



Vicon Spreader: Set-up and Calibration for the Application of Pronone[®] 10G

Proper set-up and calibration of the Vicon spreader is needed before Pronone[®] application. Over-treatment can injure the blueberry crop and increase application costs. Under-application of herbicide decreases the effectiveness and another herbicide may be needed for complete weed control. Proper set-up and calibration ensures that maximum benefit will be gained from Pronone[®] use.

Setting up the Spreader

Install the fine seed kit (two small plates available from Vicon Dealer). Tack weld them into the two holes closest to the tractor at the bottom of the hopper. The third hole, at the back of the spreader, is all that is required for Pronone[®] application. Ensure that the setting for the back and forth movement of the spout is on maximum. The adjustment is accessible through a plastic cover at the base of the spreader on the side closest to the tractor. The adjustment is made possible through the use of a special wrench supplied with the spreader. Make sure that you are able to maintain 540 rpm on the PTO to obtain the best possible spreading action. Ensure that the plastic cup below the agitator is not worn. Otherwise, Pronone[®] could sift down past the agitator shaft.

Selecting the Proper Speed

Determine the gear selection on the tractor which will maintain a constant speed throughout the field. This should generally be in the 5-8 km/hr (3-5 mph) range for leveled fields. An adjustable slide rule, available from the Vicon dealer, can be used to select the appropriate tractor speed for the application rate and spread distance (Figure 1). Keep in mind that the PTO rpm should be 540 for the best possible spreading action and that the tractor passes should be 9 m apart.

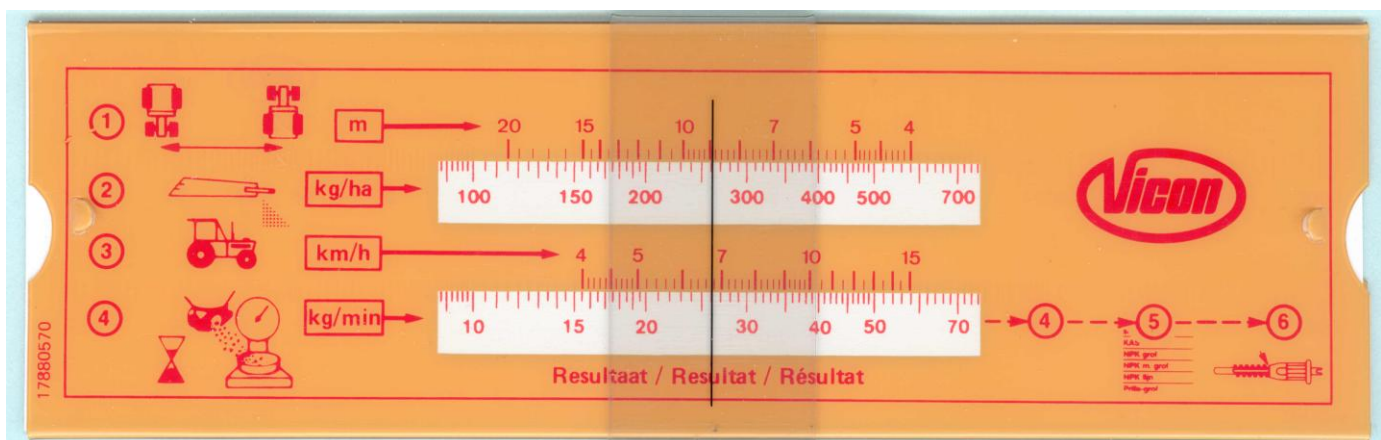


Figure 1. Vicon slide rule to select proper calibration settings.

Calibration

Two methods can be used to calibrate the Vicon spreader. Both methods will calibrate the machine in a similar fashion. The first method uses calculations based on time and distance to determine the amount of product used. The second method has these calculations built in, although more Pronone[®] blanks may be required as this method will cover more area. The choice between the two methods will depend on the operator. Calibration is easier under ideal weather conditions.

Calibration Method #1 – Calculation Method

- 1) Mark off at least 30 meters (100 ft) in order to allow you to travel at your predetermined gear and PTO settings. A longer track length will provide a more accurate reading.
- 2) Make a test run at the selected speed, without engaging the PTO. Note the time it takes to complete the test run in seconds. For greater accuracy, take an average from several runs.
- 3) Set the adjustment stop at 12 to begin with.
- 4) Using Pronone[®] blanks, readily available from your Pronone[®] dealer, place an amount of blanks in the hopper. The amount of blank required depends on the run length and application rate: at least 0.6 kg of blank per 30 m (100ft) of run length.
- 5) Place bags over the spreader openings to collect the Pronone[®] blanks.
- 6) With the equipment standing still, engage the PTO for the amount of time to make the test run.
- 7) Weigh the amount of blank contained in the bag in kg. Use the two equations below to determine the rate applied in kg/ha:
 - a) Standard swath width (9 m) x distance in test run (m)/10,000 m² per ha = area treated (ha)
 - b) Weight of blank in test run (kg) / area treated (ha) = Rate (kg/ha)
- 8) Compare the calculated rate to the label rate for Pronone[®] to be used. For greater accuracy, repeat steps 4-7 and take an average of the rate. If the calibrated rate is within 5 % (approximately 1 kg) of the label rate, the calibration is complete. If the calibrated rate is less than the label rate, increase the adjustment stop setting and repeat steps 4 to 7. If the calibrated rate is more than the label rate, decrease the adjustment stop setting and repeat steps 4 to 7.

Calibration Method #2 – Area Covered Method

- 1) Using Pronone[®] blanks, readily available from your Pronone[®] dealer, place the equivalent amount of blanks that correspond to the desired rate of Pronone[®] into the hopper. (i.e. if you want to apply 15 kg/ha, place 15 kg of Pronone[®] blanks in the hopper).
- 2) Set the adjustment stop at 12 to begin with.
- 3) Mark off a track length of 555 meters (1823 ft) on a roadway or field boundary where you can travel at your predetermined speed.
- 4) Engage the spreader. Drive to the 555-meter (1823 ft) mark and return with the spreader engaged between the stakes. The spreader should empty as you return to the starting position.
- 5) If you return to the starting point and find material left: empty the hopper, refill the hopper with the proper amount of blanks, open the adjustment stop slightly by adjusting the stop setting higher and repeat the whole process until the hopper is just empty upon returning to the starting point.
- 6) If the hopper emptied prior to your return: close the adjustment stop a bit by adjusting the stop setting lower, refill the hopper with the proper amount of blanks and repeat the whole process until the hopper is just empty upon returning to the starting point.

Field Application

Once calibrated you are ready to apply Pronone[®] in the field. It has been determined at the Vicon factory that the tractor passes must be 9 m (29.5 ft) apart in the field when applying Pronone[®]. The spreader will actually throw some of the product twice this far. However, in order to achieve the proper overlap, the driving or working width must be maintained at 9 m (29.5 ft).

From your chosen starting point in the field, engage the spreader and drive to the end of the field in a straight line and stop. Measure 9 meters (29.5 ft) across, from the center of the two wheel tracks. Turn the tractor onto this new line and drive back parallel to the first line. Try, as much as possible, to stay 9 meters from the previous line. Repeat the process until the field is complete.