

# Module 2

## Soil Fumigant RED Requirements

# Overview of Soil Fumigant Uses

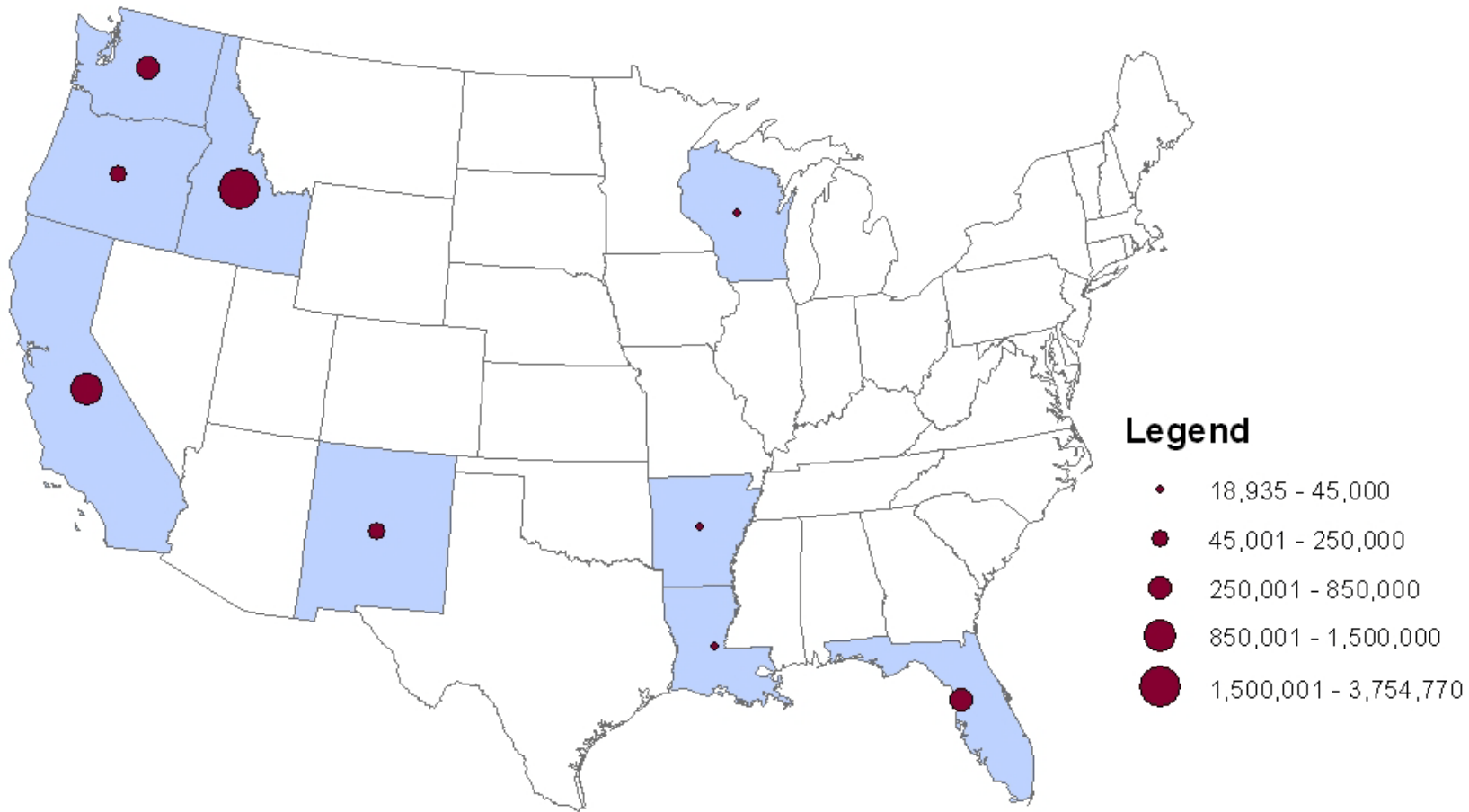
# Soil Fumigant Use By Crop

Crop	Chloropicrin		Metam Sodium Metam Potassium		Methyl Bromide		1,3- Dichloropropene		Methyl Iodide		Total Pounds
	Pounds	PCT	Pounds	PCT	Pounds	PCT	Pounds	PCT	Pounds	PCT	
<b>Potatoes</b>	300,000	2	32,500,000	20			12,700,000	10			45,500,000
<b>Strawberries</b>	3,500,000	60	200,000	2	4,400,000	50	500,000	5			8,600,000
<b>Tomatoes</b>	1,400,000	10	3,100,000	10	3,700,000	10	200,000	<1	200,000	<1	8,600,000
<b>Carrots</b>			7,400,000	50			1,100,000	10			8,500,000
<b>Tobacco</b>	1,600,000	20			60,000	<1	4,800,000	20			6,460,000
<b>Onions</b>	300,000	5	3,400,000	15			1,400,000	5			5,100,000
<b>Peppers</b>	1,100,000	20	1,900,000	15	1,300,000	15	600,000	10			4,900,000
<b>Watermelons</b>	400,000	5	1,600,000	10	700,000	5	600,000	10			3,300,000
<b>Cotton</b>	20,000	<1	60,000	<1			2,900,000	<1			2,980,000
<b>Cucumbers</b>	500,000	5	200,000	2	300,000	2	1,200,000	15			2,200,000
<b>Peanuts</b>	50,000	<1	300,000	<1			1,700,000	5			2,050,000



