

Calibration Worksheet

NC STATE

EXTENSION

Date: _____

Landowner: _____ Farm no. _____

1. Determine spreader speed, S (go to step 2 if machine has speedometer):

(a) Course length: _____ ft

(b) Time required: Run 1 _____ Run 2 _____ Run 3 _____ Average _____ (sec)

(c) Gear #: _____ Engine RPM: _____

(d) Spreader speed: $S = \frac{0.6818 \times (a)}{(b)} =$ _____ mph

2. Determine spread pattern and effective swath width: Enter litter weights in the pans in Table 1. The 21 pans are at 3-ft spacing and cover a total of 60 ft. Pans 1 and 21 are farthest to the right and left, respectively. Pans 10 – 12 are in between the spreader tires, and pans 6 – 16 are in the effective swath width. Use at least three passes, traveling in the same direction on each pass. Determine spread pattern by plotting the distance vs. litter weight.

Table 1. Litter collecting in the pans after three passes.

Pan #	Distance, ft	Litter weight, gm
1	30	
2	27	
3	24	
4	21	
5	18	
6	15	
7	12	
8	9	
9	6	
10	3	
11	0	
12	-3	
13	-6	
14	-9	
15	-12	
16	-15	
17	-18	
18	-21	
19	-24	
20	-27	
21	-30	

(a) Effective swath width: _____ ft

(b) Spread pattern: Flat-top Oval Pyramid

Other (specify): _____

3. Determine application rate, R (tons/acre):

(a) Width of tarp (along direction of travel): _____ ft

(b) ONLY pyramid pattern: distance between the left and right sides on tarp receiving **50%** litter application based on collection in the pans (Figure 7): _____ ft

ALL other spread patterns: distance between the left and right sides on tarp receiving 100% litter application based on collection in the pans (Figure 7): _____ ft

(c) Weight of litter collected from area covered by (g) × (h): _____ lb

(d) Correction factor (ONLY pyramid pattern): 1.33

Correction factor (ALL other spread patterns): 1.00

(e) Number of passes over tarp (at least 3):

$$\text{Application rate: } R = \frac{(i) \times (j) \times 21.78}{(g) \times (h) \times (k)} = \text{_____ tons/acre}$$