

# Beet Crops

## Technical Update 03

23 May 2018

### UPL Europe Ltd, Annual Broad-leaved Weed (ABLW) Sugar Beet Trials – Suffolk 2018

Dare I say it, we now require some rain on the UPL herbicide trials! This time last season we had completed spraying and were issuing the last sugar beet bulletin on the 23rd May. The 2018 season so far has not been an easy one and in a few situations crops have only just been drilled/re-drilled. The majority of crops in the sugar beet growing areas, like the UPL trials, have now received their first post-em and are due second post-em this week with crop growth stages varying between 4–6 leaves. See Table 1 and Photo 3.

The beet are growing quickly and with the forecast weather, warm and mainly dry, care is required to avoid damage to the crop when spraying.

Last week Dr Gill Champion (Weed Scientist) visited the trials sites with her new assistant, Charlie, to confirm the identification of polygonums and 'Nipplewort' *Lapsana communis*.



Photo 1. Dr Gill Champion, identifying weeds



Photo 2. Dr Charlie Champion



Photo 3. Yaxley Barn Field Crop 6 true leaves

Table 1. Details of Sugar Beet Trials 2018 – Suffolk

Location	Drilling Date	Pre-em	1st Post-em Crop 1st True Leaves	2nd Post-em Crop 4 – 6 Leaves
Mendlesham	21.04.18	22.04.18	10.05.18	Due this week
Yaxley (Kemp's)	19.04.18	20.04.18	09.05.18	Due this week
Yaxley (Barn Field)	17.04.18	None applied	09.05.18	Due this week

### Control of Pale Persicaria (*Polygonum lapathifolium*) and Redshank (*Polygonum persicaria*)

Pale persicaria seems to be 'the weed' this season with further queries this week regarding the best way to control it. Please see last week's bulletin for further information as well as suggested treatments on the next page.



Photo 4. Redshank



Photo 5. Pale persicaria

Note difference in shape of leaves, pale persicaria is thinner and shorter, the redshank short and broad.

**Table 2. Pale Persicaria and Redshank Control**

Minimum Crop Stage/Recommended Dose (L/kg/ha)			
	Crop emergence	From fully expanded cotyledon	1st true leaves 1 cm long
<b>Option 1</b>	BETASANA TRIO 2.0L/ha	BETASANA TRIO 1.0 + SHIRO 20g <sup>(2)</sup>	BETASANA TRIO 2.0 + SHIRO 20g + VENZAR FLO 0.2
<b>Option 2</b>		BEETUP COMPACT SC 1.5 + SHIRO 20g <sup>(2)</sup>	BEETUP COMPACT SC 2.0L + SHIRO 20g + EFECKT 0.5L

<sup>(1)</sup> Suggested products are based on the UPL beet herbicide range. **BETASANA TRIO** (ethofumesate, phenmedipham, desmedipham), **BEETUP COMPACT SC** (phenmedipham, desmedipham), **SHIRO** (triflusaluron-methyl), **EFECKT** (ethofumesate)

<sup>(2)</sup> Be wary of using triflusaluron at early crop growth stages, especially if warm, hot and dry, it is generally better to wait until beet are slightly larger and then a vegetable oil can be added, which will help with weed control.

**Temperatures at Spraying and Crop Damage**



**Photo 6. Ethofumesate effect**

In the UPL herbicide screen it is possible to see the impact of the different herbicide actives when they are applied to the crop as well as their efficacy on weed species present.

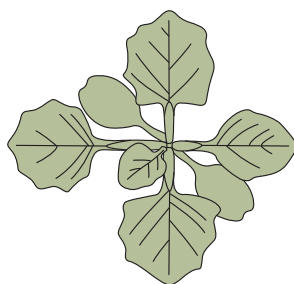
Treatment 2 in the screen consists of three applications of **EFECKT** (ethofumesate) at 0.4L/ha + vegetable oil at 0.5L/ha applied approximately at first true leaves, 4 true leaves and 10 true leaves. Photo 6 shows the effect on the beet crop a few days after the first application. First true leaves which were present at spraying are thickened and curled. The crop will grow away from this with no significant impact on yield, however be wary of what herbicides can do when conditions are warm with high humidity and very little cloud cover.

High temperatures immediately after spraying may cause crop damage, it is sensible to stop spraying at least four hours before temperature or light intensities rise to damaging levels.

**Nipplewort (*Lapsana communis*)**



**Photo 7. Nipplewort**



**Diagram 1. Seedling Nipplewort (*Lapsana communis*)**

**Diagnostic features**

- Irregular leaf margin of true leaves with blunt points
- Young rosettes are prostrate and yellow/green in colour
- Cotyledons are oval/rounded

Nipplewort can grow up to 120cm tall and has small yellow flowers that look a little bit like a dandelion. It is generally more common in winter cereals but can be found in spring crops – we have quite a few at the Mendlesham trials site.

