Tech Shares

Proactive Weed Control

Where needs take us

ICL Specialty Fertilizers

Designing and Implementing a Proactive Weed Control Program

Controlling weeds throughout the nursery is one of the biggest challenges a grower faces. We spend valuable time and money to try and control weeds, but some of us succeed while others do not. But even those who succeed often do so at a high cost. Often, the time and money spent on weed control could be better spent on something else.

Why should we concern ourselves with proactive weed control? Here are just a few reasons.

Aesthetics. The old saying "you only get one chance to make a first impression" holds true as it relates to weeds. If you have weeds in your nursery, you've probably taken a customer out to look at plants and then wished all the weeds in the nursery could just disappear. It's happened to all of us. Even worse is when the plants you're showing the customer are full of weeds. You just know you'll lose the sale. Keep this in mind: even if you don't lose the sale, customers will pay a higher price for a product that they perceive to have a higher value. And one thing's for sure—weeds don't add value. So keep the weeds out!

Crop health. Weeds in your containers also rob your crop of necessary nutrients, light and water. The weeds in the containers are competing with your crop to survive. To do so, they will consume fertilizer that's in the container and, if given an opportunity, they will outgrow your crop and prevent it from receiving the light and water it needs to thrive.

Not what your customers want to see.

Many weeds also carry pests and disease. Thus, controlling your weeds will give you a better grasp on your pest and disease issues. This will not only improve the quality of your crop, but also reduce the amount of money spent on chemicals to control these pests and pathogens.

Weeds lead to more weeds. After weeding a crop that was overrun, it's common to see smaller weeds that were missed. The more weeds you have, the higher probability that smaller weeds will be overlooked. By being proactive and taking steps to prevent weeds, you will reduce the probability of leaving behind the smaller weeds that pre-emergent herbicides do not control. Within a week or two, these smaller weeds will be visible, and more than likely, producing seed to further enhance the weed population.

Simply put, more weeds in the nursery will mean an increase in weed seeds available to germinate. Furthermore, if you try to remove weeds from containers after they've grown larger, you're likely to also pull out much of the growing media. This media can then fall on the groundcover and create yet another area where weeds love to grow.

Controlled weeds = happy employees. Let's face it. One of the worst jobs in a nursery is weeding. You're humped over all day in the hot sun performing a mundane task. Staying weed free will definitely put a smile on your employees' faces. Happy employees = productive employees.

Man-hours. This is the most important benefit of proactive weed control. I hear from growers that they simply don't have sufficient manpower to implement a weed control plan, which means that cannot keep a proactive program in place. This makes sense, right? Wrong. It will actually take more man-hours to keep a nursery clean if your employees have to chase around hot spots, perform additional spraying due to increased pest and disease pressure and hand-weed plants.

By implementing a program that will keep you two steps ahead of the weeds and provide you with all the benefits previously mentioned, your workforce will be more efficient. In the long run, you will use fewer man-hours by implementing a proactive weed control program. It's just a matter or implementing and sticking to it.

Best Practices for Fewer Weeds

Now that we've gone over the benefits of being weed-free, we will get into some of the practices we can implement that will suppress weed pressure in our nurseries. These are steps that we must not overlook, but rather make sure we integrate them into our daily processes.

- **Keep the non-production areas of the nursery as weed free as possible.** This means maintaining the roadways, fence lines, under benches, etc. Start by first mowing or weeding and following up with a combination of post-emergent and pre-emergent on these problem areas.
- **Keep the ground cover free from weeds and debris.** In between crops, sweep and remove all debris on the ground cover; this will reduce the probability of weed seeds germinating on. While degradation of the groundcover cannot be avoided, you can help slow the degradation process by not driving over groundcover with golf carts or tractors. When holes and tears begin to appear, apply some granular pre-emergent to these areas, then patch any holes before placing containers are placed on top of the groundcover.

Keep weeds and debris off of the groundcover.

- **Remove any containers that have weeds and no plants in them.** These containers will allow seeds to spread throughout your crop.
- **Before transplanting liners to a container, ensure the liners are weed-free.** If the liners have weeds, the seeds will germinate in the media when they are transplanted to a larger container.
- **Identify weeds.** Identify what weed species are in the nursery in order to choose the best product to control them. There are several herbicides in the market, each with different active ingredients that target particular weeds. Identify the prominent weeds in the nursery and choose products that control those weeds as per the label. And, remember to rotate between herbicides just like pesticides and fungicides.
- **Trial first.** Before applying a pre-emergent to a crop for the first time, conduct a trial with a small number of plants first. Keep weeds and debris off the groundcover.
- **Irrigate before applying.** If the crop is a new planting, before applying any herbicide, irrigate the crop with 1/2 - 1 inch of water to pack and firm the media and form a level surface with few crevices. Some growers will immediately apply herbicides after planting while the plants are still on the cart. This should not be done as granular herbicides work best on settled media surfaces.
- **Remove all weeds.** If this is an older crop, ensure that the surface is free from all existing weeds as these pre-emergent products will not control established weeds.
- **Prepare your equipment.** Be sure to calibrate the equipment by using calibration trays or pre-emergent rate cards in order to assist you in the correct application of the herbicide. Keep in mind, if too much is applied then the product is wasted along with your profits. It could also cause phytotoxicity to the plant and excess herbicide to enter the environment. If too little is applied, then the product may not work, weeds will not be controlled and resistance could build up in the weed population.

