Treatment Guide for Imported Chrysanthemum Cut Flowers from Viet Nam

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Version history

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February 2022	1.0	Publication of 1st version of the Treatment Guide for Imported Chrysanthemum Cut Flowers from Viet Nam

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Introduction

Some flower and foliage species may be propagated from stem material. The current policy of the Department of Agriculture, Water and the Environment (the department) is that all propagable cut flowers and foliage imported into Australia must be devitalised. Primarily this is performed using glyphosate as outlined in the Imported Cut Flower Treatment Guide—Version 2.2 available on the department's website, https://www.awe.gov.au/biosecurity-trade/import/goods/plant-products/cut-flowers-foliage/treatment-guide.

In Early 2022 the department approved a trial of an alternative chemical dip treatment, metsulfuron-methyl for devitalisation of fresh chrysanthemum flowers from Viet Nam.

This guide provides information about the department's devitalisation requirements specific to metsulfuron-methyl devitalisation of fresh chrysanthemum flowers from Viet Nam.

Treatments outlined in this guideline are currently only permitted to be used on fresh chrysanthemum flowers from Viet Nam. Application of metsulfuron-methyl on other flower types, or from other countries of export is currently not permitted.

Treatments are subject to change and should always be verified be searching the department's biosecurity import condition database (BICON).

Further information

If you require further information about this process please contact:

Cut Flower Imports

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Cut flower devitalisation treatments

The following chemical dips have been approved for use in devitalising propagable cut flowers.

Metsulfuron-methyl treatment and dosage

Any metsulfuron-methyl-based product can be used; the dosage is calculated based on the amount of active ingredient (metsulfuron-methyl) in the product.

Table 1— Metsulfuron-methyl dosage and dipping requirements for cut flowers

Flower species	Department approved treatment rate using metsulfuron-methyl 200g/kg	Final concentration of active ingredient, metsulfuron-methyl g/L in treatment solution	Dipping method
Chrysanthemum spp. from Viet Nam only	0.67g/L	0.1333g/L	20-minute immersion of stems to at least 35cm from the cut end

Example metsulfuron-methyl dosage calculations

The treatment dosage depends on the amount of active ingredient in the metsulfuron-methyl concentrate. The general formula for working out the amount of metsulfuron-methyl concentrate to use is:

Weight of concentrate required (gram) =

(metsulfuron-methyl dosage (g/Kg) x Volume of solution required in ml)/(grams of active ingredient/Kg)

A. *Chrysanthemum spp.* treated with metsulfuron-methyl 200g/kg

0.67 grams per litre is the dilution rate of metsulfuron-methyl 200g/kg that is required to make a 0.1333g/L solution of metsulfuron-methyl for devitalisation of the *Chrysanthemum spp*.

A treatment solution of 0.1333g/L metsulfuron-methyl can be prepared by mixing 20 grams of metsulfuron-methyl 200g/kg in 30L of water.

B. *Chrysanthemum* spp. treated with metsulfuron-methyl 600g/kg

0.22 grams per litre is the dilution rate of metsulfuron-methyl 600g/kg that is required to make a 0.1333g/L solution of metsulfuron-methyl for devitalisation of the *Chrysanthemum spp.*

A treatment solution of 0.1333g/L metsulfuron-methyl can be prepared by mixing 6.665 grams of metsulfuron-methyl 600g/kg in 30L of water.

Cut flower devitalisation treatment procedure

The devitalisation procedure involves dipping flower and foliage stems in a metsulfuron-methyl solution. During the treatment the metsulfuron-methyl is taken up into the stems of the plant by a process called transpiration. To achieve an effective treatment, the metsulfuron-methyl dosage, the dipping depth and the duration of the treatment must meet the requirements specified in the following procedure.

The treatment provider should also implement procedures to avoid mixing treated and untreated flowers. These should incorporate:

- how to separate treated and untreated flowers.
- how to keep flowers for export to Australia segregated from flowers for other markets.
- labelling the flowers for Australian markets.

Work health and safety

Metsulfuron-methyl may cause irritation if it comes in contact with eyes or skin. Always use personal protective equipment such as safety glasses and gloves and wash your hands thoroughly after use.

You must consult the Material Safety Data Sheet for the metsulfuron-methyl product you are using for local regulatory, safety, storage and disposal considerations.

Preparation of devitalisation vessels

1) Measure the amount of water required to fill the devitalisation vessel to a depth of 35cm or, for flowers with shorter stems, there must be enough water to reach 5cm below the flower head. Any type of vessel may be used as long as it is deep enough to accommodate the flowers being treated.
2) A permanent mark should be put inside the vessel so that the level of the solution can be checked and maintained during the devitalisation process.

Mixing the dipping solution

1) The metsulfuron-methyl concentrate used for the treatment must be within the 'use by date' on the label. Concentrate should be stored as specified by the manufacturer on the container and not in direct sunlight.
2) To determine the amount of metsulfuron-methyl concentrate needed to make the dipping solution check:
   a) that only Chrysanthemum cut flowers will be treated using this method type.
   b) the amount of water needed to fill the devitalisation vessel to the required depth.
   c) the amount of active ingredient in the metsulfuron-methyl concentrate.

   Calculate the amount of metsulfuron-methyl concentrate needed using this information and the example calculations provided in this document.
3) Add the water to the devitalisation vessel and then measure and add the metsulfuron-methyl concentrate to the water and mix thoroughly.
4) When making the dipping solution you must prepare additional dipping solution at the correct concentration for topping up the vessel during treatment.
5) Dipping solution should not be kept for more than two days. This should be monitored by using labelling and record keeping (for example, the date and time solution was mixed, concentrate used).

Preparation of flowers

1) Flower stems should be cut within two hours of treatment to ensure that:
    - the mixture can be readily absorbed up the flower stems.
    - all the stems are immersed to the correct depth.
2) Flowers that have been stored in cool rooms should be brought to room temperature before the treatment.

Devitalising the flowers

1) Set up the devitalisation vessel in a room with adequate air flow and ambient temperatures close to 18° to 21°C. High humidity in the room will also improve uptake of the metsulfuron-methyl. Fans may be used to circulate the air.
2) Before placing the flowers in the dipping solution remove or fold down any plastic sleeves or other coverings to ensure effective transpiration.
3) The stems must be immersed in the dipping solution for at least 20 minutes. Timing should commence when the last bunch has been immersed.
4) Remove any leaves from the dipping solution after each treatment. If there is a significant amount of organic material in the treatment solution, then it should be discarded, and fresh solution made up for use.
5) Top up the vessel with additional dipping solution as required to ensure correct dipping depth is being maintained.

Phytosanitary requirements for treated flowers and foliage

Each consignment of flowers that have been devitalised overseas must be accompanied by an original Phytosanitary Certificate that describes how the flowers have been treated. If flowers have been treated with fungicide for powdery mildew this also needs to be recorded on the Phytosanitary certificate. The required additional declarations are explained in the biosecurity import conditions database (BICON, https://bicon.agriculture.gov.au).

Phytosanitary Certificates must meet the minimum documentary requirements policy.

Consignments of chrysanthemum flowers from Viet Nam arriving without the correct documentation and endorsements (including original documents appropriate concentration of metsulfuron-methyl, duration of treatment, dipping method) will be subject export or destruction.