



Applying the Right Amount

Grower Pesticide Safety Course Manual © 2006

The page number at the top right corner of each slide tells you where to find the information in the Grower Pesticide Safety Course Manual. Follow along in your manual as you review each slide.

Applying the Right Amount

How Much Pesticide to Use? How Much Spray Mix to Use?

You will be given this information in the question:

- Length and width of the field
- Pesticide rate from the label in metric measure
- Size of the spray tank
- Sprayer Output

Hint:

To work in feet and acres, first change the pesticide rate from L/ha to L/acre.

$$\text{L/ha} \times 0.4 = \text{L/acre}$$

1. How large is the area you need to spray?

$$\text{Ha} = \frac{\text{Length (m)} \times \text{Width (m)}}{10,000 \text{ m}^2/\text{ha}}$$

$$\text{Acres} = \frac{\text{Length (m)} \times \text{Width (m)}}{43,560 \text{ ft}^2/\text{acre}}$$

2. How much pesticide will you need to spray the area?

Area to spray X Pesticide Rate

3. How much area can you spray with one full tank?

$$\frac{\text{Tank Size}}{\text{Sprayer Output}}$$

4. How much pesticide should you add to one full tank?

Area sprayed by one tank X Pesticide Rate

5. After you spray the full tanks, how much area is left to spray?

Total Area - Area already sprayed

6. How much pesticide should you add to the part tank?

Area left to spray X Pesticide Rate

7. How much spray mix (pesticide plus water) will you need for the part tank?

Area left to spray X Sprayer Output



Field Sprayer (ha) Example 1

You decide to spray your corn field to control the weeds.

The pesticide rate is 2 L/ha. The sprayer holds 1200 L of spray mix. Your sprayer applies 200 litres of spray mix per hectare. Your field is 200 m wide and 500 m long.

Field Sprayer (ha) Example 1

The pesticide rate is 2 L/ha. The sprayer holds 1200 L of spray mix. Your sprayer applies 200 litres of spray mix per hectare. Your field is 200 m wide and 500 m long.

1. How many hectares is the field you need to spray?

$$\text{Ha} = \frac{500 \text{ m} \times 200 \text{ m}}{10,000 \text{ m}^2/\text{ha}}$$

$$\text{Ha} = \frac{100,000}{10,000 \text{ m}^2/\text{ha}}$$

$$\text{Ha} = 10$$

Field Sprayer (ha) Example 1

The pesticide rate is 2 L/ha. The sprayer holds 1200 L of spray mix. Your sprayer applies 200 litres of spray mix per hectare. Your field is 200 m wide and 500 m long.

2. How many litres of pesticide will you need to spray the whole field?

$$= \text{Area to spray} \times \text{Pesticide Rate}$$

$$= 10 \text{ ha} \times 2 \text{ L/ha}$$

$$= 20 \text{ L}$$

Field Sprayer (ha) Example 1

The pesticide rate is 2 L/ha. The sprayer holds 1200 L of spray mix. Your sprayer applies 200 litres of spray mix per hectare. Your field is 200 m wide and 500 m long.

3. How many hectares can you spray with one full tank?

$$= \frac{\text{Tank Size}}{\text{Sprayer Output}}$$

$$= \frac{1200 \text{ L}}{200 \text{ L/ha}}$$

$$= 6 \text{ ha}$$

Field Sprayer (ha) Example 1

The pesticide rate is 2 L/ha. The sprayer holds 1200 L of spray mix. Your sprayer applies 200 litres of spray mix per hectare. Your field is 200 m wide and 500 m long.

4. How many litres of pesticide should you add to one full tank?

$$= \text{Area sprayed by one tank} \times \text{Pesticide Rate}$$

$$= 6 \text{ ha} \times 2 \text{ L/ha}$$

$$= 12 \text{ L}$$

Field Sprayer (ha) Example 1

The pesticide rate is 2 L/ha. The sprayer holds 1200 L of spray mix. Your sprayer applies 200 litres of spray mix per hectare. Your field is 200 m wide and 500 m long.

