PTx Trimble

TrueGuide vs TrueTracker Comparison Guide

Implement Guidance Overview

	TrueGuide	TrueTracker
System Type	Passive Implement Guidance	Active Implement Steering
Drift Correction	Moves the tractor to pull the implement onto the guidance line	Actively steers the implement independently of the tractor
Implement Steering Hardware	Not required	Required (compatible with built-in implement steering controls and aftermarket steering solutions)
Primary Applications	Planting, seeding, tillage and other broadacre operations	Planting, strip-till, inter-row cultivation, specialty crops (harvesting, bed making, etc.) and other high-value/multi-pass operations
Multi-Pass Repeatability	Improved due to better implement positioning but does not provide high-level repeatability for future passes	Designed for repeatable implement positioning across multiple passes all season
Standing Crop Applications	Limited because tractor movement used to correct the implement can move the tractor into crop rows	Ideal because the tractor and implement each maintain their intended paths independently
Target Customer	Price-sensitive customer looking for better implement positioning without adding an active steering system	Accuracy-focused customer where precise implement placement directly affects crop protection, input placement and repeatability
Best Fit	Simpler, lower cost implement positioning	Maximum implement accuracy and repeatability

TrueGuide Passive Implement Guidance

How It Works

An implement-mounted GNSS receiver measures the position of the implement. When the implement begins to drift away from its desired path, TrueGuide commands the tractor's Autopilot system to change the tractor's position and pull the implement back onto the guidance line.

Because the tractor is doing the correcting, the tractor may need to drive slightly off its own guidance line to get the implement where it needs to be.

Use Cases

- Planting or seeding into a field without standing crops
- Broadacre applications where improved implement positioning is valuable, but exact multi-pass repeatability is not required

- Operations where implement drift is a concern such on side slopes and rough terrain, but the customer does not need independent active implement steering
- Customers looking for a simpler and more cost-conscious entry into implement guidance
- Applications where occasional tractor offset during implement correction does not create a crop-damage concern

Ideal User Profile

TrueGuide is a good fit for farmers who are more price sensitive, want better implement placement than tractor guidance alone, and primarily operate when there are no standing crops that could be damaged by corrective tractor movement. Typically, TrueGuide is best used on the planter pass or in a tillage pass to minimize overlap and provide even guess rows in uneven, hilly terrain or on curved guidance lines.

GFX & NAV-960 Hardware Improvements

TrueGuide benefits from integration with the latest GFX displays and the NAV-960 guidance controller. The NAV-960 provides modern positioning and steering capabilities, including support for every major GNSS satellite constellation as well as features like IonoGuard™ and the ProPoint® GNSS engine that provide up to 50% better on-line performance when compared to NAV-III based systems.

Precision-IQ Improvements

TrueGuide in Precision-IQ improves implement positioning through true implement roll correction. The previous generation relied on tractor-based roll correction, while the new system measures and corrects for roll at the implement, providing a more accurate representation of the implement's actual position and helping keep it on the intended guidance line.

TrueGuide Use Case Examples

The following examples highlight common situations where TrueGuide may be a good fit.

Broadacre seeding on side hills

A wheat grower has a tractor that stays on the guidance line, but the air seeder drifts downhill on side slopes, creating overlap and inconsistent spacing. TrueGuide measures the implement's actual position and adjusts the tractor's path to keep the seeder closer to the intended line.

Lower-cost planting accuracy

A grower wants to reduce overlap and improve planter placement but can't justify the cost or complexity of an actively steered implement. TrueGuide provides implement-based guidance without requiring an implement steering system, making it a lower-cost first step into implement guidance.

Planting on rolling terrain

A grower's planter consistently pulls away from the intended line as field conditions and terrain change. With no standing crop to protect, some tractor movement is acceptable. TrueGuide compensates with the tractor to bring the planter back toward the intended path.

Strip-till

A grower wants more accurate strip placement but doesn't need active implement steering. Because this is the first operation and there is no standing crop, TrueGuide can compensate for implement drift through tractor steering while keeping the system relatively simple.

Splitting no-till corn rows

A grower who no-tills 15-inch soybeans into 30-inch corn stubble wants better guidance for his planter so that he can more easily split the corn rows and stay out of the root balls that lift his row units out of the ground. TrueGuide steers the tractor based on the implement position, keeping the planter between the corn rows at a lower price point than other implement steering solutions.

TrueGuide Use Case Examples

How It Works

TrueTracker measures the position and orientation of the implement to actively control a steering mechanism on the implement itself. The tractor and implement are controlled independently, allowing both to maintain their desired paths.

Rather than moving the tractor to compensate for implement drift, TrueTracker directly steers the implement. It is compatible with virtually all hydraulic implement steering solutions such as side-shift hitches, steerable drawbars, steering coulters, steerable axles on the implement and more.

