

TRANSLAND NEWSLETTER

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WHAT'S INSIDE?



Helping Define Effective Swath
Width Using Variable Rate



Old, But Important Tips!



ADS-B In & Falcon Simulator



Satloc – YouTube

Helping Aerial Applicators Define Effective Swath Width Using Variable Rate*



Applicators can experience streaking when using a variable rate based on prescription mapping if not using the correct base swath width.

For example, streaking could occur if an applicator wanted to disperse urea using an AT 802 while using a base swath width of 81 feet over a wide range for several other rates.

When making variable rate applications, it is best to keep applications close to the base swath. Pick an optimum base swath width for the central rate to help minimize streaking potential.

Streaks may occur from overlaps in the lower rates and/or minimization in the overlap region. Larger spreaders, such as the 23537, can handle a wider range of rate changes on the base swath width.



* These numbers are based on an AT802 – 10 vane spreader #23502, (Urea-Pounds/Acre) from Dr. Dennis Gardisser's research.
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OLD, BUT IMPORTANT TIPS!



10 inch Transland Gate with Spreader 23537

Written by Dr. Dennis Gardisser

1. Be sure to keep the gate feeding even all the way across. This is one area that is found to be lacking on many aircraft.
2. Always maintain positive pressure in the hopper when dispensing dry materials. Unpressurized hoppers result in big feed rate differences as the hopper empties.
3. 38- and 41-inch gate boxes generally fit the 25 pound step rule. That is: Reduce the swath width 1 step or 3 feet for each 25 pound increase from the 100 pound setting -or- the opposite if reducing the application rate.
4. Pattern uniformity and width is dependent on material quality. Materials that have uniform and slightly larger sizes always produce the widest and most uniform patterns. One must develop a sense for the material qualities and adjust swath widths accordingly!
5. Typical swath width for the 23501 (10 vane) series spreaders on turbines is 75+ feet for 100 lb/ac application rates. The old standard 22007 spreader

is still very popular – typical width at 100 lb/ac is 66 feet. As a general rule: one can measure the difference in the tail width of spreaders and obtain the expected difference in swath width.

6. Faster aircraft do not result in wider swath widths! Surprised!!! The effective swath width may be wider in some cases, but only because of better uniformity with the more aerodynamically smooth airframe styles. Heavily loaded radials mashing along just can't produce as wide a widths. Speed is not the key, getting the tail out of the pattern – with the aircraft up on the step flying is!
7. Spreaders should be hung on aircraft so that the attack angle on the bottom surface of the spreader is the same as the bottom of the wing or slightly negative. I recommend not going over 4 degrees with the spreader tail. Negative means the tail is relatively higher than the trailing edge of the wing. The ideal pattern shape may be obtained by having the bottom of the spreader level in flight, but the spreader does not aerodynamically carry itself and the elevator may be semi-blanked out in some turning situations.

8. Spreader vanes should fit snugly – both top and bottom. If material can slide over the top of the vane, the vane adjustment becomes ineffective. The Transland kits to seal the vanes may help solve this problem in many spreaders.
9. Minimum flight altitudes with these wide tail spreaders should be 50 feet with 60 feet being optimum.
10. Many of the streaks that I see continue to be because pilots or their customers are too conservative on swath width. Do not automatically narrow up if you suspect a problem – it may get worse!
11. Pattern test to be sure!

Dr. Dennis R. Gardisser needs no introduction to the ag aviation industry. His resume includes an extensive list of degrees, awards, agricultural work experience, and agricultural chemical application research and development. He is also the son of a dairy farmer, a husband, father, grandfather, and great grandfather – these latter blessings and accomplishments are dear to his heart.

Contact your local Transland dealer to order spreaders, gate boxes, nozzles and much more!

ADS-B IN & FALCON SIMULATOR



Pilot safety and easy navigation played a big part when developing the Satloc Falcon GPS system. So, the engineers made an ADS-B In receiver standard (no unlock fees) in all Satloc Falcons. Another result is the buttons on the touchscreen. This makes navigation simple and intuitive for the pilot, allowing users to access almost every setting within one to three taps.

Contact your local Satloc dealer for ordering information.

Download the Falcon Simulator off Satloc's website, located on the Falcon/Falcon Pro page.

SATLOC — YOUTUBE

Satloc has over 22 how-to videos on our YouTube channel. The main topics are Satloc MapStar, Satloc Cloud, and Satloc Falcon/Falcon Pro. So subscribe to be notified when we add more videos.