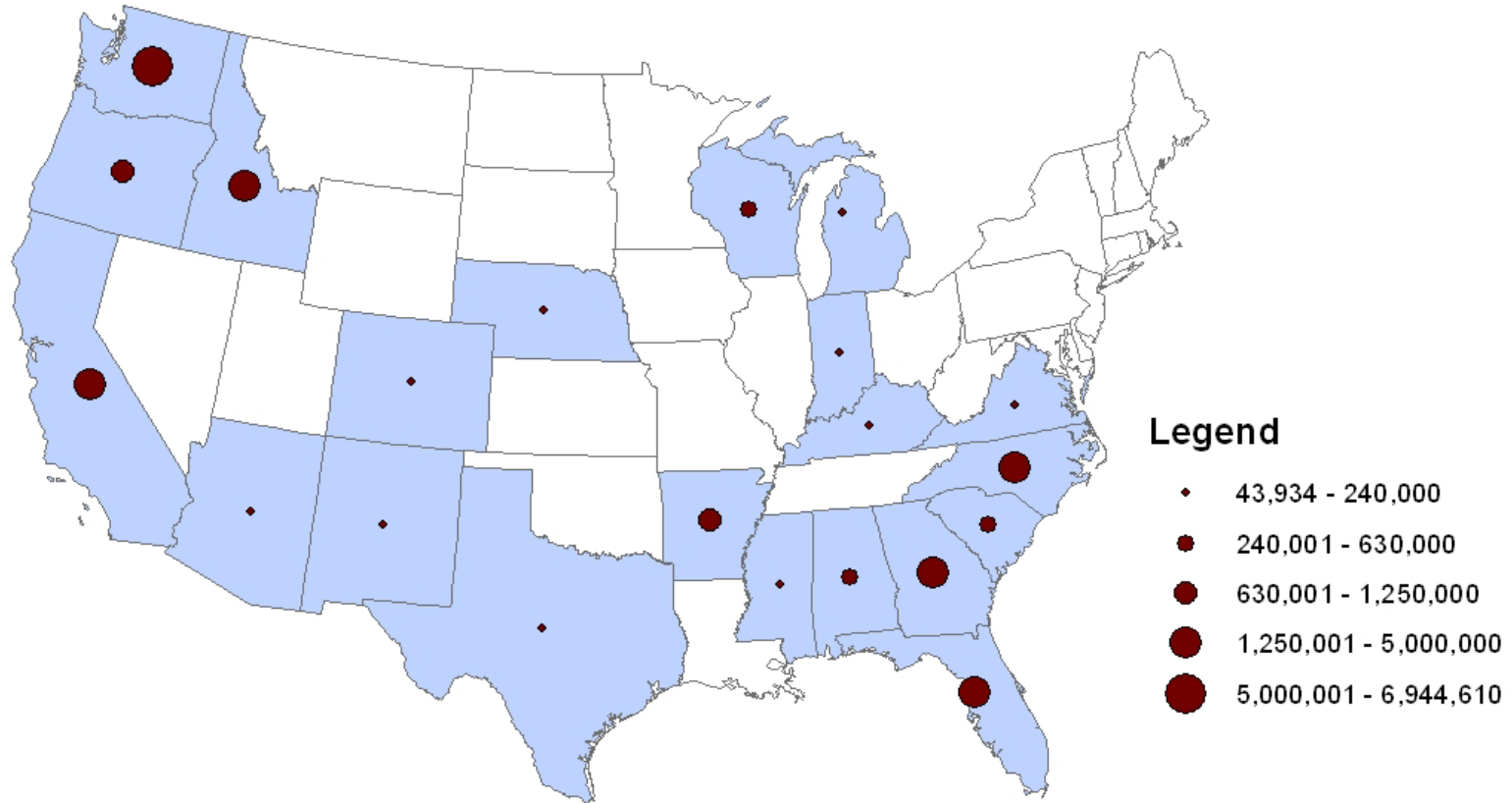


# Metam Potassium Pounds Applied

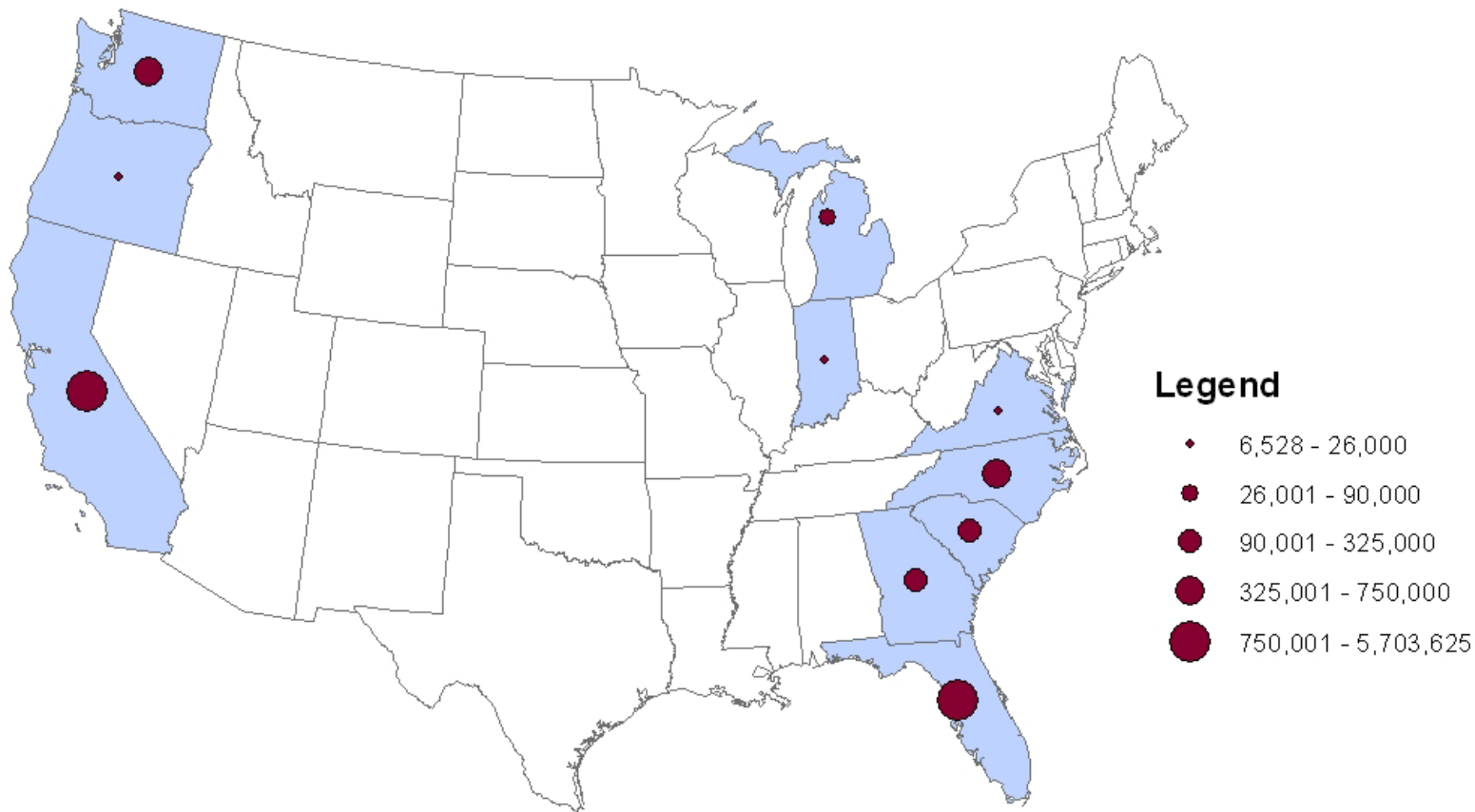


EPA proprietary data, Average usage 2006 through 2008

# 1,3-Dichloropropene Pounds Applied

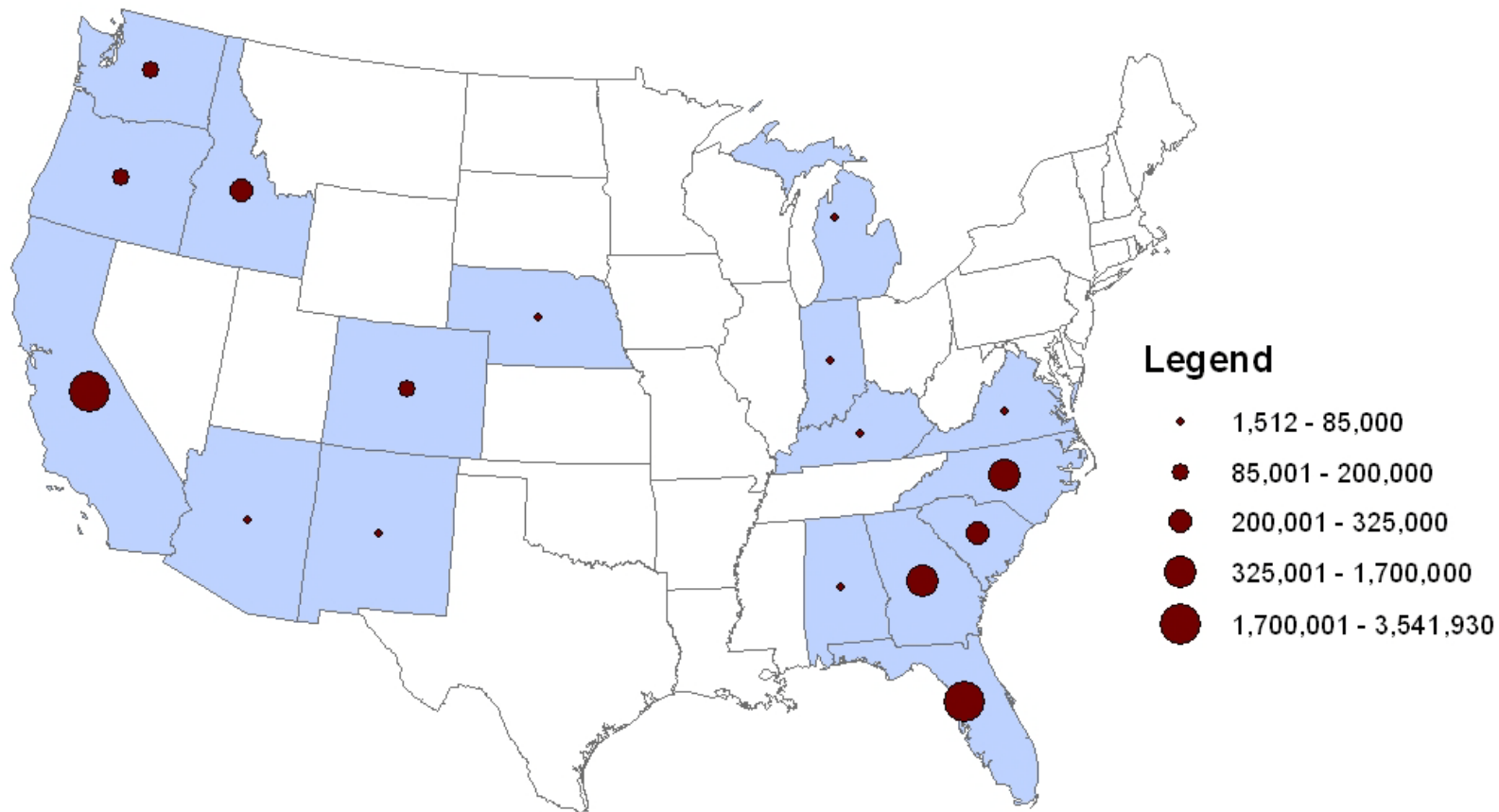


# Methyl Bromide Pounds Applied



EPA proprietary data, Average usage 2006 through 2008

# Chloropicrin Pounds Applied



EPA proprietary data, Average usage 2006 through 2008

