

**TECHNICAL UPDATE • CARROT • 2022** 

# syngenta

Switch®

Maximum individual dose: 0.8 kg/ha

Maximum number of applications: 3

Maximum individual dose: 1.0 l/ha

Maximum number of applications: 2

Aquatic Buffer Zone Distance (metres): 5

Latest time of application: 14 days before harvest

Latest time of application: 7 days before harvest

**AmistarTop**<sup>®</sup>

MAPP No.: 15129

MAPP No.: 18050 Approved use: Carrot

Approved use: Carrot

## CARROT PORTFOLIO UPDATE 2022

#### **CULTURAL CONTROL**

Avoid fields with historic pest, weed and disease issues.

Healthy strong growing crops are better able to compete with weeds and have a lower susceptibility to diseases and pests. Promote quick establishment and encourage strong growth by providing optimum growing conditions. A fine firm seedbed is essential for small seeded crops such as carrots. Tailor fertiliser applications and consider the use of starter fertiliser to promote even emergence.

Choose a variety with tolerance/resistance to pests and diseases.

#### FOLIAR DISEASE CONTROL

Foliar diseases cause loss of yield through green leaf area reduction and reduce the use of plant energy for yield creation. Good foliar disease control is also important to reduce the incidence of disease appearing on roots.

#### **CONTROL STRATEGY**

During early canopy development, *Sclerotinia spp.* is the main foliar disease issue. Apply SWITCH<sup>®</sup> as the crop canopy closes over.

Continue fungicide sprays of mixed modes of action at 14-21 day intervals.

With increasing temperatures and dense foliage, *Alternaria* and powdery mildew risk increases. Apply an SDHI in alternation with AMISTAR Top<sup>®</sup> for control of these diseases.



For late season disease control and for crops destined for storage under straw consider strengthening *Sclerotinia* control by using SWITCH. Additional fungicide treatments are recommended where crown rot risk is high.

#### DISEASE RESISTANCE MANAGEMENT STRATEGY

Syngenta products offer a robust disease control strategy giving growers the option of alternating fungicides with different modes of action and an essential tool for resistance management as recommended by FRAC.

Including SWITCH in your strategy further adds to resistance management by bringing in two further modes of action.

FRAC guidelines suggest no more than 2 applications of a Qol and SDHI containing product within a 5 spray programme.

#### **CAVITY SPOT CONTROL**

An integrated management strategy is essential for the control of cavity spot:

- Sites with previously known cavity spot issues should be avoided, testing is advised if unsure of field history
- A long rotation of five to seven years should be maintained between susceptible crops
- Control may be lower in soils with high organic matter and applications of organic matter to the field just before carrot production should be avoided
- · Avoid poorly drained or wet soils
- · Use varieties with tolerance/resistance where possible
- Schedule irrigation, to ensure availability of soil moisture during early growth and limit over wet soils especially through August. This may help to reduce disease incidence



MAPP No.: 18039 Approved use: Carrot Maximum individual dose: 1.0 l/ha Maximum number of applications: 3

**Latest time of application:** 14 days before harvest, 7 day minimum application interval. FRAC guidelines must be followed



MAPP No.: 12380 Approved use: Carrot Maximum individual dose: 1.3 l/ha Maximum total dose: 1.3 l/ha per crop Latest time of application: 6 weeks after drilling

#### Visit syngenta.co.uk/products/search/ crop-protection for Syngenta advice

Note: SL567A<sup>®</sup> should not be used where carrots have been grown on the same field within the previous eight years. SL567A is capable of reducing levels of several pathogens associated with cavity spot disorder of carrots e.g. *Pythium spp*.



#### **OPEN CANOPY:**

3D Nozzle (03, 035 or 04). Alternate the nozzles backwards and forwards along the boom. In compromised conditions the AMISTAR<sup>®</sup> air induction nozzle is recommended.

#### **FULL CANOPY:**

Syngenta vegetable nozzle (06 or 08) is best for later fungicide applications particularly when targeting *Sclerotinia* in the root crown. Avoid air inclusion or hollow cone nozzles.





### **INSECT CONTROL STRATEGIES**

Both MINECTO One (cyantraniliprole) and VOLIAM (chlorantraniliprole) belong to the diamide group (Group 28 – IRAC), offering fast acting control of fly and moth pests. Unlike chlorantraniliprole, cyantraniliprole not only provides excellent efficacy against *Lepidoptera* and fly species but also incidental control of a wider range of species including sucking pests. MINECTO One works through ingestion and is xylem mobile and translaminar, thus able to move through the plant for better control of pests. VOLIAM offers long lasting and stable efficacy early on in the programme for carrot fly control, however be mindful of diamide resistance management.



#### **MAPP No.:** 18649

Approved use: Carrot, parsnip, salsify, parsley root, horseradish, celeriac

**Pest:** Carrot fly (*Psila rosae*) **Product rate:** 0.185 kg/ha (75 gai/ha)

Maximum number of applications: 2

Growth stage: 19-49

Interval between application (days): 12-14

PHI (days): 7



MAPP No.: 19718 Approved use: Carrot Pest: Carrot fly (*Psila rosae*) Product rate: 0.175 kg/ha Maximum number of applications: 1 PHI (days): 21

MINECTO One has excellent efficacy against carrot fly, controlling the larvae, increasing both yield and quality. However, the incidental control of both peach-potato and willow-carrot aphid has also been observed in trials. A 2018 demonstration had a >99% reduction in viral symptoms due to the fast activity of MINECTO One.

#### **CARROT FLY CONTROL IN CARROTS (Warwick Crop Centre 2019)**



## CARROT FLY DAMAGE: TWO SPRAYS AT 28-DAY INTERVALS (starting at 10% of 2nd Generation [VCS])



#### EFFICACY OF TREATMENTS AGAINST APHIDS (12th June 2015): P ZWAARGDIJK







Inset image: Carrot fly yellow sticky trap (courtesy of the University of Warwick)

#### **CARROT FLY**

For HALLMARK Zeon applications made at the start of egg laying to the peak of activity, use the full label rate of 150 mls/ha. A reduced rate of 100 mls/ha can be used where the forecast or trap catches suggest pressure is low to moderate. Foliar insecticide applications should be made at 12-14 day intervals.

#### **PEST INFESTATION TIMINGS**



Highest risk: Reduced risk: Pest activity may be later in the North and Scotland



MAPP No.: 12629 Approved use: Carrots and parsnips Maximum individual dose: 150 ml/ha Maximum total dose: 450 ml/ha Latest time of application: 14 days before harvest

#### **CARROT APHIDS AND VIRUSES**

Carrot quality and yield is adversely affected by a number of viruses which have increased in relevance in recent years. The major virus issues have been identified as carrot motley dwarf (CMD) complex and parsnip yellow fleck virus (PYFV), although a recent increase in internal issues over the past few seasons have been linked to carrot yellow leaf virus (CYLF).

The main vector responsible for transmission of these viruses is willow-carrot aphid although other possible vectors may include peach-potato aphid and parsnip aphid. MINECTO One has been shown in trials to give incidental control of peach-potato aphid and some reductions of willow-carrot aphid, if a high % methylated rape seed oil adjuvant is included.

Crops should be monitored from emergence to ensure accurate foliar insecticide timings. To aid aphid scouting Rothamsted Research monitor aphid activity through a number of regional traps, this information can be used to monitor seasonal activity in your area. The latest trap results can be found at **https://insectsurvey.com** 



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