ICL-SF pre-emergent rate cards for use with OH2®, Rout® and Corral®.

- **Apply herbicide uniformly.** After ascertaining that the foliage is dry, apply the herbicide evenly at the recommended rate in order to achieve satisfactory weed control.
- **Irrigate after application of herbicide.** Once you have applied the herbicide, water immediately with ½ to 1 inch of water in order to activate the herbicide and remove any granules that may be on the foliage.
- **Do not destroy the chemical barrier.** These products form a chemical barrier on the surface of the media which do not allow weed seeds the opportunity to germinate. If you must weed, do so carefully and hold the media in place as you pull the roots out.
- **Beware of topdressing.** The efficacy of your pre-emergent may be reduced by topdressing fertilizer. Some studies suggest that this may be caused by an increased amount of microbial activity due to the elevated levels of nitrogen, or it may be caused by elevated levels of salt from your fertilizer.

As with all chemicals, the label supersedes any information that has been given here or from any other source. Always read the label and follow directions. Everris pre-emergent cards are available for use with OH2®, Rout® and Corral®.

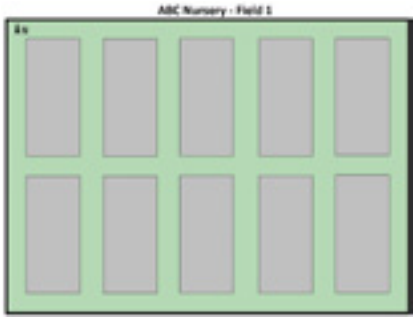
Trial proves the benefits

In a recent trial, we took three sets of ten 9"-pots, each set with different levels of weed pressure. Group 1 contained one to two weeds per pot. Group 2 consisted of pots in which the media was 50-percent covered by weeds and Group 3 was completely overrun by weeds. Then we timed how long it would take to weed each group. To obtain our end result, we then compared the time it took to weed each set and demonstrate the benefits of proactive weed control. Group 2, in which 50 percent of the surface was covered by weeds, took more than six times longer to weed than Group 1 which had one to two weeds per pot. And, when comparing Group 3, which was overrun by weeds, to Group 1, it took more than 14 times longer to weed Group 3. Now that's a lot of weeding!

We can also look at it this way. If you're paying someone $9 an hour to weed a crop similar to Group 1, it will cost you $350 to weed 50,000 plants. If your plants looked like Group 2, it will cost you $2,300 to weed 50,000 plants. Finally, if your plants look like Group 3, it will cost you $5,000 to weed 50,000 plants. If that doesn't encourage you to be proactive with your weed program, I don't know what will.

Designing and implementing your own program

So, how can you implement a disciplined program that will ensure that our nurseries are as weed-free as possible? We start by designing a "Weed Map" of the nursery. This Weed Map will consist of roadways and bays, providing a birds-eye view similar to the map on the right.



If your bays are numbered, these numbers should be reflected on the map. These Weed Maps will be used when scouting for weeds, so numbering the bays will make it easier. Create these maps in a way that they can be used to scout for pest and disease at a later date. Depending on the nursery's size, crops and location, we can choose how many employees will be trained to scout for weeds using a "drive-by" approach. The scout will take his/her map out once every two to three weeks depending on the circumstances, and record the findings in the field as they relate to weed pressure

The amount of weed pressure in the containers can be classified as seen in the pictures to the right. Plants with no weeds will not need to be classified. Plants with one to two weeds will be classified as #1. Plants with 50% of the media covered by weeds will be classified as #2. And plants in which 100% of the media is covered by weeds will be classified as #3.

Once the scout collects this information for all locations, he or she can give the information to the person who will coordinate weed removal. Depending on the size of the nursery and circumstances, there should be at least two crews to perform the weeding. These two crews can alternate in order to give the other group a break. The optimal way to coordinate weeding is to start with the plants labeled as "#3" and work your way down to the lesser affected plants.

Once you start to achieve proactive weed control, you will soon no longer have any #3 plants on your maps, but only those plants categorized as #2. The goal is to eventually get to the point where the only plants remaining are categorized as #1, with only one to two weeds per pot.

In order for this program to work properly, it should be implemented in conjunction with the herbicide program. Post- and pre-emergent should be sprayed on roadways and other common areas on a routine basis or as indicated by the scouting report. When it comes to applying pre-emergent herbicides on the crops that were recently weeded, pay careful attention to when that crop received its last herbicide application. If the last herbicide application has expired or will soon expire, schedule another application or apply more herbicide immediately. Apply it at the proper rate, with proper coverage and in a timely manner to increase the herbicide's efficacy.

Identifying weeds throughout the nursery is extremely important to your weed control success. This will help you choose the proper herbicide. To learn more about our herbicides and their specimen labels, visit http://everris.us.com/product/herbicides.

This program was designed to free your nursery of weeds, but it will not be effective without your commitment and attention to best practices. Make a commitment to be weed-free, start utilizing your resources and contact your trusted ICL Specialty Fertilizer Territory Manager for additional support or consultation.

#1 1 to 2 weeds per pot.

#2 50% weed coverage.

#3 100% weed coverage.

ICL Specialty Fertilizers
Where needs take us

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