



ALLIUM PEST AND DISEASE UPDATE

CULTURAL CONSIDERATIONS

Onions grown from seed are agronomically challenging. Emergence is generally over a few weeks which can give weeds a head start. Once emerged they are poorly competitive for light and resource. Ensuring optimum growing conditions and avoiding field issues will help optimise crop growth and yield. The following factors should be considered:

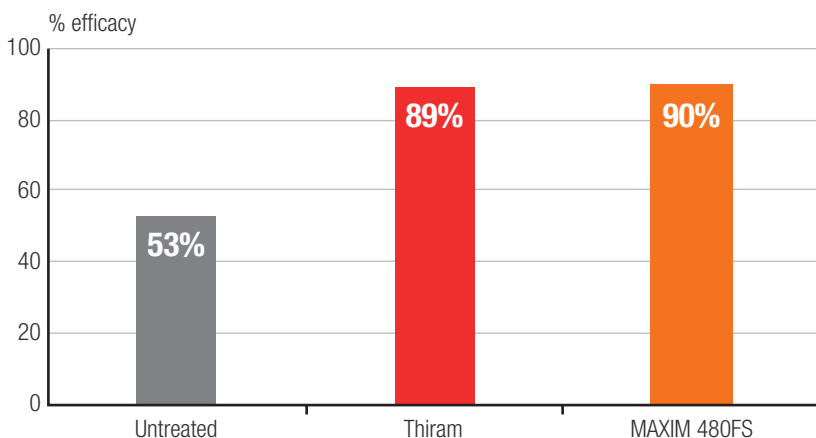
- Avoid fields with known weed and soil-borne disease issues
- Choose soil types which will allow a fine firm seedbed and are less liable to capping
- Ensure soils are worked to create seedbeds free from compaction
- Start with a weed-free seedbed and try to maintain this through to crop emergence
- Optimise nutrient applications to encourage rapid emergence and early growth, consider the use of starter fertilisers
- Monitor seeds through emergence and irrigate where seedbeds are dry to encourage even emergence

DISEASE IN STORAGE ONIONS

Neck rot (*Botrytis allii*): Although often symptomless in the growing crop in the UK, neck rot can develop during drying and storage of the harvested bulb and is potentially a cause of significant loss in store.

Control of seed borne *Botrytis allii* in onions (2007–2011)

Research has shown that the use of an effective seed treatment can significantly reduce neck rot levels at storage.



Syngenta registration trials data



SEED TREATMENTS



MAPP No.: 16725

Active Ingredient: fludioxonil

For the control of *Botrytis allii*. Full approval for Bulb Onion (seed), EAMU* (20160461) approval for Salad Onion (seed) and Shallot (seed)

FOLIAR DISEASES OF ONIONS



Downy Mildew (*Peronospora destructor*) is the major foliar disease of onions in the UK. Infection is seen most seasons but can vary in severity. Once established in the crop the disease can cause leaf loss and in severe cases this can lead to poor skin set and thin skins in the stored bulb. Risk of infection increases as the canopy thickens with infection usually higher during warm humid periods. Fungicide applications should start when the crop reaches the five leaf stage. Due to the aggressive nature of the disease a preventative strategy is recommended which alternates fungicide modes of action.



MAPP No.: 18039

Active Ingredient: azoxystrobin

Approved use: Bulb onions, shallots and garlic for moderate control of Downy mildew (*Peronospora destructor*)

