How to Mix Insecticides

1. **How to mix wettable powder for spraying:**

   If you have 50 percent Carbaryl wettable powder and want to make 50 gallons of spray containing 0.5 percent Carbaryl, use the following formula: (water weighs 8.345 pounds/gallon)

   \[
   \text{Gallons desired} \times \text{weight of water} \times \text{desired concentration} = \text{pounds of wettable powder}
   \]

   \[
   \frac{\text{50 gallons} \times 8.345 \times 0.5}{50} = 4.17 \text{ pounds}
   \]

   4.17 pounds of the 50 percent Carbaryl will be used to make 50 gallons of 0.5 percent Carbaryl.

2. **How to mix emulsifiable concentrate for spraying:**

   If you have 50 percent Malathion emulsifiable concentrate and want to make 2 percent spray, use the following formula:

   \[
   \frac{\% \text{ insecticide}}{\text{Desired concentration}} = \frac{50}{2} = 25
   \]

   The correct dilution is 1 part of the Malathion to 25 parts of water.

3. **How to mix dusts:**

   If you have 25 percent Malathion dust and want to make 100 pounds of dust containing 5 percent Malathion, use the following formula:

   \[
   \frac{\text{Desired concentration} \times \text{100 pounds}}{\% \text{ active ingredient in insecticide used}} = \text{factor}
   \]

   \[
   \frac{5 \times 100}{25} = 20
   \]

   20 pounds of the Malathion dust should be added to 80 pounds diluents to make 100 pounds of 5 percent dust.