

## Tyfu Cymru Pumpkin Network

### Weed Control in Pumpkin

Effective weed control in pumpkin is essential in growing a crop that maximizes its potential. Weed control should be carried out before and after planting, although the reduced range of actives will mean that you are unlikely to achieve a perfectly clean crop. Given below is some general guidance on weed control, but it is highly recommended that suitably qualified agronomic advice is sought throughout the season which available for free through the Tyfu Cymru program.

#### Pre-planting Weed Control

Low weed pressure at planting will allow a strong crop to establish, although pumpkins are normally drilled or planted in early to mid-May and this can meet the first flush of weeds germinating through March. Land should be free of perennial weeds, notably couch grass and thistles. To get the best results some pre-planning is useful. Ideally go for a previous crop that has had good weed control, this usually means cereals or maize so there is a reduced weed burden, particularly of broadleaf weeds. Starting with a stale seedbed is a useful important approach for this crop (**Figure 1**). The soil is cultivated down and fertilizer/lime is applied (if required) and worked in 4-6 weeks ahead of planting. The land is then left for a flush of weeds to appear and these are burnt off, normally with Glyphosate at 2 weeks ahead of planting.



**Figure 1.** Pumpkins planted into a stale seed bed with a high level of early weed control.

Planting or drilling is then carried out with the least possible soil disturbance and immediately after planting or drilling the residual herbicides are applied. This is typically carried out in May, so if the weather has been good then the soil should be dry and warm enough to support the young crop, although if there is poor soil structure or it is worked too finely then it can slump or become “sad”.

After drilling or planting a residual tank mix of herbicides is applied to the crop. *Propyzamide* (e.g. Kerb Flo) can be used under EAMU (2416/08) as a general herbicide, applied at up to 1.875 L/ha at 400g/L. This is useful on a range of weeds including grasses, but ineffective on composite weeds including mayweeds, groundsel and fleabane. Small, immature plants may see a small check in growth but this will be short lived. *Clomazone* (e.g. Gamit) can be used under EAMU (2831/15) as a broad spectrum herbicide to control cleavers, chickweed, foals

parsley, speedwell, dead-nettle and shepherds purse. This can be applied at a rate of 0.25 L/ha, although often half this rate is used. Similarly, this can give a small check in growth of the crop. *Dimethenamid-p + Pendimethalin* (e.g. Wing-P) can also be applied under EAMU (0619/18) to control annual meadow grass and broadleaf weeds with a maximum dosage of 4 L/ha. Wing-P can significantly impact crop growth so it must be used with caution – it should only be used as an inter-row herbicide in a planted crop, and it is not recommended for use in a drilled crop and it is best to use it at a reduced rate to minimise impact on the crop.

The actives given above have little contact action and so must be applied before weed emergence. After emergence/planting keep an eye on the progress daily, if weeds are seen take action immediately with direct contact herbicides. Cultivation and hoeing can be used here, but the previously applied herbicides will be disturbed and may allow more weed to germinate. In good conditions, the crop emerges and plants grow away rapidly and soon cover the soil surface, inhibiting weed germination. Avoid application in cold or windy weather to avoid negative impacts on the crop, although this can be difficult during cold/wet May or June periods such as those seen in 2019. Poor weather and herbicide applications checked crops in many cases and performance was weakened so it is important to only treat in ideal conditions if possible. Late germinating weeds (e.g. fat hen) can emerge later (even if the soil is dry) and can quickly outgrow the crop so it is important to act when the weed is small. *Polygonum* spp including redshank, knotgrass and black bindweed are often a problem, as are mayweeds.



**Figure 2.** Mayweed (L) and Fat Hen (R) can establish later in the season and can quickly smother a crop. This can be particularly problematic for PYO pumpkin crops where weeds can impede customer access to pumpkins in the field.

Organic growers could use a light excluding membrane such as black mulch polythene on a bed or a woven ground cover material with a long life such as Mypex, which could be used for 10 years if looked after. An effect similar to stale seedbed could be achieved preplanting with a similar type of cover to the above, removed after a month or more and drilled/planted.

### **Disclaimer**

Every effort is made to ensure the accuracy of information and recommendations given in these notes. All applications of crop protection chemicals should be made in accordance with label recommendations, which should be consulted before spraying. Some of the pesticides mentioned in these notes may not be supported by label recommendations for their use on pumpkin crops but are permissible via Extension of Authorisation for Minor Use (EAMU) in the UK under 'The Revised Long Term Arrangements For Extension Of Use (2002)'. In these cases, the use of the pesticide is at the risk of the user and Tyfu Cymru does not accept liability for any loss or damage caused by such use. The references to on-label approvals and EAMUs for use of pesticides in pumpkin crops and are correct at the time of writing. These are subject to change and approval may be withdrawn at any point. It is the grower's responsibility to check approvals before use of pesticides. If in doubt a grower should seek advice from a BASIS qualified advisor - this is available free of charge for eligible growers through the Tyfu Cymru program, please contact us to arrange a visit to your site.