Maximum individual dose: 1.0 l/ha

Maximum number of applications: 3

Minimum spray interval: 7 days

Latest time of application: 14 days before harvest

Aquatic buffer zone: LERAP B



MAPP No.: 14605

Active Ingredient: metalaxyl-M and mancozeb

Approved use: Bulb onion and shallot

Maximum individual dose: 1.9 kg/ha

Maximum number of applications: 3

Latest time of application: 28 days before harvest



MAPP No.: 19305

Active Ingredient: oxathiapiprolin

Approved use: Onions, garlic and shallot

Maximum individual dose: 0.2 l/ha

Maximum number of applications: 3

Latest time of application (when used with AMISTAR): 14 days before harvest



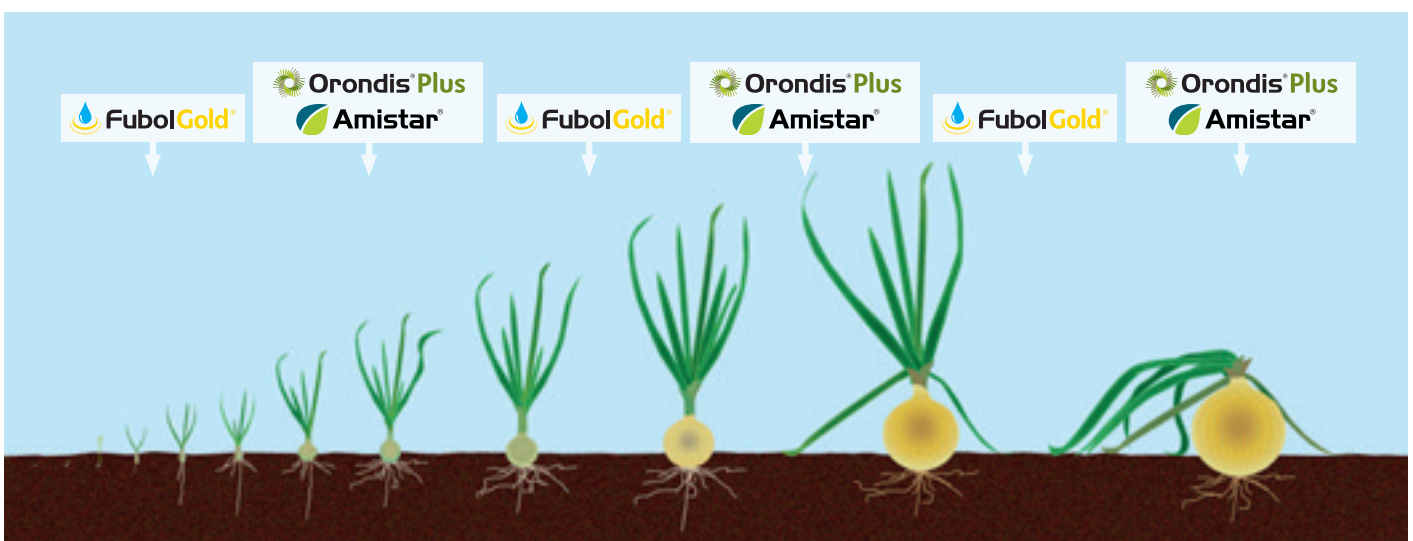
For the control of downy mildew in onions, garlic, shallots and outdoor lettuce

ORONDIS Plus is based on new chemistry which is very active at a low dose. It should always be used in combination with AMISTAR to minimise the risk of fungicide resistance developing to oxathiapiprolin.

ORONDIS Plus with AMISTAR works best as a protectant and should be used before disease becomes established and should be incorporated into a programme of treatments to protect onions from Downy mildew through the season.

Trials have also shown that the addition of an adjuvant such as Activator 90 improves control of onion downy mildew.

Available co-packed with AMISTAR



FOLIAR DISEASES OF LEEKS



Rust (*Puccinia allii*)

Usually associated with periods of high humidity and warm temperatures. Outbreaks can occur in the summer during warm periods with high rainfall or more commonly during late summer and early autumn as humidity remains high for longer periods and temperatures are still warm. Rust causes unsightly lesions on the leaf which can move down towards the shank increasing costs for stripping and reducing yield. The disease often appears quickly and at high levels as the early stages of development spread under the leaf surface before the disease bursts out. Once the disease starts to sporulate it produces a very high number of spores with the potential to rapidly increase disease levels in the crop.

As high levels of disease can already be present once infection starts to appear through the leaf surface, a preventative strategy is recommended which alternates fungicide modes of action. Fungicide applications should commence once the crop has sufficient canopy, applications at 14 to 21 day intervals are recommended. Disease can still be active late into the autumn depending on temperatures and disease pressure.



White Tip (*Phytophthora porri*)

This disease is usually associated with wet weather and is most severe where heavy showers splash soil onto the leaf. The disease is identified as a paper white lesion with a water soaked margin between the healthy leaf and the white area. It is usually seen in the autumn and can cause collapse of plants if infection is severe.



MAPP No.: 18039

Active Ingredient: azoxystrobin

Approved use: Leek for the control of Leaf rust (*Puccinia porri*), Purple blotch (*Alternaria porri*) – moderate, White tip (*Phytophthora porri*) – moderate