# Application Methods

	Methyl Bromide	Chloropicrin	Metam Sodium/ Potassium	Dazomet
Shank injection	●	●	●	
Spray blade			●	
Chemigation, drip		●	●	
Chemigation, sprinkler			●	
Chemigation, center pivot			●	
Hand held probe for tree holes	●	●		
Rotor tiller			●	●
Hot gas	●			



Shank bedded



Shank broadcast



shank no tarp



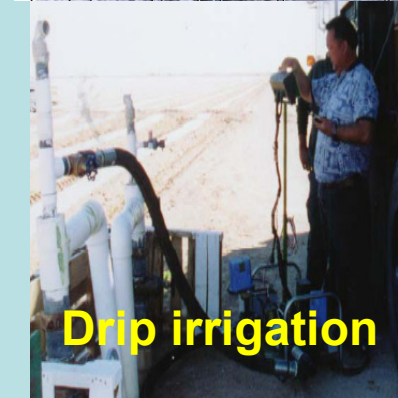
Center pivot



Tree hole



Spray blade



Drip irrigation



Rotor tiller



Hot gas



# Shank Injection Applications



# Shank Injection Applications



# Shank Injection Applications

Untarped broadcast



# Chemigation Applications





# Chemigation Applications



# Chemigation Applications





# Other Application Methods



# Review Questions

## *True or False?*

1. Fumigation of soil for potatoes is a major use.
2. Fumigant usage across the country is similar.
3. Application methods differ by chemical.



# Summary

- Use of soil fumigants on major food crops ranges from about 2 to 45.5 million pounds per year
- Largest use on potatoes, strawberries, tomatoes & carrots
  - Data lacking for nursery uses
- Amounts used vary by chemical, application method & geographic location

# EPA Contact Information

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