5. After you spray the full tank, how many hectares are left to spray?

$$= \text{Total Area} - \text{Area already sprayed}$$

$$= 10 \text{ ha} - 6 \text{ ha}$$

$$= 4 \text{ ha}$$

Field Sprayer (ha) Example 1

The pesticide rate is 2 L/ha. The sprayer holds 1200 L of spray mix. Your sprayer applies 200 litres of spray mix per hectare. Your field is 200 m wide and 500 m long.

6. How many litres of pesticide should you add to the part tank?

$$= \text{Area left to spray} \times \text{Pesticide Rate}$$

$$= 4 \text{ ha} \times 2 \text{ L/ha}$$

$$= 8 \text{ L}$$

Field Sprayer (ha) Example 1

The pesticide rate is 2 L/ha. The sprayer holds 1200 L of spray mix. Your sprayer applies 200 litres of spray mix per hectare. Your field is 200 m wide and 500 m long.

7. How many litres of spray mix will you need for the part tank?

$$= \text{Area left to spray} \times \text{Sprayer Output}$$

$$= 4 \text{ ha} \times 200 \text{ L/ha}$$

$$= 800 \text{ L}$$

Field Sprayer (ha) Example 2

You decide to spray your soybean field to control the insects.

The pesticide rate is 83 mL/ha. The sprayer holds 900 L of spray mix. Your sprayer applies 150 litres of spray mix per hectare. Your field is 200 m wide and 400 m long.

Field Sprayer (ha) Example 2

The pesticide rate is 83 mL/ha. The sprayer holds 900 L of spray mix. Your sprayer applies 150 litres of spray mix per hectare. Your field is 200 m wide and 400 m long.

1. How many hectares is the field you need to spray?

$$\text{Ha} = \frac{400 \text{ m} \times 200 \text{ m}}{10,000 \text{ m}^2/\text{ha}}$$

$$\text{Ha} = \frac{80,000 \text{ m}^2}{10,000 \text{ m}^2/\text{ha}}$$

$$\text{Ha} = 8$$

Field Sprayer (ha) Example 2

The pesticide rate is 83 mL/ha. The sprayer holds 900 L of spray mix. Your sprayer applies 150 litres of spray mix per hectare. Your field is 200 m wide and 400 m long.

2. How many millilitres of pesticide will you need to spray the whole field?

$$= \text{Area to spray} \times \text{Pesticide Rate}$$

$$= 8 \text{ ha} \times 83 \text{ mL/ha}$$

$$= 664 \text{ mL}$$

Field Sprayer (ha) Example 2

The pesticide rate is 83 mL/ha. The sprayer holds 900 L of spray mix. Your sprayer applies 150 litres of spray mix per hectare. Your field is 200 m wide and 400 m long.

3. How many hectares can you spray with one full tank?

$$= \frac{\text{Tank Size}}{\text{Sprayer Output}}$$

$$= \frac{900 \text{ L}}{150 \text{ L/ha}}$$

$$= 6 \text{ ha}$$

Field Sprayer (ha) Example 2

The pesticide rate is 83 mL/ha. The sprayer holds 900 L of spray mix. Your sprayer applies 150 litres of spray mix per hectare. Your field is 200 m wide and 400 m long.

4. How many millilitres of pesticide should you add to one full tank?

$$= \text{Area sprayed by one tank} \times \text{Pesticide Rate}$$

$$= 6 \text{ ha} \times 83 \text{ mL/ha}$$

$$= 498 \text{ mL}$$

Field Sprayer (ha) Example 2

The pesticide rate is 83 mL/ha. The sprayer holds 900 L of spray mix. Your sprayer applies 150 litres of spray mix per hectare. Your field is 200 m wide and 400 m long.

5. After you spray the full tank, how many hectares are left to spray?

$$= \text{Total Area} - \text{Area already sprayed}$$

$$= 8 \text{ ha} - 6 \text{ ha}$$

$$= 2 \text{ ha}$$

Field Sprayer (ha) Example 2

The pesticide rate is 83 mL/ha. The sprayer holds 900 L of spray mix. Your sprayer applies 150 litres of spray mix per hectare. Your field is 200 m wide and 400 m long.

