

## **J: 1, 3-Dicholopropene (Telone)**

These permit conditions apply to the use of pesticides containing the active ingredient (a.i.) *1,3-Dichloropropene* (1,3-D) when applied by mechanical soil injection or drip application systems to fields used for the production of agricultural crops. They should be used in addition to the provisions in the *California Food and Agricultural Code* (FAC), *Title 3, California Code of Regulations* (3 CCR) and product labeling.

### **Use Limitations**

Each request to use 1,3-D will be approved using the following process:

1. A registrant-authorized pest control adviser electronically submits a recommendation for 1,3-D use to the registrant's agent for approval.
2. The registrant's agent electronically checks the recommendation for compliance with the product labeling and permit conditions, including compliance with the maximum allowable amount of 1,3-D (332 pounds of a.i. per acre).
3. The registrant's agent validates the calculation of total adjusted pounds of 1,3-D requested, taking into consideration all application factors described by the permit.
4. The registrant's agent checks the request against the available pounds within the township allotment. If the amount requested is available, the recommendation is approved and a Notice of Intent (NOI) shall be filed with the county agricultural commissioner (CAC) **96 hours** prior to an application. If there is not enough 1,3-D available, a note is displayed, identifying available Adjusted Total Pounds (ATP) of 1,3-D and allowing a modified request for available material.
5. When use in any township exceeds the authorized cap for that township, both DPR and the CAC will receive an informal notification from the registrant or registrant's agent.

### **Township caps**

An annual township (36 square-mile area) cap is necessary to minimize the levels of the amount of 1,3-D in the atmosphere and mitigate the potential for chronic exposure. This township cap is based on the ATP of 1, 3-D used, which is calculated using the percentage of a.i. in different 1,3-D products. **The township cap in California is 136,000 Adjusted Total Pounds (ATP) per calendar year.**

### **Time of Year Restrictions**

**All 1,3-D applications are prohibited during December to address air concentration uncertainties and potentially high seasonal exposures.**

## **CONDITIONS FOR ALL APPLICATION METHODS**

### **Notice of Intent (NOI)**

NOI's for field fumigations are due 96 hours prior to the start of application. Include a detailed map showing exact distances to sensitive sites and occupied structures that are within a ¼ mile of the application site. The permittee shall provide a valid recommendation to the CAC from a registrant-authorized pest control adviser before the NOI is approved and the application is allowed.

In addition to the information required in 3 CCR section 6434, the following information shall be provided on the NOI:

1. Starting ATP balance available in the township prior to the proposed application
2. Application depth and type, including 4-digit field fumigation method (FFM) code
3. The total gallons (TG) of the pesticide formulation
4. The pounds per gallon (lbs./gal) of 1,3-D formulation
5. The percent by weight of a.i., expressed as a decimal (.XX)
6. The total pounds (TP) of 1,3-D a.i. applied
7. The application factor (AF) appropriate for the proposed application from Table 2
8. The ATP for the proposed application

### **School Properties**

When a school property, Kindergarten through 12<sup>th</sup> grade, is within 1/4 mile (1320 feet) of a fumigation block, the injection must be completed 36 hours prior to the start of a school session. School sessions are those times when students are attending scheduled classes.

### **Restrictions for occupied structures**

Applications are prohibited within 100 feet of any occupied structure, measured from the perimeter of the application block to any occupied residences, occupied onsite employee housing, schools, convalescent homes, hospitals, or other similar sites identified by the CAC. If a structure is within 100 feet of the application block, no person shall be present at this structure at any time during the application and during the seven-consecutive day period after the application is complete. This restriction applies even on soils that have not experienced a 1,3-D treatment in the previous two years.

### **Entry into the application block**

Entry into the application block (including early entry that would otherwise be permitted by the Worker Protection Standard of 3CCR 6770) by any person, other than a government official mandated to regulate pesticide use or a properly trained and equipped handler

who is performing a handling task permitted by the product labeling, is prohibited from the start of the application until seven (7) days after the application is complete. This prohibition applies to all applications, including all tarp types and untarped applications.

### Tarp perforation and/or removal

Tarps that do not meet the requirements for any percentage reduction in buffer zone distance mentioned on 1,3-D/chloropicrin labels, such as standard polyethylene tarps, may be perforated and/or removed according to fumigant labeling directions.

