

Vicon PS spreader calibration tips

Calibration is essential to obtain maximum accuracy of the spreader.

The chart supplied is a guide only and the material being supplied will vary from supplier to supplier.

To Calibrate:

- Fill hopper one half full
 - Adjust spout height to 30"
 - Run at 540 PTO speed (*Make sure PTO shaft has been sized to the tractor and cut if necessary!)
 - Open and close metering plates to determine spread width for broadcasting. A flat smooth area is best to determine this edge. Measure from the where the last granule is found on one side, to the center of the spreader. Use that distance as the "Spread Width" in the formula. Spread width will vary for each material according to it's density.
 - Remove Spout
 - Attach calibration bag to spread unit
 - Set unit at proper height
 - Adjust PTO speed to 540 RPM
 - Collect material in sack for one minute
 - Weigh the material and compare to chart
- It may be necessary to reset adjusting rod position

The tractor ground speed is very important to the accuracy of the application rate.

This should be checked and determined to be correct. **MPH = $\frac{\text{Distance traveled in 20 seconds}}{30}$**

USEFUL FORMULAS IN LIEU OF USING SLIDE RULE METHOD IN OPERATOR'S MANUAL

The formulas can be used when application rates are less than 20 lbs/ acre.

TO DETERMINE CALIBRATION LBS/MIN

$$\frac{\text{LBS/ACRE X MPH X SPREAD WIDTH}}{495} = \text{LBS/MIN}$$

EXAMPLE: APPLICATION RATE 250 LBS/ACRE
DRIVING SPEED 5 MPH
SPREAD WIDTH 42 FT.

$$\frac{250 \times 5 \times 42}{495} = 106 \text{ LBS/MIN}$$

TO DETERMINE LBS PER ACRE

$$\frac{\text{LBS/MIN X 495}}{\text{SPREAD WIDTH X MPH}} = \text{LBS PER ACRE}$$

CALIBRATION 88 LBS/MIN
SPREAD WIDTH 42 FT.
DRIVING SPEED 5 MPH

$$\frac{88 \times 495}{42 \times 5} = 207 \text{ LBS/ACRE}$$

FRUIT & XMAS TREE BANDING

$$\frac{\text{LBS/MIN X 495}}{\text{(CALIBRATION) (CONSTANT) SPREAD WIDTH IN FT. X MPH}} = \text{LBS/ACRE}$$

(TOTAL OF BOTH BANDS)

When the machine is delivered to the farm and is ready for start off, it is essential that the unit is fitted to the tractor which has had its PTO checked for speed, i.e. 540 at the recommended tractor engine speed. The unit must be fitted to the tractor linkage and be level from side to side and also fore and aft. The spout must be 30" above the ground or crop.

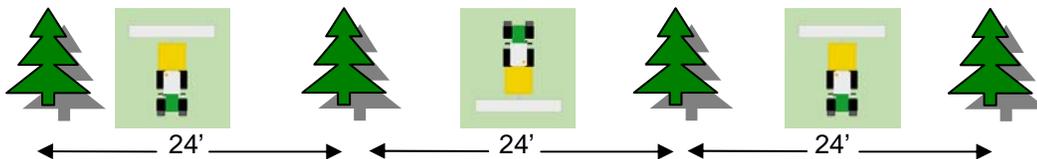
More info on calibration for banding

1. Determining spread width:

- a. Row spacing and band width with one pass are the factors that determine what spread width figure to use in the formula for calculating lbs./minute
- b. Example: If rows are on 24' spacing and the band width is adequate to apply an equal amount of fertilizer on the row then only one pass is required. That means every other row is used, and the spread width entered will be 48'.



- c. If band width is not wide enough to cover a row in one pass then every row is traveled and effective spread width entered will be 24'



2. Adjusting band width:

- a. Several adjustments can be made to change the width of the band.
 - 1. Spreader height on the 3 point (Raise or lower)
 - 2. Spreader angle (lengthen or shorten top link)
 - 3. PTO speed
 - 4. Spread angle adjustment on the spreader base unit. (use adjustment wrench to change the arc of the spout- machines are shipped with maximum arc setting)



Spreader height



Spout angle



Spout arc adjustment



Example:

250# per acre is the desired rate of application.
 Rows are on 24' centers
 Band width requires a pass down every row

Formula to determine pounds per minute:

$$\frac{\text{Lbs/acre} \times \text{MPH} \times \text{Spread Width}}{495} = \text{lbs/minute to catch}$$

$$\frac{250 \times 5\text{mph} \times 24'}{495} = 60.6 \text{ lbs/minute}$$

Set the metering rod at 33 or 34 to start with. Adjust until closest to 60.6 lbs per minute are caught.