6. How many millilitres of pesticide should you add to the part tank?

$$= \text{Area left to spray} \times \text{Pesticide Rate}$$

$$= 2 \text{ ha} \times 83 \text{ mL/ha}$$

$$= 166 \text{ mL}$$

Field Sprayer (ha) Example 2

The pesticide rate is 83 mL/ha. The sprayer holds 900 L of spray mix. Your sprayer applies 150 litres of spray mix per hectare. Your field is 200 m wide and 400 m long.

7. How many litres of spray mix will you need for the part tank?

$$= \text{Area left to spray} \times \text{Sprayer Output}$$

$$= 2 \text{ ha} \times 150 \text{ L/ha}$$

$$= 300 \text{ L}$$

Field Sprayer (acres)

You need to spray a field to control the weeds.

The pesticide rate is 2 L/ha. Your sprayer holds 300 gallons and your sprayer applies 15 gallons of spray mix per acre. Your field is 1,210 ft long by 900 ft wide.

Field Sprayer (acres)

The pesticide rate is 2 L/ha. The sprayer holds 300 gallons and your sprayer applies 15 gallons of spray mix per acre. Your field is 1,210 ft long by 900 ft wide.

1. How many acres is the field you need to spray?

$$\text{acres} = \frac{1,210 \text{ ft} \times 900 \text{ ft}}{43,560 \text{ ft}^2/\text{acre}}$$

$$\text{acres} = \frac{1,089,000 \text{ ft}^2}{43,560 \text{ ft}^2/\text{acre}}$$

$$\text{acres} = 25$$

Field Sprayer (acres)

The pesticide rate is 2 L/ha. The sprayer holds 300 gallons and your sprayer applies 15 gallons of spray mix per acre. Your field is 1,210 ft long by 900 ft wide.

2. How many litres of pesticide will you need to spray the whole field?

Change the pesticide rate to L/acre.

$$= 2 \text{ L/ha} \times 0.4$$

$$= 0.8 \text{ L/acre}$$

Field Sprayer (acres)

The pesticide rate is 2 L/ha. The sprayer holds 300 gallons and your sprayer applies 15 gallons of spray mix per acre. Your field is 1,210 ft long by 900 ft wide.

$$2 \text{ L/ha} = 0.8 \text{ L/acre}$$

2. How many litres of pesticide will you need to spray the whole field?

$$= \text{Area to spray} \times \text{Pesticide Rate}$$

$$= 25 \text{ acres} \times 0.8 \text{ L/acre}$$

$$= 20 \text{ Litres}$$

Field Sprayer (acres)

The pesticide rate is 2 L/ha. The sprayer holds 300 gallons and your sprayer applies 15 gallons of spray mix per acre.

Your field is 1,210 ft long by 900 ft wide.

$$2 \text{ L/ha} = 0.8 \text{ L/acre}$$

3. How many acres can you spray with one full tank?

$$= \frac{\text{Tank Size}}{\text{Sprayer Output}}$$

$$= \frac{300 \text{ gallons}}{15 \text{ gallons/acre}}$$

$$= 20 \text{ acres}$$

Field Sprayer (acres)

The pesticide rate is 2 L/ha. The sprayer holds 300 gallons and your sprayer applies 15 gallons of spray mix per acre. Your field is 1,210 ft long by 900 ft wide.

$$2 \text{ L/ha} = 0.8 \text{ L/acre}$$

4. How many litres of pesticide should you add to one full tank?

$$= \text{Area sprayed by one tank} \times \text{Pesticide Rate}$$

$$= 20 \text{ acres} \times 0.8 \text{ L/acre}$$

$$= 16 \text{ L}$$

Field Sprayer (acres)

The pesticide rate is 2 L/ha. The sprayer holds 300 gallons and your sprayer applies 15 gallons of spray mix per acre. Your field is 1,210 ft long by 900 ft wide.

$$2 \text{ L/ha} = 0.8 \text{ L/acre}$$

5. After you spray the full tank, how many acres are left to spray?

$$= \text{Total Area} - \text{Area already sprayed}$$

$$= 25 \text{ acres} - 20 \text{ acres}$$

$$= 5 \text{ acres}$$

Field Sprayer (acres)

The pesticide rate is 2 L/ha. The sprayer holds 300 gallons and your sprayer applies 15 gallons of spray mix per acre. Your field is 1,210 ft long by 900 ft wide.

