

## Using Kamba M to kill blue morning glory

The best formulation of dicamba to treat morning glory is known by the trade name of Kamba M<sup>®</sup>, which contains 80g/L of dicamba and 340g/L of MCPA. There are other products that contain the same active ingredients, and they can be substituted if the chemicals are present in the same amounts. Some general purpose lawn weed killers contain both dicamba and MCPA, but they are not in the right proportions for blue morning glory.

Both dicamba and MCPA are widely used herbicides in agriculture and horticulture, but not so common in environmental weed control (which is one of the reasons for this fact sheet).

So, getting the best out of using Kamba M<sup>®</sup> requires some knowledge of how it works and what to do / what not to do. This fact sheet is aimed at giving you a better picture of how to go about getting the best results.

### **The chemical**

Dicamba and MCPA are both selective herbicides, controlling annual and perennial broadleaf weeds, but not killing grasses (if used at the recommended rate). They are synthetic plant growth hormones, acting as a growth regulator.

It has low toxicity to animals and is rapidly excreted in the urine. It has not been found to accumulate in animal tissues.

Dicamba and MCPA are primarily applied and absorbed as a foliar spray. However, dicamba can be taken up by plant roots if applied to the ground. The chemical has a short half life of about 14 days, and is easily broken down in the soil by microbial action.

However, if the soil is dry and low in microbe activity, the chemical can persist for up to 4 weeks. This, combined with the fact that it can be root absorbed, means that care needs to be taken when it is used around plants with a lot of surface roots and if the soil is low in biological activity.

Compounding this is the fact that the chemical doesn't bind with soil particles and can be leached through the soil into the root zone of most plants.

The important message here is that you need to make sure that you only spray to the point of run-off and not contaminate the ground with excessive amounts of spray mixture. Employing sensible spraying practices will ensure that this doesn't happen.

It is also a water soluble herbicide and won't mix with oil-based products like diesel.

### **Toxicity to animals**

Studies have found that both chemicals are only slightly toxic to birds, has low toxicity to fish and aquatic invertebrates, and is non-toxic to bees. It has been rated as posing little threat to wildlife.

Both chemicals rapidly pass through the bodies of animals without being absorbed or metabolised – meaning that they have very little effect on organs.

The product (Kamba M<sup>®</sup>) has a low toxicity to humans. Contact with the skin can cause skin rashes, especially to people with sensitive skin.

### **How to best use Kamba M<sup>®</sup> against blue morning glory**

Kamba M<sup>®</sup> can be used effectively to treat morning glory as a foliar spray only.

The safest way to foliar spray morning glory is when it is growing over the ground or up to 1m into small trees and shrubs. Once the vines get up into trees, then foliar spraying is not the preferred control option.

As Kamba M<sup>®</sup> is a selective herbicide, it won't kill grasses and some other strap-leaved plants.

However, some care must be taken if you are spraying around desirable trees and shrubs that have a shallow root system, as research has shown that non-target plants can absorb the dicamba chemical through their roots if the spraying has been too heavy and a shower of rain comes across not long after (washing the chemical into the shallow root zone). However, by using the correct mixing rate, only spraying enough mixture to wet the leaves, and not spraying when rain is forecast, problems should not be encountered.

The best situations to use Kamba M<sup>®</sup> in are:

- to spray regrowth;
- to spot-spray small infestations; and
- to spray large amounts of morning glory growth across the ground or along a fence.

If the morning glory is growing up trees and shrubs, an effective technique is to cut these vines without treating them, and let them re-sprout. When enough new growth is on the ground, you can then foliar spray the leaves.

The mixing rate for foliar spraying with Kamba M<sup>®</sup> is 3½ ml of herbicide per 1 litre of clean water.

An extra wetting agent isn't really necessary, but if you feel so inclined, the addition of a sticking agent (such as Codacide Oil, Synertrol Oil or Spraytech Oil) which sticks the spray solution to the leaves, would be the best option.

Don't use soaps or detergents as a wetting agent, as these will bind with the herbicide chemical and make the spray solution ineffective. They are also harmful to frogs.

Spray as many of the leaves as you can to 'the point of run-off'. This is where the leaves are wet but not dripping spray solution into the soil.

Take care around waterways. Don't allow the spray mixture to contaminate water. If possible spray from the water edge back towards the land.

## **How to tell if it's working**

Results from foliar spraying may take a couple of weeks to become evident, and it may take a couple of months for the vines to look like they are dying off – depending on the growing conditions.

If you've foliar sprayed, it is importantly that you don't damage the plants. Don't cut them with a brush-cutter; don't pull them out of the trees; don't spray them with other chemicals; don't burn the area. This will only stop the herbicide from doing its work properly.

Morning glory is palatable to stock, so don't let grazing animals eat the treated material before the plant has had a chance to translocate it through its system. If possible, exclude stock for at least a week.

The underground stems may resprout after the herbicide treatment. This is a natural response by the plant to the stress of dying. The plant is trying to survive. Don't worry about these shoots, as you can't really treat them until they grow more leaves, and they may still die as the remaining herbicide in their system kicks in. The tell-tale signs of Kamba M<sup>®</sup> effects on regrowth are that the growth will be misshapen.

So, the consistent message is ... be patient and have faith. Give the herbicide at least 3 months to do its stuff.

## **Follow up**

Don't expect Kamba M<sup>®</sup> to be the silver bullet. You'll need to monitor the problem and be prepared for follow-up control over the next couple of years at least.

That may involve tracing the vines that you've missed – they'll be easy to find as they'll have healthy green leaves six months after the initial treatment.

One thing in your favour is that morning glory doesn't produce seeds. So do a good job and kill the plants you've got, and you won't have any more to deal with later.

The resprouting vine stems should not be treated as soon as they appear. You really need to leave them for an extended period of time to ensure that enough leaves are available to absorb an adequate amount of herbicide to kill the remaining stem and root. Respraying too early will just be a waste of your time and herbicide.

As with using any herbicide, read and follow the directions on the label. Wear appropriate protective clothes – at least a long sleeved shirt and long pants. Store it appropriately and securely.