

## Pestjet Professional Injection Gun

Congratulations on choosing the Pestjet Spray gun. Rittenhouse developed the Pestjet gun to make applications of small areas easier, eliminating tank mixing while performing IPM spot treatment applications.

The Pestjet Gun uses a siphon principle to inject product from the 1750 ml (60 fl oz) bottle. Because of the siphon action, the following parameters must be kept in mind when calibrating and when necessary, re-calibrating:

- q Viscosity of Product
- q Temperature of Product
- q Spray Pressure

### **Viscosity**

Products that are thicker eg. Sevin - work best at the highest setting 5 (see example page). The thick viscosity of this and other similar products require more siphon draw to effectively draw the chemical from the bottle and add it to the spray stream.

Products with low viscosity - eg. RoundUp - work best at the lowest setting 1. The thin viscosity of this and other similar products require little siphon draw to effectively draw chemical from the bottle and add it to the spray stream.

### **Temperature of Product**

Temperature can change a product's viscosity. It is important to calibrate each product at the temperature at which it will be applied. Temperature fluctuations of more than 15F (8C) will likely require re-calibration, particularly with thicker viscosity products.

It is also important to note that chemical storage temperature may vary from chemical application temperature.

### **Inlet Spray Pressure**

For the siphon principle to work, an inlet pressure of 40-60 psi must be maintained. Fine tuning the calibration can be achieved by adjusting the inlet pressure. For initial calibration we suggest 50 psi. You can then adjust pressure up or down as required.

An injection rate chart is not available due to the wide variety of chemical product choices and the variables noted above. It is

important that the operator calibrates the Pestjet gun according to the chemical product, spray pressure, and conditions.

**Replacement parts are available for trigger assembly and wand/nozzle assembly.**

**Siphon mechanism is not reparable.**

**Due to the small orifice sizes of the siphon system, this gun must be flushed with clean water on a daily basis when in use.**

#### Pestjet Calibration Guide

Important:

**For calibration, the intended spray product must be used, as the injection rate will vary with the viscosity of the product sprayed.**

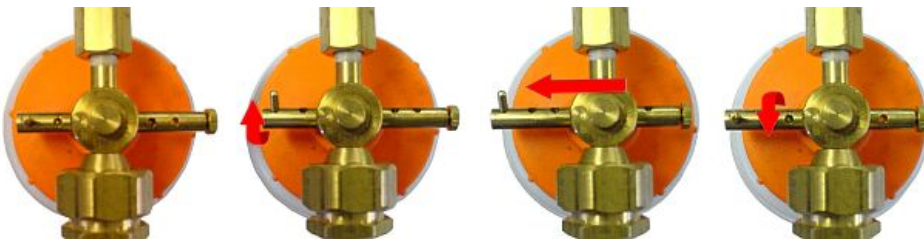
**To ensure that the concentrate is siphoned correctly, a pressure between 40 and 60 psi must be used with the nozzle provided (TKSS-20).**

**Due to the small orifice sizes of the siphon system, this gun must be flushed with clean water on a daily basis when in use.**

Procedure:

1. Using a measuring container, measure out a desired amount of spray product into the Pest Jet container (concentrate bottle).
2. Spray the Pest Jet into a large calibrated pail (with approximately 12 L (3 US gallon) minimum capacity) for a period of 1 minute.
3. Remove concentrate bottle from Pest Jet and pour remainder of contents back into measuring container to determine the difference in the volume of product for the 1 minute sprayed. Measuring the contents of the bucket will give the total volume sprayed in 1 minute. From these two pieces of data, the concentration of the total liquid sprayed can be determined.

4. Using the choice of 5 settings, make adjustments as necessary to approximate the desired injection rate. The photos below show the adjustment from Setting 2 to Setting 3. Be sure to rotate the adjustment bar turn before and after sliding to a new setting, then lock into place.



5. Adjust application speed and/or area covered in 1 minute to achieve the desired rate of application.

q Note: When applying nematodes, remove the metal screen on the siphon intake tube, as the screen may physically damage the nematodes.

**Quick Guide to Begin Calibration:**

- Setting 1 - RoundUp
- Setting 2 or 3 - 2-4D based products such a Killex and other 3-way herbicides
- Setting 3 or 4 - Fungicides
- Setting 5 - Thick viscous products such as Sevin



Setting 1



Setting 5

Using the product Sevin, we tested this gun at 60 psi input pressure and with the injector adjusted to the maximum rate (brass bar at top of bottle pulled out as far as possible) .

With this we achieved approx. 250 ml (8.5 fl oz) concentrate and a total output of 8 litres (270 fl oz) per minute

= approx 700 m<sup>2</sup> production per 1750 ml bottle, assuming an application rate of 100 m<sup>2</sup> per minute

(= approx 7535 ft<sup>2</sup> production per 60 fl oz bottle (assuming an application rate of 1076 ft<sup>2</sup> per minute)

**Due to the small orifice sizes of the siphon system, this gun must be flushed with clean water on a daily basis when in use.**

The Pestjet gun was originally designed for use with Sevin.

Lower injection rates can be achieved for other products. With this gun, you can choose from 5 different injection settings. Each product concentrate must be calibrated separately as product viscosity can greatly vary the injection ratio. The applicator must calibrate using the desired product to achieve accurate application rates for that product. An injection rate chart is not available due to the wide variety of chemical product choices.

However, in order for the siphon principle to inject product, a Spraying Systems TK-20 nozzle (or equivalent) must be used and 40 to 60 psi spray pressure must be maintained.