

# 2

Treatment Manual

## Chemical Treatments

### *Dips*

---

#### Contents

Overview	<a href="#">page-2-12-1</a>
Safety and Dip Treatment Equipment and Materials	<a href="#">page-2-12-1</a>
Dip Treatment Procedures	<a href="#">page-2-12-3</a>
Safety Responsibilities	<a href="#">page-2-12-5</a>

---

#### Overview

As with other treatments, chemical dips require careful planning and preparation. Make sure you have all the necessary safety and treatment equipment and materials ready before you start the dip treatment procedure. When you handle pesticides, always comply with the pesticide Label instructions, and State and local regulations.

---

#### Safety and Dip Treatment Equipment and Materials

The following lists include safety equipment (Personal Protective Equipment, PPE) and basic material that you will need for dip treatments. However, other materials may be required by additional Label requirements that are specific to chemical being used.

##### **Personal Protective Equipment (PPE)**

Always check the Label and Material Safety and Data Sheet (MSDS) for additional requirements of personal protective equipment. The following is a basic list of PPE that you will need for dip treatments:

- ◆ chemical-resistant footwear (rubber or neoprene boots)
- ◆ chemical-resistant gloves (neoprene)
- ◆ chemical-resistant headgear for overhead exposure
- ◆ chemical-resistant rain suit with hood
- ◆ protective eye wear (goggles)
- ◆ respirator (per Label and MSDS requirements)

##### **Dip Treatment Equipment and Materials**

Always check the Label for additional requirements for equipment and materials. The following is a basic list of equipment and materials you will need for dip treatments:

◆ Newspaper or any other absorbent paper



Place plastic backed paper on pallets prior to covering with paper and/or absorbent paper to preclude the pesticide being absorbed onto the wood.

◆ Pesticides



Pesticides should be fresh (not over 1 year old). Labels and MSDS must be attached to the pesticide container and all instructions must be followed.

- ◆ Mixing containers and dipping containers must be provided with lids to prevent spills during transportation and storage.
- ◆ New boxes (when reconditioning or excess contamination of original boxes is not possible)
- ◆ Fans<sup>1</sup>



A mechanical exhaust is the preferred method of aeration when it is specifically installed to remove chemical fumes from the treatment area. Fans may be used if they do not cause airborne pesticides to contaminate the treatment facility or the breathable air. The flow of air should be across the dip vat/container and away from people in the treatment area.

◆ Pallets<sup>1</sup>



Place plastic backed paper on pallets prior to covering with paper and/or absorbent paper to preclude the pesticide being absorbed onto the wood.

- ◆ Plastic bags (4 to 6 mil plastic)<sup>1</sup>
- ◆ Shear scissors
- ◆ Sponges
- ◆ Liquid soap<sup>2</sup>
- ◆ Packing material<sup>1</sup>

---

<sup>1</sup> This equipment will be provided by USDA when available.  
<sup>2</sup> This equipment will be provided by USDA when available.

---

## Dip Treatment Procedures

### Step 1—Plan for the Dip Treatment

Before you start the dip treatment, inform the customer (Broker/Importer) of the specific material and personal protective equipment (PPE) that will be needed to perform the dip treatment procedure. All required materials and equipment must be available at the time of treatment.

### Step 2—Designate Restricted Use Areas

Designate the following restricted use areas:

- ◆ **Measuring and mixing area-** The measuring and mixing area for the specific pesticide(s) must be in a well ventilated area away from food preparation, eating areas, and offices. Areas that contain mechanical exhaust systems are preferred.
- ◆ **Plant material dipping area-** The plant material dipping area must be an area where access is limited by a barricade or warning signs. Areas that contain mechanical exhaust systems are preferred.
- ◆ **Plant material drying area-** The plant material drying area must have proper air circulation and exhaust ventilation. These areas should be closed to the dipping area. The route from the plant dripping area to the drying area should be lined with plastic backed absorbent paper or plastic and paper to catch excess pesticide solution.

