

Solid Manure Spreader Calibration

1. Spreader Capacity is Known.

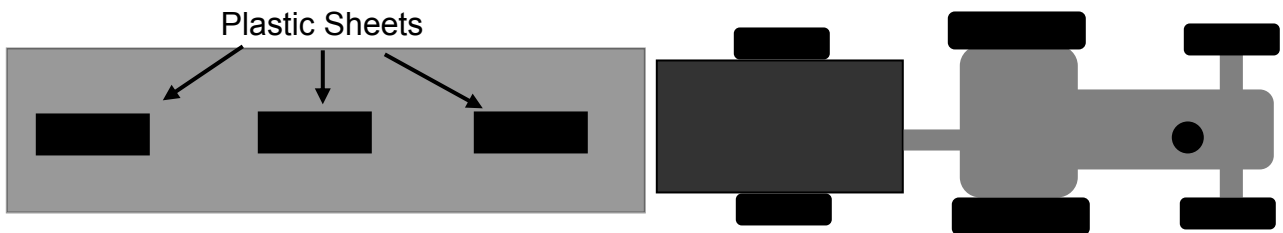
$$\text{Rate per acre} = \frac{\text{Spreader Capacity} \times 43560}{(\text{Width} \times \text{Travel Distance})}$$

Example: 20 ton manure solids spreader makes a pass every 6 30" corn rows (15 ft.) and empties spreader in 2400 ft. is applying 24 tons per acre.

$$\text{Rate per acre} = \frac{20 \text{ tons} \times 43560}{(15 \text{ ft.} \times 2400 \text{ ft.})} = 24 \text{ tons/acre}$$

2. Spreader Capacity is Unknown.

- Cut three or more sheets of equally sized plastic. 22 square feet (3' x 7'4" or 4' X 5'6") is the preferred size for ease of calculation.
- Weigh empty 5 gallon bucket plus one plastic sheet on a scale: _____ lbs.
- Lay sheets in field with edges secured by stones or other heavy objects.
- Drive tractor at normal speeds and discharge manure at typical rates over plastic sheets. Record tractor gear: _____, engine RPM: _____, and spreader settings: _____



- Check the sheet. Did a reasonably representative application rate fall on the plastic sheet?
- Carefully fold individual sheets without losing manure and place each sheet in separate buckets. Weigh each bucket.
Bucket 1: _____ lbs. Bucket 2: _____ lbs. Bucket 3: _____ lbs.
- Subtract weight of empty bucket and plastic (step b) to determine net manure weight in each bucket. Net manure weight for
Bucket 1: _____ lbs. Bucket 2: _____ lbs. Bucket 3: _____ lbs.
- Calculate average weight of buckets. Average Net Manure Weight: _____ lbs.
- Calculate application rate:

$$\text{Tons per Acre} = \frac{(\text{Net Manure Weight} \times 22)}{\text{area of plastic sheet (ft}^2\text{)}}$$

If plastic sheet = 22 ft², then Tons per Acre = Net Manure Weight