are sprayed with Score 250 EC (0.03%) against fruitlet drop and with a fungicide based on captan – Captan 80 WG (150-180 g/da), Merpan 80 WG (225 g/da), Scab 80 WG (180-210 g/da) against brown leaf spots and other diseases.

The development of codling moth and plum fruit moth is monitored on the material collected during the previous year and kept in hanging cages in the orchards. Observations are also made on the development of cherry fruit fly on material left to overwinter in the soil under isolation frames.

In the crowns of trees in cherry orchards, yellow boards are hung to determine the beginning of the flight of cherry fruit fly and Mediterranean fruit fly and hand-made traps – a plastic bottle with a 4-6 millimetre diameter opening made in the upper part and bait at the bottom – apple vinegar and red wine in a ratio of 2:3 and 1-2 spoons of sugar or molasses. The boards and bottles are hung at different heights on the eastern, southern and western side of the trees.

Post-blossom spraying of cherry and sour cherry orchards is carried out immediately after petal fall with Syllit 544 SC (125 ml/da) or Karamat 2.5 EW (300 ml/da) against cylindrosporiosis, Captan 80 WG (150-180 g/da), Merpan 80 WG (225 g/da) or Scab 80 WG (180-210 g/da) against shot-hole and brown rot, and with an insecticide with active ingredient deltamethrin – Deka EC – 30-50 ml/da, Decis 100 EC - 7.5 -12.5 ml/da, Delmur – 50 ml/da, Meteor – 0.06 - 0.09% against weevils, aphids and scale insects, leafrollers, winter moths, cherry sawfly, stone fruit sawfly. The risk of cylindrosporiosis arises with the appearance of the first leaves and continues almost throughout the entire vegetation period. Therefore, the protection of cherries from this disease depends to the greatest extent on the first 2-3 treatments.



Almond seed wasp

The flight of almond seed wasp is monitored initially every other day, and after the emergence of the first wasps – every day. Observations are carried out in the morning. At the same time, observations are made for apple fruit sawfly and plum sawflies.

The third post-blossom spraying of almond orchards is carried out 12-14 days after the second with a copper-containing fungicide – 1% Bordeaux mixture, Funguran OH 50 WP -150-250 g/da, Champion WP - 0.3%, Copper Key – 180-300 g/da against shot-hole, scab, cercospora leaf spot and with an insecticide with active ingredient deltamethrin – Deka EC – 30-50 ml/da, Decis 100 EC - 7.5 -12.5 ml/da, Delmur – 50 ml/da, Meteor – 0.06 - 0.09% against almond sawfly, almond seed wasp. The spraying coincides with the beginning of hatching of almond seed wasp.

Hazelnut orchards are sprayed immediately after petal fall with products with active ingredient sulphur – Sulphur WG (500 g/da), Thiovit Jet 80 WG (500 g/da) for the control of powdery mildew.

The second post-blossom spraying of hazelnut is carried out with a product with active ingredient sulphur – Sulphur WG (500 g/da), Thiovit Jet 80 WG (500 g/da) against powdery mildew and with Coragen 20 SC (18-30 ml/da) against hazelnut weevil.

The first post-blossom spraying of walnut trees is carried out at the appearance of aphids and spots of anthracnose or bacterial blight with a copper product against the diseases and with Closer 120 EC (20 ml/da) against aphids.

The first mapping of weeds in the orchards is carried out.

When soil herbicides have not been applied by the end of March or, despite their application, there are weeds, spray with foliar herbicides – when weed height is 20-30 cm. Sprayers with protective devices are used for spraying.

In strawberry plantations

Strawberry plantations are inspected for strawberry mite. Before flowering, strawberries are sprayed against it with Valmec (60-96 ml/da).

At the beginning of growth, strawberry plants are treated with 1% Bordeaux mixture against white and purple-brown leaf spots, with Sulphur WG (500 g/da), Thiovit Jet 80 WG (500 g/da) against powdery mildew and with Meteor (0.06 -0.09%) against strawberry stem weevil and strawberry blossom weevil, Decis 100 EC (7.5 -12.5 ml/da) against aphids, Bermectin (15-100 ml/da) against mites.

At the beginning of flowering, strawberry plants are sprayed with Signum (75 g/da) against grey mould, white and purple-brown leaf spots, powdery mildew and with Bermectin (15-100 ml/da) against strawberry mite.

During flowering, strawberry plantations are sprayed with Signum (75 g/da) against grey mould, white leaf spots, red leaf spots and with Sulphur WG (500 g/da) or Thiovit Jet 80 WG (500 g/da) against powdery mildew and with one of the products – Sumicidin 5 EC (0.02%), Afikar 100 EC (15 ml/da), Efcimetrin 10 EC (15 ml/da) against hairy beetle.

Strawberry plantations are covered with straw, polyethylene sheeting to protect against late spring frosts, which cause the disease “black eye”.

In raspberry plantations

On raspberry bushes, 5-10 cages are placed in connection with observations on the development of raspberry gall midge.

