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)

$$\frac{Gallons\ desired\ \times weight\ of\ water\ \times desired\ concentration}{\%\ active\ ingredient\ in\ insecticide\ used} = pounds\ of\ wettable\ powder$$

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

   4.17 pounds of the 50 percent Carbaryl will 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 a 2 percent spray, use the following formula:

$$\frac{\%\ insecticide}{Desired\ concentration} = \frac{50}{2} = 25$$

   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:

$$\frac{Desired\ concentration\ \times Desired\ Weight}{\%\ active\ ingredient\ in\ insecticide\ used} = factor$$

$$\frac{5 \times 100}{25} = 20$$

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