

Calibrating A Seeder

(Adapted from Southern Forages, 3rd Edition)

To calibrate any seeding machine, two things must be known:

1. amount of seed used (S)
2. area covered in acres (A)

Amount of seed collected from machine covering a known area

The seeding rate (SR) is calculated from $\frac{S \text{ (amount of seed used)}}{A \text{ (area covered in acres)}}$

**A = area covered in square feet
 43,560 ft² in one acre**

Determining Amount of Seed Used

Place a collection device at seed outlets.
 Collect and weigh the seed.

Determining Area Covered in Acres

A. Measure seeding width of machine used.
 Pull the machine for a known distance.
 Example: a 7' wide drill pulled 100'
 covers 700 square feet (7' x 100' = 700 ft²)

B. Measure the distance around the drive wheel and turn the wheel a given number of times for a total distance



Source: Southern Forages, 3rd Edition

Example 1

A drill with a 7 foot wide seeding width is pulled 100 feet with 0.25 lbs of seed dispensed.
 What is the seeding rate?

S (amount of seed)

A (area covered in acres)

$$\text{Seeding rate} = \frac{0.25 \text{ lb}}{0.016 \text{ acre}} = 15.6 \text{ lbs/acre}$$

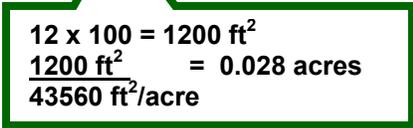
7' seeding width x 100' distance = 700 ft²
 Area in acres = $\frac{700 \text{ ft}^2}{43,560 \text{ ft}^2 / \text{acre}} = 0.016 \text{ acres}$

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Example 2

A cyclone seeder with a 12 foot seeding width dispenses 0.12 lbs of seed in 100 feet. What is the seeding rate?

$$\text{Seeding Rate} = \frac{S(\text{amount of seed})}{A (\text{area covered in acres})}$$
$$= \frac{0.12 \text{ lb}}{0.028 \text{ acres}} = 4.3 \text{ lbs/acre}$$

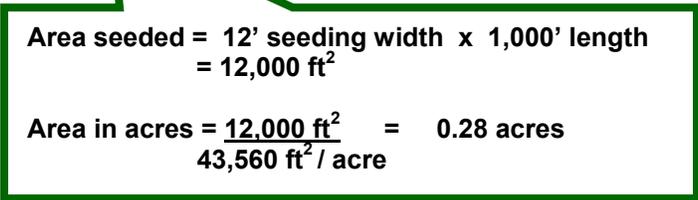

$$\begin{aligned} 12 \times 100 &= 1200 \text{ ft}^2 \\ \frac{1200 \text{ ft}^2}{43560 \text{ ft}^2/\text{acre}} &= 0.028 \text{ acres} \end{aligned}$$

Example 3

Three pounds of seed were placed in a cyclone seeder with a 12 foot seeding width. Seed was sufficient to cover a distance of 1,000 feet. What is the seeding rate per acre?

Seed = 3 lbs

$$\text{Seeding rate} = \frac{3 \text{ lbs of seed}}{0.28 \text{ acres}} = 10.7 \text{ lbs/acre}$$


$$\begin{aligned} \text{Area seeded} &= 12' \text{ seeding width} \times 1,000' \text{ length} \\ &= 12,000 \text{ ft}^2 \\ \text{Area in acres} &= \frac{12,000 \text{ ft}^2}{43,560 \text{ ft}^2/\text{acre}} = 0.28 \text{ acres} \end{aligned}$$

Area

Acre = 4,840 square yards = 43,560 square feet = 160 square rods

Length

Rod = 16.5 feet = 5.5 yards

Mile = 1,760 yards = 5,280 feet

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