NURSERY 'KNOW HOW' :

#8 Weed suppression

McHort KNOW HOW
McPHERSON HORTICULTURE

Weed control in the container nursery is a keystone to profitability.
By design, we create the very best conditions in which to grow plants. It should not then surprise us when weeds grow so prolifically amongst our crops, if we are careless enough to let them.

The definition of a weed
A weed, by definition, is simply a plant growing where we don't want it. Tackle the problem of weeds as a whole; the emphasis being on prevention with strategic eradication and ongoing suppression.
The challenge is how to selectively remove the weeds effectively and economically without harming our crop.
Don't dismiss hand weeding from the equation, but acknowledge that it is unreliable, unpopular and proven to be uneconomical.
The whole approach requires that we look and act beyond the actual crop in containers. We must keep the production area and surrounds as weed free as possible. To do this, economically, requires an integration of a number of control and suppression strategies.

These are **1. Physical methods**

2. Chemical methods

We can further divide these methods into two areas:

A. Outside and beyond the growing container

B. In, or on, the surface of the growing container

Physical methods outside the container
Use weed mat, black is best, on top of a prepared production area. Ensure a stable consolidated foundation for the bed. Create a crown, so that excess water can be shed.

Sweep the mat and wash down using a biocide between crops to prevent any build up of spilt potting mix which might provide a foot hold for invasive weeds, moss and algae.
If your weed mat does not extend to the pathways, these must be kept weed free too. Garden and stock beds will benefit from mulching every couple of years. This will conserve moisture, stimulate healthy roots and suppress weed growth.

Using chemicals
Chemical methods may be necessary, but should perhaps form a second line of defence.
Chemicals cost money and always carry the inherent risk of damaging your crop. The most cost effective chemical herbicide group to use in the non-cropped situations on the nursery are the non-selective contact herbicides.

Non selective herbicides for non- cropped areas

Glyphosate - inexpensive and effective
Buster® – useful if clover is a problem
Preeglone™– a dangerous poison, but very effective at killing fibrous rooted grasses
20% Vinegar (acetic acid) is used overseas as an alternative to glyphosate; McHort plan to import a proven product from the USA.

Selective biocide/herbicides for liverwort, moss and algae
Surrender® or Yield– are effective on new growth, less so on older established infestations
Don't forget to treat the nursery margins and your plant casualty dump to prevent wind blown seed from re-infesting your clean crops.
Baking soda (sodium bicarbonate) may be a useful alternative in some circumstances. Work needs to be done on rate of use and checking for any long term problems resulting from frequent use. Trial first!

Physical methods in the growing container
A mulching technique using either organic (bark) or synthetic (geotextile) mats is viable. A mulch of landscape bark, non-graded, raw and inexpensive, in a layer 3-5 cm deep can be accommodated by under-filling the container when potting or bagging. It does slow up the potting process, but, when production is on a small to medium scale, it is realistic and economic.
This method especially appeals to those who are a little anti-herbicide and who appreciate the aesthetics of the finished and weed free product. McHort commend this practice.

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Synthetic geotextile mats installed wet and the correct side up are effective and reusable. You may find application slow and there is a question mark over hygiene if re-used.
Like bark, water and nutrients applied as topdressing will get down through the mulch mats.

Cut discs of weed mat may also be of use, but will need to be anchored to the top of the container to prevent loss.

Hand weeding is, of course, widely practiced, though usually as a spot treatment only.

Chemical methods in the growing container
Pre-emergence herbicides can be applied to the container surface up to a couple of weeks post potting; the time limitation being that application should be made before any weed germination. None of the pre emergence herbicides are good at knocking down germinated weeds.
Available in both liquid and granular formats, pre-emergence herbicides are non selective. They are best suited to use on woody ornamentals.
The principle of forming a chemical herbicide seal across the potting mix surface applies to all formulations.
It is critical to success that the surface to which they are applied is level, lump free and reasonably firm.
Application should take place when the containers are positioned on the growing bed and, ideally, only after a couple of applications of overhead irrigation which helps level and consolidate the potting mix surface.

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Foresite®– a liquid formulation which is inexpensive and safe on a wide range of species. Foliage should be washed off immediately after application.
It is difficult to see if a complete coverage has been achieved and is therefore less popular than the granular formulations.

Ronstar®– a granular formulation applied from a pepper pot type applicator at the rate of 20g/m2.
Contains Simazine (NZ formulation only) for improved control of annual grasses.
Does not control Pearlwort or Mouse Ear Chickweed.
Ronstar is due to be replaced in the NZ market, so check out the replacement. Pay special attention to the active ingredients and formulation of any replacement offered.

Rout®– a granular formulation applied at 32 granules/10cm2 (About half the Ronstar rate).

A good practice is to ring the changes between the granular types. They should remain effective for 2-3 months by which time the crop leaf canopy tends to suppress weed growth.

Always trial any change to your current methods on a small scale first.

McHort are currently trialing an organic pre-emergence herbicide for use in ornamentals' production in containers. If you would like to participate in this programme, please contact Donald on 021 782250

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