When the shoots reach a height of 30-40 cm, raspberries are treated with Signum (100 g/da) for control of didymella, coniothyrium, rust, anthracnose, leaf spots and with Decis 100 EC (7.5-12.5 ml/da) against raspberry moth, aphids, leaf-feeding caterpillars, and Bermectin (15-100 ml/da) against raspberry mite and two-spotted spider mite.

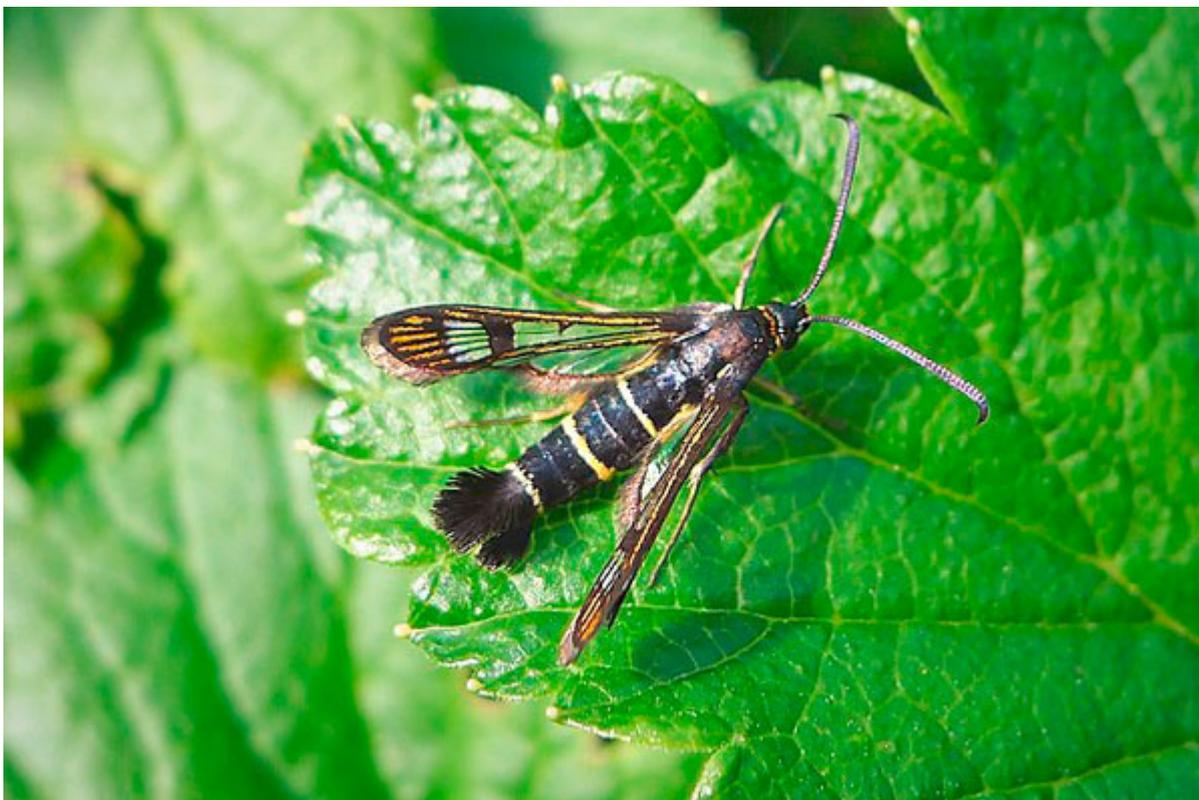
The flight of raspberry gall midge is monitored.

Immediately before flowering, raspberry and blackberry plantations are sprayed with Signum (100 g/da) against rust, coniothyrium, didymella, anthracnose, leaf spots and with Decis 100 EC (7.5 -12.5 ml/da) against raspberry gall midge, raspberry beetle and others.

Raspberry semi-shrubs heavily infested by leaf spots are blossom-sprayed with Signum (100 g/da).

In blackcurrant plantations

Blackcurrant plantations are treated before bud burst of fruit buds with a copper product – 1% Bordeaux mixture, Funguran OH 50 WP (150-250 g/da), Champion WP (0.3%), Copper Key (180-300 g/da) or Syllit 544 SC (125 ml/da) for control of anthracnose and leaf spots, with Topaz 100 EC (0.05%) against American powdery mildew and with Mospilan 20 SG (25 g/da) against aphids, Bermectin (15-100 ml/da) against mites.



Blackcurrant clearwing moth

The first post-blossom spraying of blackcurrant bushes is carried out immediately after petal fall with Sulphur WG (500 g/da) against powdery mildew, with Syllit 544 SC (125 ml/da) against anthracnose and leaf spots, and with one of the products – Decis 100 EC (7.5 – 12.5 ml/da), Karate Zeon 5 CS (15 ml/da), Sumi Alpha 5 EC (0.02%), Afikar 100 EC (15 ml/da), Efcimetrin 10 EC (15 ml/da) against clearwing moth and bordered straw moth. Spraying must coincide with the flight of the first clearwing moth butterflies.