In contrast, tarps that meet the requirements for any percentage reduction in buffer zone distance mentioned on 1,3-D/chloropicrin labels (<http://www.epa.gov/soil-fumigants/tarps%23chloropicrin-1-3d#chloropicrin-1-3d>) must not be perforated until a minimum of nine (9) days (216 hours) have elapsed after the application is complete, and must not be removed until a minimum of one (1) day (24 hours) after perforation, unless a weather condition exists that necessitates early tarp perforation or removal as specified by the fumigant label.

## CALCULATING ADJUSTED TOTAL POUNDS

### Definition of Adjusted Total Pounds

Adjusted Total Pounds (ATP) is the total quantity of 1,3-D active ingredient that is applied during a particular application, adjusted by an Application Factor (AF). The AF adjusts for the relative amount of 1,3-D that is potentially present in the air near the treated field.

### Purpose for calculating Adjusted Total Pounds

The purpose for calculating the ATP is to verify that a recommendation for 1,3-D use is in compliance with the maximum allowable application rate. The maximum allowable application rate is 332 pounds of 1,3-D active ingredient per acre. If a pest control adviser submits a recommendation for 1,3-D use that exceeds this maximum allowable rate per acre, the registrant's agent will not approve the recommendation.

### Determining the Application Factor (AF)

The Application Factor (AF) is a numerical value determined by DPR scientists that indicates the relative amount of 1,3-D that is potentially present in the air near treated fields. The higher the AF value, the greater the proportion of the applied 1,3-D that may escape into the air. AF values are based on the geographic location, month, and method of the specific application. The AF values are used in the formula to calculate the ATP used during the application. Use Table 2 below to determine the AF.

**Table 1. 1,3-D Field Fumigation Method (FFM) Codes for Pesticide Use Reporting**

Regulation Section	Field Fumigation Method	FFM Code
<b>6448.1</b>	<b>1,3_Dichloropropene Fumigation methods (with or without chloropicrin)</b>	<b>1200 series</b>
6448.1(d)(1)	Nontarpaulin/Shallow/Broadcast or Bed	1201*
6448.1(d)(2)	Tarpaulin/Shallow/Broadcast	1202*
	Tarpaulin/Shallow/Bed	1203*
6448.1(d)(3)	Nontarpaulin/Shallow/Broadcast /Three Water Treatments	1204
6448.1(d)(4)	Tarpaulin/Shallow/Bed/Three Water Treatments	1205
6448.1(d)(5)	Nontarpaulin/Deep/Broadcast or Bed	1206
6448.1(d)(6)	Tarpaulin/Deep/Broadcast	1207
	Tarpaulin/Deep/Bed	1208
6448.1(d)(7)	Chemigation (Drip System)/Tarpaulin	1209
6448.1(d)(5)	Nontarpaulin/Deep/Strip	1210
6448.1(d)(5)	Nontarpaulin/Deep/Strip/GPS-Targeted	1211
6448.1(d)(2)	Tarpaulin/Shallow/Broadcast with tarp eligible for 60% credit	1242
	Tarpaulin/Shallow/Bed with tarp eligible for 60% credit	1243*
6448.1(d)(4)	Tarpaulin/Shallow/Bed/Three Water Treatment with tarp eligible for 60% credit	1245
6448.1(d)(6)	Tarpaulin/Deep/Broadcast with tarp eligible for 60% credit	1247
	Tarpaulin/Deep/Bed' with tarp eligible for 60% credit	1248
6448.1(d)(6)	Tarpaulin/Deep/Broadcast-strip-with tarp eligible for 60% credit	1249
6448.1(d)(7)	Chemigation (Drip System)/Tarpaulin-with tarp eligible for 60% credit	1259
	Other label method for 1,3-Dichloropropene (with or without chloropicrin)**	1290

\*Method prohibited within the San Joaquin Valley, Southeast Desert, and Ventura nonattainment areas during May 1- October 31.