$$2 \text{ L/ha} = 0.8 \text{ L/acre}$$

6. How many litres of pesticide should you add to the part tank?

$$= \text{Area left to spray} \times \text{Pesticide Rate}$$

$$= 5 \text{ acres} \times 0.8 \text{ L/acre}$$

$$= 4 \text{ L}$$

Field Sprayer (acres)

The pesticide rate is 2 L/ha. The sprayer holds 300 gallons and your sprayer applies 15 gallons of spray mix per acre. Your field is 1,210 ft long by 900 ft wide.

$$2 \text{ L/ha} = 0.8 \text{ L/acre}$$

7. How many gallons of spray mix will you need for the part tank?

$$= \text{Area left to spray} \times \text{Sprayer Output}$$

$$= 5 \text{ acres} \times 15 \text{ gallons/acre}$$

$$= 75 \text{ gallons}$$

Greenhouse (square feet, acres)

You need to spray the greenhouse to control insects on the ornamental plants.

The pesticide rate is 1.5 kg per 1,000 litres of water, which is enough to spray 1 acre. Your spray tank holds 400 litres. You will spray 7 greenhouses. Each greenhouse is 40 ft by 200 ft.

Greenhouse (square feet, acres)

The pesticide rate is 1.5 kg per 1,000 litres of water, which is enough to spray 1 acre. Your spray tank holds 400 litres. You will spray 7 greenhouses. Each greenhouse is 40 feet by 200 feet.

1. How many square feet (acres) is the total area you need to spray?

$$\text{acres} = \frac{7(40 \text{ ft} \times 200 \text{ ft})}{43,560 \text{ ft}^2/\text{acre}}$$

$$\text{acres} = \frac{56,000 \text{ ft}^2}{43,560 \text{ ft}^2/\text{acre}}$$

$$\text{acres} = 1.3$$

Greenhouse (square feet, acres)

The pesticide rate is 1.5 kg per 1,000 litres of water, which is enough to spray 1 acre. Your spray tank holds 400 litres. You will spray 7 greenhouses. Each greenhouse is 40 feet by 200 feet.

2. How many kilograms of pesticide will you need to spray the area?

$$= \text{Area to spray} \times \text{Pesticide Rate}$$

$$= 1.3 \text{ acres} \times 1.5 \text{ kg/acre}$$

$$= 1.95 \text{ kg}$$

The pesticide rate is 1.5 kg per 1,000 litres of water, which is enough to spray 1 acre. Your spray tank holds 400 litres. You will spray 7 greenhouses. Each greenhouse is 40 feet by 200 feet.

3. How many acres can you spray with one full tank?

$$= \frac{\text{Tank Size}}{\text{Sprayer Output}}$$

$$= \frac{400 \text{ Litres}}{1,000 \text{ litres/acre}}$$

$$= 0.4 \text{ acres}$$

Greenhouse (square feet, acres)

The pesticide rate is 1.5 kg per 1,000 litres of water, which is enough to spray 1 acre. Your spray tank holds 400 litres. You will spray 7 greenhouses. Each greenhouse is 40 feet by 200 feet.

4. How many kilograms (or grams) of pesticide should you add to one full tank?

$$= \text{Area sprayed by one tank} \times \text{Pesticide Rate}$$

$$= 0.4 \text{ acres} \times 1.5 \text{ kg/acre}$$

$$= 0.6 \text{ kg (600 grams)}$$

Greenhouse (square feet, acres)

The pesticide rate is 1.5 kg per 1,000 litres of water, which is enough to spray 1 acre. Your spray tank holds 400 litres. You will spray 7 greenhouses. Each greenhouse is 40 feet by 200 feet.

5. After spraying **three** full tanks, how many acres are left to spray?

$$= \text{Total Area} - \text{Area already sprayed}$$

$$= 1.3 \text{ acres} - (3 \times 0.4 \text{ acres})$$

$$= 1.3 \text{ acres} - (1.2 \text{ acres})$$

$$= 0.1 \text{ acres (4,256 ft}^2\text{)}$$

The pesticide rate is 1.5 kg per 1,000 litres of water, which is enough to spray 1 acre. Your spray tank holds 400 litres. You will spray 7 greenhouses. Each greenhouse is 40 feet by 200 feet.

