Calibration of Litter Spreading Trucks

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Calibrating your litter spreading truck is important. This simple procedure will help you apply litter at the exact rate you need to fertilize crops and forages. You will also reduce the risk of nutrient runoff, which can negatively impact water quality.

Materials Needed:

- Plastic tarp
- Bucket
- Top-loading scale

Steps to Successful Calibration:

1. Determine application rate (tons/acre) required to provide fertilizer based on soil and litter analyses.

2. Place the tarp inside the bucket. Record the weight of both bucket and tarp.

3. Choose a large, reasonably smooth, flat area in the field and spread the tarp over the chosen area.

4. Mark the spreader gate opening with a grease pencil or non-permanent marker.

5. Proceed toward the tarp at a speed appropriate for the field.

6. Drive over the sheet, spreading litter, before, during, and after you pass over the sheet.

7. Once you've passed over the tarp, carefully fold the corners of the tarp into the center and place it into the bucket.

8. Weigh the bucket and the tarp. Subtract the weight of the empty bucket and clean tarp. The difference is the weight of the litter spread over the tarp.

9. Shake litter off the tarp.

10. Repeat the above steps three times and use the average for calculations.

11. Using Table 1 on the back of this fact sheet, determine how many pounds of litter were spread per acre.

12. If the rate calculated is higher than the rate determined in step 1, slightly close the spreader gate and mark it with a grease pencil. If the rate calculated is too low, open the spreader gate. Repeat steps 2 through 11 until you reach the proper application rate.

This process usually takes less than an hour. If you follow this procedure, you will save hundreds of dollars in fertilizer costs alone. Considering that over-applying litter could contaminate groundwater or cause excessive runoff, you'll also have the peace of mind that comes from trying to work for, not against, the environment.

Table 1. Litter Spreading Truck Calibration
(Adapted from Alabama Cooperative Extension Service)

Pounds of Litter Applied to Tarp	Tons of Litter Applied / Acre			
	Size of Tarp			
	8' x 8'	8' x 10'	10' x 10'	10' x 12'
1	0.34	0.27	0.22	0.18
2	0.68	0.54	0.44	0.36
3	1.02	0.81	0.65	0.54
4	1.36	1.08	0.87	0.73
5	1.70	1.35	1.09	0.91
6	2.04	1.62	1.31	1.09
7	2.38	1.80	1.52	1.27
8	2.72	2.16	1.74	1.45
9	3.06	2.43	1.96	1.63
10	3.40	2.70	2.18	1.82
11	3.74	2.97	2.40	2.00
12	4.08	3.24	2.61	2.18
13	4.42	3.51	2.83	2.36
14	4.76	3.78	3.05	2.54
15	5.10	4.05	3.27	2.72
16	5.45	4.32	3.48	2.90
17	5.79	4.59	3.70	3.09
18	6.13	4.86	3.92	3.27
19	6.47	5.13	4.14	3.45
20	6.81	5.40	4.36	3.63
21	7.15	5.67	4.57	3.81
22	7.49	5.94	4.79	3.99

Note: If your tarp does not match one of these sizes, calculate your rate as follows:

$$\frac{\text{lbs manure on tarp x } 21.78}{\text{tarp length (ft) x width (ft)}} = \text{tons per acre}$$