

Vegetable News

April 2011

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On Farm Technology Projects

Last year growers hosted a number of valuable technology projects on a range of topics including the control of club root, canker, slugs and diamond back moth. It is better if a project can be repeated for two or three years on different sites, to see if a pattern is maintained across different weather, site and soils.

CAFRE would welcome a more sites for certain projects this year. In particular:

A site for a liming materials project. The field should be acidic and require lime.

A site for parsnip where canker is known to be a risk, to test a bio-control.

A site where carrots are grown, to erect a carrot fly trap. An unsprayed site e.g. organic or private garden is best to check the timing of this pest.

A crop where slugs are expected, to compare ferric phosphate pellets with conventional pellets for slug control.

If you would like to participate in any project please contact Anne Stone, see details at end of this bulletin.

BASF presentation on 15th February 2011 Simon Townsend

Stomp Aqua

There are three forms of Stomp. Each contains pendimethalin. The formulation in organic solvent is PDM 330EC. The suspension concentrate form is Stomp 400SC. Stomp Aqua contains pendimethalin in a polymer micro-capsule. These capsules burst in the spraying process, which prevents staining of equipment.

The preferred timing for Stomp 400SC is pre-planting, however the act of planting disturbs the herbicide layer. The alternative is to use Stomp Aqua post planting, at which time it is much safer than other formulations of pendimethalin. The only brassica on which it can be used post planting is cabbage under a SOLA (0650/2010), and then only for the first day after planting.

Carrot and lettuce

Stomp Aqua (SOLA 2921/2009) is safer on lettuce pre-planting than Stomp 400SC. Very good weed control in carrots has been achieved in trials with pre-emergence 1.5l/ha Stomp Aqua plus 0.75l/ha linuron, followed by Stomp Aqua 1.75 l/ha + Sencorex (metribuzin) post emergence. (Stomp Aqua SOLA 3526/2009 Sencorex SOLA 3173/2009) The safe rate of Sencorex depends on the stage of crop development, based on 100g/ha per true leaf. On this basis 300g would be used at the three leaf stage of carrot.

Springbok (metazachlor + dimethenamid-P)

This herbicide is currently approved on oil seed rape where it has greatly improved control of shepherd's-purse and chickweed A SOLA (0918/2011) for drilled and transplanted leeks has been issued. Maximum individual dose 2L/ha, max total dose 2.5 L/ha before four leaves of the crop. Simon reported trials work at 1.5 L/ha pre emergence of the drilled crop. He has not tested Springbok on transplanted leeks. Springbok may be an option for the future in other vegetable brassicas.

Nirvana (pendimethalin + imazamox)

Gives good pre-emergence weed control in beans at up to 4 l/ha and in peas at up to 3.5l/ha

Signum (pyraclostrobin + boscalid)

This fungicide helps the crop immune system and improves nitrogen uptake. It reduces ethylene production so the plants are more tolerant to shock and to water shortage. It has also been shown to enable cabbage to make better use of available nitrogen.

Lettuce

To prevent *Botrytis* and ringspot in lettuce, apply up to three sprays of Rovral at a maximum of 0.33kg/ha (33g per 100 litres water) and two sprays of Signum at 1.5l/ha. Applications of Signum to lettuce must only be made between 1 April and 31 October.

Signum should be used in a programme against downy mildew in lettuce, together with Invader, (SOLA 0719/11) or Previcur Energy (fostyl aluminium + propamocarb hydrochloride) SOLA 2668/08. Use of Signum also has been shown in trials to

reduce a physiological lettuce condition called pink rib and can reduce water loss after harvest.

Leeks

A programme of Signum, a triazole (e.g. Rudis or Folicur) and Invader is recommended to prevent all foliar disease.

Carrots

Two applications of Signum at 0.75kg/ha gives better combined *Alternaria* and mildew control than either azoxystrobin or difenoconazole.

Peas and beans

In beans, Signum consistently controls chocolate spot and bean rust at reduced rates. In peas, Signum controls powdery mildew, leaf and pod spot. In trials yield responses over disease control have been observed.

Cabbage trials have shown Signum can be sprayed on coleslaw cabbage 14 days before harvest, to reduce storage diseases.

Invader (dimethomorph and mancozeb)

Recently approved on-label for leek, onion, shallot and garlic. Dose for onions is 2.5 kg/ha with a 14 day HI. Maximum total dose 10 kg product/ha. Other formulations containing mancozeb have a 28 day HI. Leek may receive up to three sprays of Invader at 2.0 l/ha, with a 21 day harvest interval. There is a SOLA for scallions (0720/2011)

Alert (alpha cypermethrin)

Kills caterpillars and flea beetle. Approved in vegetable brassicas, (but not turnip) peas and beans. Dose 100 ml/ha with a 7 day HI.

Answers to Questions from the audience

(1) Difficulty mixing Signum.

Preferably pour directly into a partially filled spray tank with agitation on and with no basket, or if through an induction hopper; mix slowly and be patient.

2) Foliar diseases on cabbage

Hopefully RovralWG will be approved in the future. Currently it only has approval as a storage treatment for coleslaw cabbages

3) The SOLAs have been supported by the Horticultural Development Company (HDC) levy payers in GB.

4) Growers use of products under SOLA arrangements is at their own risk.

Syngenta presentations 27th January 2011

Michael Tait, control of insects

Peach potato aphid (*Myzus persicae*). Likely not to be so serious a problem early on after last year's hard winter. Resistance is of three types

- Esterase – organophosphates. Now rare and irrelevant
- MACE – pirimicarb very common in recent seasons in GB
- Kdr – pyrethroids levels of resistance have declined in GB in recent years

Recently Kdr has become less common while MACE resistance is very common. To date insecticide resistance in mealy cabbage aphid has not been observed but the pest can still be difficult to control.

