Te Pànui
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Weeds-spread and control

New weeds can be transported by machinery, livestock, birds and other animals, so multitudes of weeds have the potential to end up on your property. But most weeds come from seed that overwintered in the soil. Grass seeds tend to live no longer than 2 years, whilst broadleaf seeds have the potential to live 5 to 10 years plus. This is because grass seeds usually have softer coats, and broadleaf seeds are better protected by hard seed coats.

Weed Germination

Under the right conditions the seeds will start to germinate. If small seeded weeds are too deep then the energy required to germinate will be greater than what is stored. Even when they germinate, they die before they reach the sun. On the other hand, some types of broadleaf weeds emerge from depths greater than some cultivation methods.

Many weed seeds germinate when they are exposed to light. If we do not disturb the soil they will not grow and over time will die away.

Why weeds should be controlled

Weeds can affect a crop through competition for nutrients, light and water. They can increase costs for establishing and maintaining the crop as well as decrease its yield and quality.

The effect of weeds on a crop depends on the type of weed, how fast it grows and the type of crop you are growing.

Let's say you have a crop of sweetcorn you have just sown. After two weeks the sweetcorn is emerging across most parts of your paddock and there are little weed seedlings coming through as well. If those weed seedlings present are left, then competition can become a big problem.

At the seedling stage there isn't a lot of competition. As weeds and crops grow competition increases. When nutrients are going to weeds instead of the crop there is a decrease in crop size and yield. In the most serious cases, your crop may end up a complete write-off.

Fathen and spurrey weeds in sweetcorn. These are now large enough to be competing with the corn crop and will reduce yields

If weeds are left to grow the likelihood of a good quality crop decreases. Weeds often grow high and can smother a crop or creep through and choke or rot it. They can bring pests and increase disease. Weeds can be good hosts for many insect pests and in some cases attract them to the crop. They

also provide adequate shelter for pests such as rodents and rabbits.

High growing weeds can shade your crop out. This means that the energy the plant needs from the sun to grow is no longer available to the plant. High and bushy weeds can also provide an environment for the crop to rot. If the sun cannot get through to the plant to dry it out and there is minimal wind, then moist conditions can cause a variety of problems including rot.

So nutrient losses are not the only thing that can have a major effect on your crop. Yield, quality and the ability to sell your crop or feed your family is the aim of the day. Weeds decrease your crop yields and quality, so it's no wonder successful croppers have few weeds and excellent weed management practices!

Methods of control

Weeds can be controlled in many ways. The first should be to stop them spreading and establishing in new areas. The next is to stop existing weeds from setting seed and making the problem worse. Good weed control begins with the preceding crop. Reducing weed seed production in the preceding crop and eliminating it all together during fallow period is essential.

If weeds do start to grow, early control is most important. It is much easier to control very small seedlings and they won't have time to affect the crop. Removing large weeds is hard work, and often damages the crop's roots. Again this reduces yields.

Control in organic cropping is usually by mechanical means – hoeing, discing or burying the seedlings. There are some chemicals that can be used – these usually burn the seedling or damage the skin making them dry out.

There are also machines that use very hot steam to kill weeds which also help control pests and diseases.

A simple harrow will give good weed control if used early on small weeds. It can be used to weed in a growing crop if crop plants are large enough and well rooted. Timing is critical for best control and least crop damage.

'*Te Pànui Tips*' are simple fact sheets that cover topics designing organic crop production systems on the East Coast.

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