Common metric conversions:

- 1 Meter = 3.29 Feet
- 1 CM= .394 Inch
- 1 KG = 2.2 lbs.
- 1 Liter = .0357 Cu. Ft.
- 1 Liter = Approximately 2.38 lbs. dry fertilizer
- 1 Hectare = 2.47 Acres
- 1 Acre= .4047 Hectare

Capacity in pounds is based on dry fertilizer weight of approximately 67 lbs./cu. ft.



SPREADER CHART

PS 202 - 302 - 402 - 602 - 802 - 1002

PS 203 - 303 - 403 - 603 - 803 - 1003



SETTING	POUNDS PER MIN.	SPREAD WIDTH	POUNDS PER ACRE AT:					SPROUT ANGLE	SETTING	POUNDS PER MIN.	SPREAD WIDTH	POUNDS PER ACRE AT:					SPROUT ANGLE
		FEET	MPH								FEET	MPH					
			3	4	5	6	7					3	4	5	6	7	
GRANULAR FERTILIZER FINE									FURADAN Fine Application Kit								
33	55	40	235	176	142	119	102	MAX	12	7.5	32	40	30	24	20	17	MAX
36	64	40	273	205	165	138	119		18	15	32	77	57	46	38	34	
42	86	40	367	275	222	185	160		24	22	32	114	85	68	57	50	
54	134	40	574	431	346	290	250		27	32	32	164	123	99	83	71	
GRANULAR FERTILIZER COURSE									WHEAT								
24	40	40	169	127	103	85	74	MAX	27	42	40	179	134	107	90	78	MAX
30	57	40	245	184	148	124	107		36	66	40	282	212	171	143	123	
36	79	40	339	254	205	171	148		39	77	40	328	246	198	165	143	
48	138	40	593	446	267	300	258		42	88	40	375	282	228	189	163	
PRILLS									SOYBEANS								
18	35	40	147	110	89	74	64	MAX	24	22	45	80	60	48	40	35	MAX
24	57	40	245	184	148	124	107		32	35	45	129	97	77	65	55	
30	81	40	348	261	210	175	152		36	50	45	185	139	111	93	80	
36	110	40	471	353	285	238	205		40	55	45	202	151	121	100	86	
UREA 46% N									ALFALFA Fine Application Kit								
18	38	32	198	149	119	100	86	MAX	14	4.8	30	27	20	16	14	11	MAX
27	68	32	384	263	211	177	152		18	7.7	30	44	33	26	22	19	
30	77	32	395	297	238	200	172		22	15	30	85	63	51	43	37	
36	100	32	514	386	310	259	224		27	19	30	107	81	65	54	47	
LIME Agitator Extension									CRIMSON CLOVER Fine Application Kit								
39	68	20	582	441	355	295	254	MID	12	3.1	32	16	12	9	8	7	MAX
46	95	20	808	609	491	410	352		14	3.7	32	19	14	11	9	8	
53	158	20	1356	1020	818	684	590		16	6.3	32	33	25	20	16	14	
62	262	20	2243	1683	1355	1128	975		18	6.8	32	35	27	21	18	16	
FERTRELL Windshield & Agitator Extension									RYE GRASS Agitator Extension								
18	46	20	395	297	238	199	172	MID	18	4.8	20	41	31	25	21	18	MAX
24	70	20	602	452	364	303	262		19	5.2	20	45	34	27	22	20	
27	79	20	678	509	409	342	295		20	5.9	20	51	38	31	26	22	
36	110	20	941	707	568	474	410		22	7.9	20	68	50	41	34	30	
MOCAP Fine Application Kit									TIMOTHY Fine Application Kit								
12	3	20	19	15	12	9	8	MAX	12	3.1	26	195	14	11	10	84	MAX
18	7	20	62	47	37	32	27		18	6.6	26	42	31	25	21	18	
24	13	20	113	84	68	57	49		24	16	26	102	76	61	51	63	
27	17	20	147	110	88	74	64		32	21.6	26	137	103	82	68	58	

Pounds Per Acre x MPH x Spreading Width = Divide By 495 = Pounds Per Minute.

NOTE: This chart to be used as a guide only.

FORMULA: Pounds Per Acre = Pound/Min. X 495

Spread Width X MPH

