

**Section 6**

**Exercises on Determination of Pesticide and Water Needs**

**-- Mixing Calculations**

*[NOTE – Formulas for these calculations are in the Appendix, and will be provided on quizzes and exams]*

**Problem One**

A 22 acre cotton field needs to be sprayed with Ammo at 3.25 fluid ounces formulation per Acre. Your sprayer is delivering 21.5 gallons per acre, and has a 200 gallon tank.

1. How much total Ammo should you buy? *[show your calculations]*
  
2. How much total water will be needed? *[show your calculations]*
  
3. How much Ammo will there be in each gallon of water? *[show your calculations]*
  
4. How much Ammo will you put in the first tank? *[show your calculations]*
  
5. How many tankfuls will be required to spray the entire area? *[show your calculations]*
  
6. How much water should you put in the last tank? *[show your calculations]*
  - a.
  
  - b.
  
7. How much Ammo should you put in the last tank? *[show your calculations]*

## **Problem Two**

A 44 acre cotton field needs to be sprayed with Pix at 2.5 pints formulation/Acre. Your sprayer is delivering 25.5 gallons per acre, and has a 275 gallon tank.

1. How much total Pix should you buy? *[show your calculations]*
  
2. How much total water will be needed? *[show your calculations]*
  
3. How much Pix will there be in each gallon of water? *[show your calculations]*
  
4. How much Pix will you put in the first tank? *[show your calculations]*
  
5. How many tankfuls will be required to spray the entire area? *[show your calculations]*
  
6. How much water should you put in the last tank? *[show your calculations]*
  - a.
  - b.
  
7. How much Pix should you put in the last tank? *[show your calculations]*

### **Problem Three**

A 18 acre peanut field needs to be sprayed with Orthene 90S (90% AI) at 1.0 Lb per Acre. Your sprayer is delivering 23.5 gallons per acre, and has a 320 gallon tank.

1. How much Orthene would you need to have? *[show your calculations]*
  
2. How much total water will be needed? *[show your calculations]*
  
3. How much Orthene will be in each gallon of spray mix? *[show your calculations]*
  
4. How much Orthene will you put in the first tank? *[show your calculations]*
  
5. How many tankfuls will be required to spray the entire area? *[show your calculations]*
  
6. How much water should you put in the last tank? *[show your calculations]*
  - a.
  - b.
  
7. How much Orthene should you put in the last tank? *[show your calculations]*

#### **Problem Four**

A 52 thousand square foot turf area needs to be sprayed for chinch bugs with Scimitar 10WP at 0.2oz (0.0125 Lb) / TSF. Your sprayer is delivering 0.55 gallons per TSF, and has a 50 gallon tank.

1. How much Scimitar would you need to have? *[show your calculations]*
  
2. How much total water will be needed? *[show your calculations]*
  
3. How much Scimitar will be in each gallon of water? *[show your calculations]*
  
4. How much Scimitar would you need to put in a full tank? *[show your calculations]*
  
5. How many tanks will it take to spray the whole area? *[show your calculations]*
  
6. How much water should you put in the last tank? *[show your calculations]*
  - a.
  - b.
  
7. How much Scimitar should you put in the last tank? *[show your calculations]*