

N – BUGGY CALIBRATION

- Ensure brush skirts of silo outlet are in contact with the belt and open silo side fully.
- Set timer on to 1 second and weigh the amount of urea delivered to establish what amount the belt delivers per second.
- Collect 2 to 4 samples together if there is any concern about scale accuracy.

Example: watering time is 45 hectares per 10 hours. This is equivalent to 4.5 Hectares per hour or 0.075 hectares per minute.

The urea application is 50kg / ha.

Rate per minute = Rate per ha x watering time ha per minute
 = 50 kg per ha x 0.075 ha per min
 = 3.75 kg per minute

If conveyor belt delivers 1.25kg per second

Setting for On timer = Rate per min / delivery per sec
 = 3.75 kg per min / 1.25 kg per sec
 = 3.0 sec per min
 = 1.5 sec per 30 sec

Therefore set on timer: 1.5 seconds

Set off timer: 30 seconds

CALIBRATION CHART

This chart shows the rate of urea delivery in kg per min for a range of urea application rates and watering rates.

		Watering Rate ha / hr									
		1	2	3	4	5	6	7	8	9	10
Urea Rate Kg/ Ha	10	0.17	0.33	0.50	0.67	0.83	1.00	1.17	1.33	1.50	1.67
	20	0.33	0.66	1.00	1.34	1.66	2.00	2.33	2.66	3.00	3.34
	30	0.50	0.99	1.50	2.01	2.49	3.00	3.50	3.99	4.50	5.01
	40	0.67	1.32	2.00	2.68	3.32	4.00	4.67	5.32	6.00	6.68
	50	0.84	1.65	2.50	3.35	4.15	5.00	5.84	6.65	7.50	8.35
	60	1.00	1.98	3.00	4.02	4.98	6.00	7.00	7.98	9.00	10.02
	70	1.17	2.31	3.50	4.69	5.81	7.00	8.17	9.31	10.50	11.69
	80	1.34	2.64	4.00	5.36	6.64	8.00	9.34	10.64	12.00	13.36
	90	1.50	2.97	4.50	6.03	7.47	9.00	10.50	11.97	13.50	15.03
	100	1.67	3.30	5.00	6.70	8.30	10.00	11.67	13.30	15.00	16.70

Urea delivery required (kg / min) = urea rate (kg / ha) x watering rate (ha / hr) /60