Aphox (pirimicarb) has some trans-laminar & vapour movement. When it comes up for re-registration the number of applications per crop will probably be limited.

Dovetail (pirimicarb + lambda cyhalothrin) Registration will lapse in 31/1/11. Merchants must sell out by 31/7/11 and farmers must use up by 31/7/12.

Cabbage mealy aphid
Plenum (pymetrozine) gives effective control if applied with a methylated seed oil such as Phase II oil. Plenum works best when ingested from treated foliage.

It is slow acting, not knock down like Aphox. In cold conditions aphids feed slower, so Plenum can take longer to work.

Thrips on leeks. Resistance to pyrethroids wide-spread. The SOLA for Agrimec (abamectin) at 0.48l/ha will be more effective.

New insecticides
Emamectin benzoate
This insecticide, not yet approved, is derived from *Streptomyces* soil fungi. It will kill caterpillars, with good safety to beneficials.

Thiamethoxam (TMX) seed treatment
Very systemic. Will be used against aphids, thrips and weevils. The first use in the UK may be for lettuce aphids, by mutual recognition of a Dutch approval, applied as seed coating, dummy pill or Phytodrip onto modules. The next use of TMX is likely to be on carrots, with traditional seed treatment against willow-carrot aphid *Cavariella aegopodii*.

Questions
1) Can you triple mix Plenum, Aphox and Hallmark
Answer. Not desirable or necessary, it is over-kill.

Jon Ogborn, Control of Diseases and Weeds

Lettuce programme
Switch – *Botrytis*, *Rhizoctonia*, *Sclerotinia*
Amistar - *Botrytis*, *Rhizoctonia*, *Sclerotinia* and downy mildew.
Fubol Gold – Downy mildew - but this is no longer approved under protection.

The best programme would be Switch after planting out followed by Amistar, then Fubol Gold.

Jon would usually advise Amistar mixed with mancozeb for best control of downy mildew.

Brassica fungicides; the three main products are Folio Gold, Amistar and Plover.

Folio Gold (chlorothalonil + metalaxyl-M) with approval for Brussels sprouts, cauliflower and beans; not for cabbage or broccoli.

The related product **Fubol Gold** (mancozeb and metalaxyl-M) has approvals for cabbage, herbs and onions.

Unfortunately no product containing metalaxyl is approved on broccoli, due to high residues at the 14 day harvest interval.

A future possibility is a new SOLA with a 28 day HI, but this may be too expensive to obtain. So, for the present, to prevent downy mildew on broccoli, apply Amistar as a protectant.

Amistar Top

(azoxystrobin+difenoconazole) is effective against light leaf spot, a disease which is on the increase, plus ring spot, powdery mildew and *Alternaria*.

Plover (difenoconazole) is effective against ring spot, *Alternaria* and powdery mildew.

Carrot fungicides

SL567A (metalaxyl) has been studied by Des Barbara at HRI Wellesborne. He found that it works well against the *Pythium* which causes cavity spot when there is moisture in the soil. In dry weather *Pythium* doesn't germinate until later, when the SL567A has run out. The recommendation is to spray at the two true leaf stage, preferably after rain or irrigation.

Amistar Top is active against *Alternaria*, *Cercospora* leaf spot, *Sclerotinia*, powdery mildew and *Phoma* in parsnips.

Dual Gold (S-metolachlor)

This herbicide is in the same family as Butisan and has a similar price, with probably a better weed spectrum. Particularly good on mayweed, groundsel, annual meadow grass and other weed grasses. It now has SOLAs for all the vegetable brassicas, both drilled and transplanted, and for turnip, garlic, onion and beetroot; all at 1.4l/ha. There is no approval yet on lettuce, though it may be obtained for 2012.

The SOLA for transplanted brassicas is for application within 5 days of transplanting. A trial at the Allium and Brassica Centre in Lincolnshire on transplanted brassicas found Dual Gold at 1.0l/ha plus Stomp Aqua at 2.9l/ha gave the best control, on plots where annual nettles were the main weed. Dual Gold alone also gave good control. A post-plant tank-mix with clomazone may be the best option in most brassicas following a pre-plant pendimethalin.

Crop Protection News

Rudis (a.i. prothioconazole) is now approved for broccoli and cauliflower, in addition to existing approvals for Brussels sprouts, cabbage and leek. Rudis is a relatively new triazole fungicide and gives effective treatment against ring spot/*Alternaria*, light leaf spot, powdery mildew and *Phoma* leaf spot. It is normally used in an early autumn programme after an initial strobilurin protectant spray such as Amistar (azoxystrobin), Nativo (trifluoxystrobin + tebuconazole) or Signum (boscalid + pyraclostrobin).

The maximum rate is 4l/ha and harvest interval is 21 days.

Existing stock with the old label can be used on newly approved crops, provided the new approval has been downloaded from the CRD website.

Google CRD

On the CRD homepage look down the list on the left hand side. The fifth item down from the top is e-@papproval. Click on it.

Click on 'public search'

Click on 'Document for specific product name'

Type 'Rudis' into the search box

Select the bottom of the four options

Extensions to approvals

Approval for some active ingredients has been extended until March'13. Relevant SOLAs have been amended in line with the date for the parent product. This applies to products containing propamocarb hydrochloride (Filex, Proplant and Previcur Energy) and products containing dimethoate (Danadim).

The new SOLA 0719/11 for the fungicide Invader (dimethomorph + mancozeb) on outdoor lettuce, parsley and other herbs is now valid until Jan '15.

Contact

For any enquiries on the items in this newsletter, or other aspects of commercial vegetable growing, please contact Anne Stone on 02894 426683 or 07500 957895, or e-mail anne.stone@dardni.gov.uk