6. How many kilograms of pesticide should you add to the part tank?

$$= \text{Area left to spray} \times \text{Pesticide Rate}$$

$$= 0.1 \text{ acres} \times 1.5 \text{ kg/acre}$$

$$= 0.15 \text{ kg (150 grams)}$$

Greenhouse (square feet, acres)

The pesticide rate is 1.5 kg per 1,000 litres of water, which is enough to spray 1 acre. Your spray tank holds 400 litres. You will spray 7 greenhouses. Each greenhouse is 40 feet by 200 feet.

7. How many litres of water should you add to make up the part tank of spray mix?

$$= \text{Area left to spray} \times \text{Sprayer Output}$$

$$= 0.1 \text{ acres} \times 1000 \text{ litres/acre}$$

$$= 100 \text{ litres}$$

Orchard (acres)

You need to spray an insecticide on your apple trees.

The pesticide rate is 2 kg/ha. Your sprayer holds 600 gallons and your sprayer applies 100 gallons of spray mix per acre. The area you will spray is 1,400 ft long by 400 ft wide.

Orchard (acres)

The pesticide rate is 2 kg/ha. The sprayer holds 600 gallons and your sprayer applies 100 gallons of spray mix per acre. The area you will spray is 1,400 ft long by 400 ft wide.

1. How many acres is the orchard area you need to spray?

$$\text{acres} = \frac{1,400 \text{ ft} \times 400 \text{ ft}}{43,560 \text{ ft}^2/\text{acre}}$$

$$\text{acres} = \frac{560,000 \text{ ft}^2}{43,560 \text{ ft}^2/\text{acre}}$$

$$\text{acres} = 12.86$$

Orchard (acres)

The pesticide rate is 2 kg/ha. The sprayer holds 600 gallons and your sprayer applies 100 gallons of spray mix per acre. The area you will spray is 1,400 ft long by 400 ft wide.

2. How many kilograms of pesticide will you need to spray the orchard?

Change the pesticide rate to kg/acre.

$$= 2 \text{ kg/ha} \times 0.4$$

$$= 0.8 \text{ kg/acre}$$

Orchard (acres)

The pesticide rate is 2 kg/ha. The sprayer holds 600 gallons and your sprayer applies 100 gallons of spray mix per acre. The area you will spray is 1,400 ft long by 400 ft wide.

$$2 \text{ kg/ha} = 0.8 \text{ kg/acre}$$

2. How many kilograms of pesticide will you need to spray the orchard?

$$= \text{Area to spray} \times \text{Pesticide Rate}$$

$$= 12.86 \text{ acres} \times 0.8 \text{ kg/acre}$$

$$= 10.29 \text{ kg}$$

The pesticide rate is 2 kg/ha. The sprayer holds 600 gallons and your sprayer applies 100 gallons of spray mix per acre. The area you will spray is 1,400 ft long by 400 ft wide.

3. How many acres can you spray with one full tank?

$$2 \text{ kg/ha} = 0.8 \text{ kg/acre}$$

$$= \frac{\text{Tank Size}}{\text{Sprayer Output}}$$

$$= \frac{600 \text{ gallons}}{100 \text{ gallons/acre}}$$

$$= 6 \text{ acres}$$

Orchard (acres)

The pesticide rate is 2 kg/ha. The sprayer holds 600 gallons and your sprayer applies 100 gallons of spray mix per acre. The area you will spray is 1,400 ft long by 400 ft wide.

$$2 \text{ kg/ha} = 0.8 \text{ kg/acre}$$

4. How many kilograms of pesticide should you add to one full tank?

$$= \text{Area sprayed by one tank} \times \text{Pesticide Rate}$$

$$= 6 \text{ acres} \times 0.8 \text{ kg/acre}$$

$$= 4.8 \text{ kg}$$

Orchard (acres)

The pesticide rate is 2 kg/ha. The sprayer holds 600 gallons and your sprayer applies 100 gallons of spray mix per acre. The area you will spray is 1,400 ft long by 400 ft wide.