### Step 3—Prepare Plant Material

Prepare the plant material for the dip treatment according to the PPQ Treatment Manual and pesticide Label requirements.

### Step 4—Prepare the Pesticide Solution



Wear personal protective equipment (PPE) and keep the exhaust system running when you are preparing pesticide solutions. To minimize your exposure to the pesticide dust or airborne particles, keep the pesticide between you and the exhaust.

1. Measure the amount of water required for the treatment.
2. Measure the amount of pesticide required for the treatment.



It is important to use fresh chemicals for every solution. If questions arise during this procedure, stop and seek assistance from the Center for Plant Health Science & Technology (CPHST) (Tel: 919-855-7450).

3. Prepare a pesticide paste as follows:

- A. Add the previously measured amount of water into a clean and empty container, for example, an empty can or plastic container.
  - B. Form a paste (with dry pesticides) by adding the measured pesticide to the small amount of water and mix gently
  - C. Dilute the paste by slowly adding more water from the previously measured water
  - D. Slowly add the concentrated solution(s) to the rest of the measured water
4. Add some drops of liquid soap to the solution (soap is used as a sticking agent).
  5. Mix the final solution by stirring it gently.

#### **Step 5—Dip the Plants in the Pesticide Solution**

Dip the plants in the solution for the time required by the PPQ Treatment Manual.

#### **Step 6—Remove the Plants from the Pesticide Solution**

Remove the plants from the solution and allow excess solution to drip into the dipping container.

#### **Step 7—Dry the Plants**

Place the plants on newspaper covered pallets and allow them to dry (make sure to space the plants out for maximum drying).



Plants should be dried thoroughly before releasing them to the customer.

#### **Step 8—Disinfect Original Shipping Containers**

Disinfect the original shipping containers with a sponge containing the pesticide solution. The plant material may be packed with new packing material in a previously used container that has been disinfected.

#### **Step 9—Clean Up the Treatment Area and Equipment**

Discard all empty containers, excess pesticides, packing materials, plastic bags/backing materials, and newspaper/absorbent paper in compliance with instructions on the Label and State/Local regulations. Decontaminate all treatment areas and equipment while you are wearing your PPE.

#### **Step 10—Release the Cargo**

After the plant material is dry, release it to the customer or broker if agreed to by the airline and if it has been released by Customs.

## Safety Responsibilities

The PPQ Officer is responsible for the following safety issues:

- ◆ Make the broker/importer aware of his or her responsibilities as it pertains to:
  - ❖ materials
  - ❖ Personal Protective Equipment (PPE)
  - ❖ health hazard and safety concerns when performing the dip treatment process
- ◆ All personnel involved in the dip treatment process are required to wear the appropriate and Label required PPE while performing the treatment. PPQ Officers may need to wear PPE if the dip treatment process area prevents them from observing the process from outside the restricted area.
- ◆ Designated dip treatment process areas must be located away from food preparation, eating areas, and offices. All efforts should be made to place dip treatment processes in an area containing a mechanical exhaust.
- ◆ The broker/importer personnel involved with treatments must be aware and briefed on the location of the emergency eyewash and all other required safety equipment. They also need to be aware of the areas that they will be limited to working within and any other specific restrictions determined by the PPQ Officer in charge of the process. The PPQ Officer monitoring the process should be aware of procedures to be followed in the event of an accidental release of the pesticide or an injury to one of the broker/importer's personnel.
- ◆ The broker/importer's personnel should shower as soon as possible after performing a dip treatment. The PPQ Officer should ensure that personnel are aware of the location and route to the shower. Guidance should also include instruction on how to disrobe and dispose of clothing used during dip treatment processes. All contaminated clothing and PPE must be removed before entering the shower room. Contaminated clothing should be placed in plastic bags and PPE in Separate plastic bags.
- ◆ Broker/importer personnel should be informed that clothes worn during treatment must be washed in hot water with detergent and that they should be washed separately from other clothes
- ◆ The plant material should be released to the Broker/importer only if they are using/provide a vehicle that has a compartment physically separated from the cab, for example, a pick-up truck or tractor trailer.