**Table 2. Determining the Application Factor (AF)**

Location <sup>i</sup>	Tarp Type <sup>ii</sup>	Months <sup>iii</sup>	Fumigation Method <sup>iv</sup>	Application Factor	
Within SJV	non-60% credit	Jan	Shallow	Prohibited	
			Deep	1.9	
			Drip	1.16	
		Feb-Nov	Shallow	1.9	
			Deep	1.0	
			Drip	1.16	
	60% credit	Jan	Shallow	0.6	
			Deep	0.6	
			Strip	1.2	
			Drip	1.16	
		Feb-Nov	Shallow	0.3	
			Deep	0.3	
			Strip	0.6	
			Drip	1.16	
	Outside SJV	non-60% credit	Jan	Shallow	2.3
				Deep	1.2
Drip				1.16	
Feb-Nov			Shallow	1.9	
			Deep	1.0	
			Drip	1.16	
60% credit		Jan	Shallow	0.6	
			Deep	0.6	
			Strip	1.2	
			Drip	1.16	
		Feb-Nov	Shallow	0.3	
			Deep	0.3	
			Strip	0.6	
			Drip	1.16	

<sup>i</sup>Within SJV - Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus and Tulare Counties

Outside SJV - All other counties in California

<sup>ii</sup>Tarp Type: 60% Credit - Only DPR-approved tarp assigned a 60% buffer zone credit for products containing both chloropicrin and 1,3-D (<http://www.cdpr.ca.gov/docs/emon/pubs/tac/tarpaulins.htm>).

Non-60% Credit - Either the tarp is not DPR-approved for a 60% buffer zone reduction for chloropicrin and 1,3-D products or the application is untarped.

<sup>iii</sup>All applications are prohibited during December.

<sup>iv</sup>Fumigation Methods consist of -

Shallow broadcast - shank injection less than 18 inches deep

Deep broadcast - shank injection 18 inches or deeper

Strip - shank injection alternating with untreated area

Drip - all chemigation using drip irrigation system whether on soil surface or buried, regardless of depth

**Application rates - maximum gallons per acre (M gal/A)**

**To determine the maximum number of gallons per acre of pesticide formulation (M gal/A):**

Maximum application rate in gal/A = maximum lbs./A divided by lbs./gal

The maximum lbs./A has been set at 332. Therefore: **Divide maximum lbs./A (332) by lbs./gal**

Because percentages of a.i. differ in various 1,3-D products, the procedures below describe a method to ensure that neither the maximum rate nor the township limit is exceeded. Additionally, this procedure takes into account percentages of 1,3-D a.i. within different formulated products, allowing more gallons per acre (gal/A) when the product has a lower percentage of 1,3-D or fewer gal/A if the product has a higher percentage of 1,3-D. Use the following steps:

1. The gal/A of pesticide formulation shall be based on the number of pounds per acre (lbs./A) of 1,3-D a.i.
  - a) The maximum allowable amount of 1,3-D shall be 332 lbs. of a.i./A
  - b) See pesticide labeling for detailed rate recommendations and rate calculation instructions.
2. Use the following information to calculate the maximum gal/A allowed for each application:
  - a) The pounds per gallon (lbs./gal) for the pesticide formulation
  - b) The percentage by weight (XX%) of 1,3-D in the pesticide formulation, expressed as a decimal (.XX)
  - c) The pounds of 1,3-D per gallon (1,3-D/gal) for the pesticide formulation
  - d) The maximum lbs./A for the application (332)

Maximum application rates cannot exceed labeling maximum rates.

**Calculating the Adjusted Total Pounds (ATP)**

The Adjusted Total Pounds (ATP) for each application shall be calculated based on the following:

1. The total gallons (TG) of the pesticide formulation
2. The lbs./gal for the pesticide formulation
3. The percent by weight (XX%) of 1,3-D in the pesticide formulation, expressed as a decimal (.XX)\*
4. The total pounds (TP) of 1,3-D\*\*
5. The application factor (AF) as determined from Table 1.

The ATP for each application shall be calculated using the following formula: **TG x lbs./gal x (.XX) x AF = ATP**

\*To convert the 1,3-D percentage by weight (XX%) to a decimal, divide XX% by 100 = .XX

\*\*To find the TP, multiply, TG x lbs./gal x (.XX) = TP

To find the ATP, multiply, TP x AF = ATP