$$2 \text{ kg/ha} = 0.8 \text{ kg/acre}$$

5. After you spray **two** full tanks, how many acres are left to spray?

$$= \text{Total Area} - \text{Area already sprayed}$$

$$= 12.86 \text{ acres} - (2 \times 6 \text{ acres})$$

$$= 0.86 \text{ acres}$$

Orchard (acres)

The pesticide rate is 2 kg/ha. The sprayer holds 600 gallons and your sprayer applies 100 gallons of spray mix per acre. The area you will spray is 1,400 ft long by 400 ft wide.

$$2 \text{ kg/ha} = 0.8 \text{ kg/acre}$$

6. How many kilograms (or grams) of pesticide should you add to the part tank?

$$= \text{Area left to spray} \times \text{Pesticide Rate}$$

$$= 0.86 \text{ acres} \times 0.8 \text{ kg/acre}$$

$$= 0.688 \text{ kg (688 g)}$$

Orchard (acres)

The pesticide rate is 2 kg/ha. The sprayer holds 600 gallons and your sprayer applies 100 gallons of spray mix per acre. The area you will spray is 1,400 ft long by 400 ft wide.

$$2 \text{ kg/ha} = 0.8 \text{ kg/acre}$$

7. How many gallons of spray mix will you need for the part tank?

$$= \text{Area left to spray} \times \text{Sprayer Output}$$

$$= 0.86 \text{ acres} \times 100 \text{ gallons/acre}$$

$$= 86 \text{ gallons}$$

Livestock Pour-On

You need to apply “Pour-On Lice Kill” to your beef cattle.

You have 80 beef cattle with an average weight of 500 lbs. You must apply the mixture at 64 mL per 100 kg of body weight of the animals. The pesticide label tells you to prepare a mixture of one part Pour-On to eight parts water.

Livestock Pour-On

You have 80 beef cattle with an average weight of 500 lbs. You must apply the mixture at 64 mL per 100 kg of body weight of the animals. The pesticide label tells you to prepare a mixture of one part Pour-On to eight parts water.

1. How many millilitres of pesticide mix will you need to treat one animal?

Hint: Change the rate to mL/100 lbs.

$$\text{mL/100 kgs} \quad \times \quad 0.45 = \text{mL/100 lbs}$$

$$64 \text{ mL/100 kgs} \quad \times \quad 0.45 = 28.8 \text{ mL/100 lbs}$$

$$= \text{Weight per animal} \quad \times \quad \text{Pesticide Rate}$$

$$= 500 \text{ lbs} \quad \times \quad 28.8 \text{ mL/100 lbs}$$

$$= 144 \text{ mL applied to each animal}$$

Livestock Pour-On

You have 80 beef cattle with an average weight of 500 lbs. You must apply the mixture at 64 mL per 100 kg of body weight of the animals. The pesticide label tells you to prepare a mixture of one part Pour-On to eight parts water.

2. How many litres of pesticide mix will you need to treat 80 animals?

Hint: 1,000 mL = 1L

= Number of animals X Amount per animal

= 80 animals X 144 mL

= 11,520 mL or 11.52 L

Livestock Pour-On

You have 80 beef cattle with an average weight of 500 lbs. You must apply the mixture at 64 mL per 100 kg of body weight of the animals. The pesticide label tells you to prepare a mixture of one part Pour-On to eight parts water.

3. How many litres of Pour-On Lice Kill will you need to treat 80 animals?

$$= \text{Total Mix} \quad X \quad \frac{\text{parts pesticide}}{\text{total parts of the mix}}$$

$$= 11.52 \text{ L} \quad X \quad \frac{1 \text{ part Pour-On}}{9 \text{ parts total mix}}$$

$$= 1.28 \text{ L of Pour-On}$$

Livestock Pour-On

You have 80 beef cattle with an average weight of 500 lbs. You must apply the mixture at 64 mL per 100 kg of body weight of the animals. The pesticide label tells you to prepare a mixture of one part Pour-On to eight parts water.

4. How many litres of water will you need to treat 80 animals?

$$= \text{Total Mix } X \frac{\text{parts water}}{\text{total parts of the mix}}$$

$$= 11.52 \text{ L } X \frac{8 \text{ parts water}}{9 \text{ parts total mix}}$$

$$= 10.24 \text{ L of water}$$

Fly Control in a Barn

You have decided to use an insecticide to control a fly problem in your barn.

