

GPS vs. Foam Markers

18 reasons to replace foam markers with *AgGPS* Parallel Swathing

GPS Parallel Swathing is more reliable and more accurate than foam.

Initial field trials comparing GPS and foam marker guidance show that when using the *AgGPS*[®] Parallel Swathing Option, skilled equipment operators regularly achieve less than 1.5% overlap and skip. The cross track error in open fields is on the order of 0.61 m (2 ft). However, results will vary depending on operator driving skills and the DGPS correction quality. These tests were completed using a 24 m (80 ft) boom.

In ideal foam marking conditions, GPS and foam marker guidance achieved similar swath overlap and skip results. On spinner spreaders and in less ideal foam conditions, such as low visibility, wind, low humidity, rough terrain, and canopy crops, GPS swathing is more reliable and accurate than foam markers.

GPS guidance is ideal for dry spinner applicators.

Ground spreaders can not effectively use foam markers. The operator must 'eyeball' where to drive. With GPS parallel swathing, the operator is shown exactly where to drive.

GPS guidance is easy to use.

While the technology behind GPS is very complex, using it is easy. Basic field operation is no more difficult than turning on and off a spray boom.

GPS guidance allows operators to finish a field when daylight is dwindling.

GPS guidance is effective both day and night. No need to stop application due to poor foam visibility.

GPS provides effective guidance over any growing crop.

On solid seeded crops (wheat, soybeans, etc.), foam tends to fall through the canopy onto the ground where it can not be seen. Solid seed crops do not affect GPS guidance.

GPS operates when it is cold.

Operators that have waited until noon for the foam line to thaw understand this benefit.

Trimble

GPS works in low humidity and large fields.

Foam markers are not usable when spraying in hot dry conditions or large fields where the return time to areas where foam was dropped can be very long. AgGPS parallel swathing allows operators to drive the full swath without losing guidance.

GPS guidance has no ongoing maintenance costs.

GPS guidance eliminates the need to purchase foam, dyes, and tank cleaner. In areas of beacon DGPS coverage the yearly cost of GPS guidance can be significantly less than foam markers. In areas of satellite coverage, subscription costs are competitive with foam marker accessory expenses.

GPS guidance reduces operator fatigue and eye strain.

The AgGPS Parallel Swathing Option allows equipment operators to accurately drive swaths while looking straight ahead! The lightbar placed in the operators peripheral vision eliminates the need to look backwards or sideways to line up the end of the spray boom with the previous swath's foam droppings.

GPS guidance reduces set up time.

With GPS guidance, time that was once spent filling foam tanks and changing foam dyes becomes the operator's. Time is further saved through increased swathing accuracy. Accurate guidance decreases the time spent spraying part of a field twice.

GPS guidance can be used at night.

The efficacy of many pesticides is greatly improved when applied in the evenings, at night, in the early morning or in foggy conditions. This is particularly true for systematic pesticides which benefit from high moisture levels to enable rapid uptake into the plant. In addition many plant species tilt their leaves upwards at night, exposing the undersides of the leaves where species of insect pest prefer to habitat.

GPS guidance uses less chemical.

A reduction in swath overlap significantly reduces the amount of chemical applied. This improves both the environment and the bottom line.

GPS guidance is not affected by wind or boom bounce

Blowing foam and boom bounce can significantly reduce swath accuracy. GPS based guidance is not affected by the wind or boom bounce.

GPS guidance does not require foam dye.

With GPS there is no foam dye. The operator can swath over any crop without stopping to fuss with the color of the foam marker system.

GPS guidance does not require foam mixing.

GPS guidance is clean and contains no messy extra chemicals!

GPS guidance can be configured for fine tuning of driving patterns.

When chemical overlaps damage the crop, the swath width can be adjusted to ensure exact spacing. If complete coverage is the objective, the swath width can be adjusted to ensure full coverage.

Accurate field areas mean accurate application rates and billings.

The AgGPS 132 can calculate field areas, so application rates and billings are more accurate.

Faster return of investment is gained by using the Trimble AgGPS 132 or Case Universal Receiver for other precision farming applications.

The AgGPS 132 and Case Universal DGPS receivers can add DGPS position data to yield monitor, variable rate controller, mapping, soil sample and crop scouting equipment.



Trimble Navigation Limited
645 North Mary Avenue
Post Office Box 3642
Sunnyvale, CA 94088-3642
1-800-827-8000
in North America
1-408-481-8000
outside North America
1-408-481-7744 Fax
<http://www.trimble.com>