Maximum individual dose: 1.0 l/ha

Maximum number of applications: 3

Minimum spray interval: 12 days

Latest time of application: 21 days before harvest

Aquatic buffer zone: LERAP B



MAPP No.: 18050

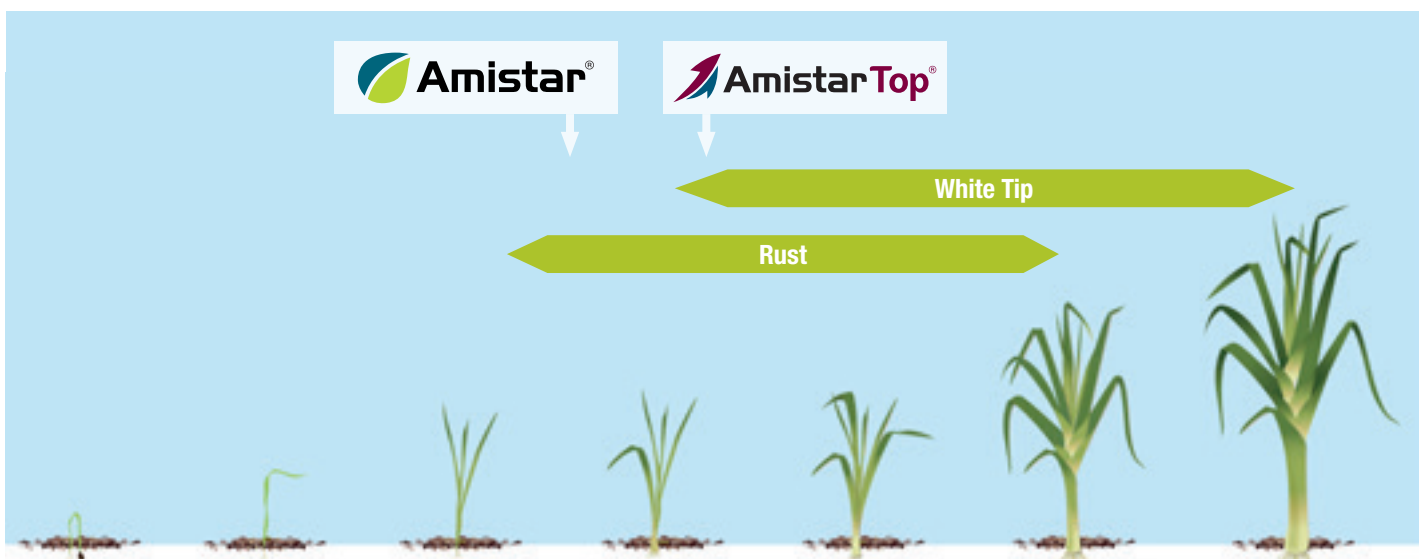
Active Ingredient: azoxystrobin and difenoconazole

Approved use: Leek for the control of Leaf rust (*Puccinia porri*), Purple blotch (*Alternaria porri*) – moderate control. Qualified recommendation: May give some control of White tip (*Phytophthora porri*)

Maximum individual dose: 1.0 l/ha

Maximum number of applications: 1

Latest time of application: 21 days before harvest

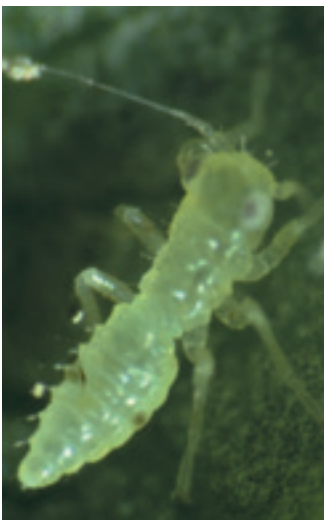




SEEDLING PESTS

Bean Seed Fly: A major and potentially devastating pest of alliums. Damage from this pest usually occurs at the small seedling stage (April/May). The female adult fly prefers to lay eggs on freshly disturbed soils especially where there are high levels of organic matter. Avoid areas with known high pest pressure and ensure all crop residues are well buried at ploughing. Onion fly can also damage allium crops, damage usually occurs slightly later in June/July.

PGRO are asking growers and agronomists to report incidents of crop damage caused by this pest via the PGRO App (www.pgroapp.org). It is encouraged to record for all affected crops and not just legumes.



FOLIAR PESTS OF ALLIUMS

Thrips (*Thrips tabaci*)

MINECTO One allows an extra mode of action, which in UK trials has shown 100% control of thrips in alliums. Along with its persistency, MINECTO One will make a great start to a thrip programme. Alternating modes of action in the programme will help alleviate issues with resistance that has been experienced in previous seasons with both pyrethroid and spinosad resistance.

Cultural advice and control – Thrip damage and numbers of nymphs are generally lower where crops are well irrigated. Early control of thrips is essential, use blue sticky traps to help monitor the population in your area.



MAPP No.: 12629

Active Ingredient: lambda-cyhalothrin

Approved use: EAMU* (20190109) approval for use on Outdoor bulb onion, Outdoor garlic, Outdoor leek, Outdoor salad onion, Outdoor shallot



MAPP: 18649

Active Ingredient: cyantraniliprole

Approved use: Bulb onion, garlic, shallots, salad onion

Target: Onion thrips (*Thrips tabaci*)

Maximum individual dose: 0.310 kg/ha

Growth stage: 12-49

Maximum total dose: 0.310 kg/ha

Maximum numbers of applications: 1

Latest time of application: 14 days



Leek Moth (*Acrolepiopsis assectella*)

Cultural advice and control – Locate new crops away from last seasons crops and ensure that the harvest debris is incorporated quickly. Adult moths can be monitored with pheromone traps, which will help with crop walking and insecticide timing. Well-timed pyrethroid applications will give good control of this pest.

	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV
Thrips	Low	Low	High	High	High	High	High	High
Leek Moth	Low	Low	High	High	High	High	High	High

■ Low risk ■ Medium risk ■ High risk