The area of your barn that you wish to spray is 550 m². The label recommends the addition of 200 mL of insecticide to 10 L of water. Your backpack sprayer is calibrated to apply 4.5 L of pesticide solution per 100 m² and holds 15 L.

Fly Control in a Barn

The area of your barn that you wish to spray is 550 m². The label recommends the addition of 200 mL of insecticide to 10 L of water. Your backpack sprayer is calibrated to apply 4.5 L of pesticide solution per 100 m and holds 15 L.

1. How many litres of spray mix (water plus insecticide) do you need to treat the whole area?

$$L = \text{Total area to spray} \quad X \quad \text{Sprayer Output}$$

$$L = 550 \text{ m}^2 \quad X \quad \frac{4.5 \text{ L}}{100 \text{ m}^2}$$

$$L = 24.75$$

Fly Control in a Barn

The area of your barn that you wish to spray is 550 m². The label recommends the addition of 200 mL of insecticide to 10 L of water. Your backpack sprayer is calibrated to apply 4.5 L of pesticide solution per 100 m and holds 15 L.

2. How many millilitres of insecticide will you need to spray the whole area?

$$= \text{Total litres of spray mix} \times \text{Pesticide Rate}$$

$$= 24.75 \text{ L} \times \frac{200 \text{ mL}}{10 \text{ L}}$$

$$= 495 \text{ mL}$$

Fly Control in a Barn

The area of your barn that you wish to spray is 550 m². The label recommends the addition of 200 mL of insecticide to 10 L of water. Your backpack sprayer is calibrated to apply 4.5 L of pesticide solution per 100 m and holds 15 L.

3. How many square metres does one full tank cover?

$$= \frac{\text{Tank Size}}{\text{Sprayer Output}}$$

$$= \frac{15 \text{ L}}{4.5 \text{ L} / 100 \text{ m}^2}$$

$$= 333.3 \text{ m}^2$$

Fly Control in a Barn

The area of your barn that you wish to spray is 550 m². The label recommends the addition of 200 mL of insecticide to 10 L of water. Your backpack sprayer is calibrated to apply 4.5 L of pesticide solution per 100 m and holds 15 L.

4. How many millilitres of pesticide should you add to one full tank?

$$= \text{Tank size} \times \text{Pesticide Rate}$$

$$= 15 \text{ L} \times 200 \text{ mL}/10 \text{ L}$$

$$= 300 \text{ mL}$$

Fly Control in a Barn

The area of your barn that you wish to spray is 550 m². The label recommends the addition of 200 mL of insecticide to 10 L of water. Your backpack sprayer is calibrated to apply 4.5 L of pesticide solution per 100 m and holds 15 L.

5. After spraying the first tank, how many square metres are left to spray?

$$= \text{Total Area} - \text{Area already sprayed}$$

$$= 550 \text{ m}^2 - 333.3 \text{ m}^2$$

$$= 216.7 \text{ m}^2$$

Fly Control in a Barn

The area of your barn that you wish to spray is 550 m². The label recommends the addition of 200 mL of insecticide to 10 L of water. Your backpack sprayer is calibrated to apply 4.5 L of pesticide solution per 100 m² and holds 15 L.

6. How many litres of water should you add to the part tank?

$$= \text{Area left to spray} \times \text{Sprayer Output}$$

$$= 216.7 \text{ m}^2 \times 4.5 \text{ L}/100 \text{ m}^2$$

$$= 9.75 \text{ L}$$

Fly Control in a Barn

The area of your barn that you wish to spray is 550 m². The label recommends the addition of 200 mL of insecticide to 10 L of water. Your backpack sprayer is calibrated to apply 4.5 L of pesticide solution per 100 m and holds 15 L.

7. How many millilitres of pesticide should you add to the part tank?

$$= \text{Litres for the part tank} \times \text{Pesticide Rate}$$

$$= 9.75 \text{ L} \times 200 \text{ mL}/10 \text{ L}$$

$$= 195 \text{ mL}$$