**Table 3. Nipplewort Control**

Yield Effect	Key Actives – Post-em	Comments	Suggested Products <sup>(1)</sup>
No information available but probably not significant	Combination of phenmedipham, desmedipham and ethofumesate	Phenmedipham on its own not thought to be very effective. Most herbicide programmes should control Nipplewort.	<b>BETASANA TRIO</b>

<sup>(1)</sup> Suggested products are based on the UPL beet herbicide range. **BETASANA TRIO** (ethofumesate, phenmedipham, desmedipham)

## Thistle Control

Where thistles are a particular problem, and especially where violet root rot (Photo 8) is known to be present in the field **VIVENDI 200** should be used (clopyralid 200g ai/L). The first (0.5L/ha) dose will give good suppression, but the full programme 0.5L/ha + 1.0L/ha is required for good control. Creeping thistles are one of the major weeds that carry violet root rot through cereal break crops. Remember that the strength of clopyralid formulations do vary so check that you are using the correct rate. In some situations it may be possible and more economical to 'patch treat' fields. This may also be an opportunity to use GPS to note patches of thistles for future reference.

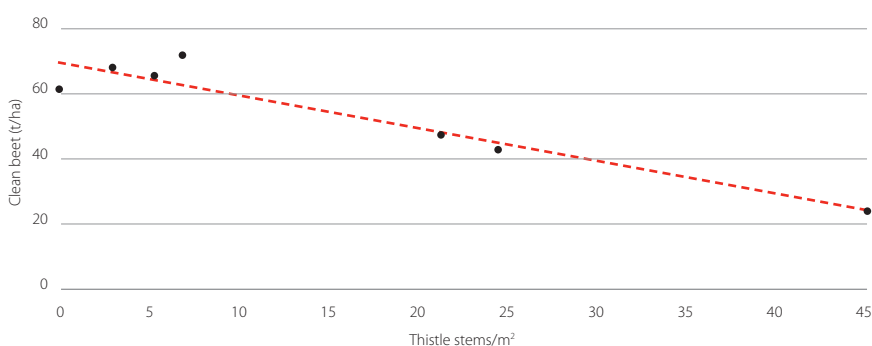
- **BETASANA TRIO** 2.0L/ha (phenmedipham + desmedipham + ethofumesate) + **SHIRO** 20g /ha (triflurosulfuron-methyl) + **VIVENDI 200** 0.5L/ha can be applied from the beet at 2 true leaves expanded stage.

This above mix is very good for all round annual broad leaved weed control, volunteer osr, thistles and volunteer potatoes. In situations where the concern is for high levels of late emerging fat-hen then a programme that includes metamitron should be used one option may be:

- **BETASANA TRIO** 2.0L/ha (phenmedipham + desmedipham + ethofumesate) + **BETTIX FLO SC** 1.0L/ha + **VIVENDI 200** 0.5L/ha can be applied from the beet at 2 true leaves expanded stage.

The impact of creeping thistles on yield is shown in Graph 1, this was produced from work carried out by Morley Research Centre in 1993. Conclusions were that average infestations of 10 to 15 shoots/m<sup>2</sup> could reduce yields by more than 25% – so even though control programmes are costly it is beneficial, especially if 'patch' treating is an option.

**Graph 1. Effect of Creeping Thistle on Yield of Clean Beet**



**Photo 8. Violet root rot**

## Question of the Week!

### 'What are the best actives for controlling volunteer potatoes?'

- Avoid just scorching potatoes as daughter progeny from scorched plants will be more vigorous than those from un-scorched potato plants.
- Using **VIVENDI 200** (clopyralid) in tank mix with other actives such as ethofumesate e.g. **EFECKT**, triflurosulfuron-methyl e.g. **SHIRO** and phenmedipham e.g. **BETASANA SC** will result in quicker effects on the volunteer potato foliage as opposed to using **VIVENDI 200** alone.
- A programme of three application of **VIVENDI 200** to cover extended periods of potato emergence is recommended. Spray intervals should be between 7 – 14 days depending on subsequent potato emergence; remember applications should be completed by the end of June. Note that not all formulations of clopyralid are of the same strength so check labels.
- First treatments should be applied when the majority of the potatoes are at 5 – 10cm tall.
- Remember apart from acting as a source for potato blight 5 potatoes/m<sup>2</sup> can result in a loss of 16.5t/ha of beet.
- Remember to check before using clopyralid on any beet crops that are destined for AD plants as some do not permit the use of this active.

Supported mix from UPL from the beet at 2 true leaves expanded stage onwards are:

- **BETASANA TRIO** 2.0L/ha + **SHIRO** 20g/ha + **VIVENDI 200** 0.5L/ha + adjuvant oil

**BASIS points for the technical information provided by this series of updates are CP/58801/1718/g. To claim them email [assistant@basis-reg.co.uk](mailto:assistant@basis-reg.co.uk).**

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