Use Cases

- Multi-pass operations where later passes must accurately follow the original pass
- Strip-till followed by planting
- Planting followed by cultivation or mechanical weeding
- Specialty and high-value crops
- Operations on side slopes or terrain where implement drift is significant
- Applications with standing crops, where keeping both the tractor and implement on their intended paths helps reduce crop damage
- Operations where precise seed, fertilizer or input placement is critical

Ideal User Profile

TrueTracker is designed for farmers who require high accuracy, multi-pass repeatability and maximum crop protection. The added investment is justified because implement positioning directly impacts productivity, crop damage, input placement and the success of later field operations.

GFX & NAV-960 Hardware Improvements

TrueTracker benefits from integration with the latest GFX displays and the NAV-960 guidance controller. The NAV-960 provides modern positioning and steering capabilities, including support for every major GNSS satellite constellation as well as features like IonoGuard™ and the ProPoint® GNSS engine that provide up to 50% better on-line performance when compared to NAV-III based systems.

Precision-IQ Improvements

TrueTracker in Precision-IQ adds new features that make active implement guidance easier and more intuitive to run.

Dual Stage Engage: Provides more control over guidance engagement for both the tractor and the implement. Engage them separately when desired, both simultaneously or leave only one engaged to provide maximum versatility for the operation.

Steer to Zero: Automatically returns the implement steering to center when the implement is lifted. This allows for faster acquisition of the line when turning around at the end of the row.

TrueTracker Use Case Examples

The following examples highlight common situations where TrueTracker may be a good fit.

Potato harvest

A specialty crop farmer is struggling to keep the harvester centered on potato beds. Even small amounts of implement drift can damage the crop and reduce harvest efficiency. TrueTracker actively steers the harvester, helping it follow the original beds with centimeter-level accuracy while keeping the tractor on its own guidance line.

Sidedressing standing corn

A corn grower needs a high-accuracy solution for sidedressing nitrogen in a standing crop. They need the toolbar centered between the rows without steering the tractor into standing corn. TrueTracker independently steers the implement, keeping the toolbar on line while the tractor stays off the crop.

Strip-till to planting

A grower invests significant time and fertilizer into creating accurate strips, but implement drift makes it difficult to place the planter directly over those strips later. TrueTracker actively controls the planter's position, providing the repeatability needed to accurately plant into the fertilizer bands.

Mechanical cultivation

A vegetable or organic grower needs to cultivate close to established plants without damaging the crop. TrueTracker keeps the cultivator centered between the rows, providing precise implement control where even an inch of drift can damage valuable crops.

Implement Monitoring in Precision-IQ

How It Works

Implement Monitoring uses an implement-mounted GNSS receiver to record the implement's actual path as a feature line in Precision-IQ. That feature line can then be selected as a guidable line for reference or used during future field operations. TrueGuide or TrueTracker do not need to be actively guiding the implement to use Implement Monitoring and no license is required to use this feature. Minimum hardware requirements are the same as TrueGuide.

Use Cases

Implement Monitoring is best suited for operations where accurately recording the implement's actual path is more important than actively steering the implement. A grower can record where an implement traveled during one operation and return to that same path during a later operation. This can be especially useful when the tractor and implement do not follow the exact same path due to side slopes, drift or implement offset, since the recorded line is based on the implement receiver rather than the tractor position.

Limitations

Implement Monitoring records the implement path as a feature line, not as a standard Precision-IQ guidance line. Because of this, the recorded line cannot be shifted or adjusted for future passes. Implement widths also need to match the original implement width used to create the line or be divisible by 3 implement widths (e.g. using a 30 ft planter then coming back with a 90 ft sprayer), since the feature line does not automatically adjust or generate passes based on different implement widths. It is best used as a way to return to a previously recorded implement path, rather than a replacement for a standard guidance-line system.

Implement Monitoring Use Case Examples

The following examples highlight common situations where Implement Monitoring may be a good fit or a value-add feature for a potential TrueTracker or TrueGuide customer.

Recording beds for harvest

A specialty crop grower wants an accurate record of where the bed-forming implement traveled, not just where the tractor traveled. Implement Monitoring uses the implement receiver to create a guidable feature line, giving the grower a reference to those actual bed locations for a future operation.

Recording strip-till placement

A grower doesn't need active implement guidance but wants to know exactly where the strip-till bar traveled. Implement Monitoring records the implement's actual path as a feature line that can be referenced during a later operation using the same implement width.

Getting more value from implement guidance hardware

A grower has the hardware and licensing for TrueGuide or TrueTracker but doesn't need implement correction for every operation. Implement Monitoring lets them use the implement receiver to record and reference actual implement paths even when TrueGuide or TrueTracker are not actively engaged.