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DEPTH OF COVERING GRASS SEED.

JAMES WILSON.  C. F. CURTISS.

The numerous failures in getting good stands of the cultivated grasses, and the serious losses resulting, has induced us to make trials during the past two years to ascertain what influence time of sowing and depth of sowing has, on securing good crops.

Bulletin No. 15, issued one year ago, treats of the time of sowing and experiments made during 1892, give us indications relative to the depth of covering grass seed.

The spring was rainy and the ground wet; seeding could not be done until April 9th, when operations begun. Red clover, Timothy, Bromus Inermus and Tall Meadow Oat grass, were sown at that date, as follows: A plat of each one rod square was covered one-half inch deep, by raking the seed in. A plat of each was sown in furrows, made one inch deep, and covered with the hoe. A plat of each was sown in furrows two inches deep, and covered in the same manner, and a plat of each was put in furrows three inches deep.

Red Clover.

Wet weather continued, so that moisture was abundant to assist germination. On April 25th the clover raked in was in sight above ground; the clover covered one inch deep could be seen at that time, but not so much of it. Clover sown two inches deep could also be seen, but still less than that covered one inch deep. No other grasses could be seen at this date.

On April 26th the clover covered three inches deep was about one-half up, and on April 27th was as large as the clovers covered at less depth.

Timothy.

April 27th the raked in Timothy was in sight; that covered one inch deep was not all above the ground; that
covered two inches deep was similar to that covered one inch deep; and that covered three inches deep begun to come through the ground.

**Tall Meadow Oat Grass.**

On April 28th the first spears of Tall Meadow Oat Grass covered one-half inch were seen. April 29th that which was covered one inch came first in sight; and what was covered two inches deep showed spears. May 2d that covered three inches came first through the ground.

**Bromus Inermus (Awnless Brome).**

April 29 the Bromus Inermus seed covered one-half an inch made its first appearance; April 30 that covered one inch was visible; May 2 the seed covered two inches was coming through, and a few spears of that covered three inches was visible.

On July 23, the plats were cut and the grass dried into hay condition.

Clover covered \( \frac{1}{4} \) an inch, made 31\( \frac{3}{4} \) pounds.

- " " 1 " " " " 11 "
- " " 2 " " " " 5 "
- " " 3 " " " " 3 "

Timothy covered \( \frac{1}{4} \) an inch made 20 pounds.

- " " 1 " " " " 25 "
- " " 2 " " " " 16 "
- " " 3 " " " " 17 "

Tall Meadow Oat Grass \( \frac{1}{4} \) an inch made 17 pounds.

- " " " " 1 " " " " 23 "
- " " " " 2 " " " " 34 "
- " " " " 3 " " " " 15 "

Bromus Inermus \( \frac{1}{4} \) an inch made 17 pounds.

- " " 1 " " " " 42 "
- " " 2 " " " " 35 "
- " " 3 " " " " 5 "

The clover covered one-half inch made most hay on July 23, the deeper coverings decreasing as the seed was covered deeper. No intervening drouth had occurred to affect the plants. Late fall conditions showed the plats covered two and three inches were markedly better than that covered one inch, and decidedly better than the raked in plat covered one-half inch, after a severe fall drouth.
The Timothy plat covered one inch deep, gave the most hay and that covered one-half inch the next highest yield, and the October conditions maintained this relation; the two-inch covered plat showed a better fall condition than either of the foregoing; that covered three inches was not quite as good as that covered two inches.

The Tall Meadow Oat Grass yielded most hay where the seed was covered two inches and showed the best fall condition; the deeper covered plats gave lighter yields and showed poorer fall conditions.

The Bromus Inermus covered one inch, gave the most hay, and that covered two inches yielded nearly as much; the two-inch covered plat showed the best fall conditions.

Notes taken September 25th show that Timothy raked in was in fair condition, Clover the same. Tall Meadow Oat Grass rusted, and Bromus Inermus a thin light stand.

The one inch seeding in October was better than that raked in, and free from rust. Timothy and Tall Meadow Oat Grass covered two inches were better than that covered one inch; no rust.

The Clover covered three inches, at this season, was nearly as good as that covered two inches. The Timothy covered three inches was also nearly as good as that covered two inches. The Tall Meadow Oat Grass and Bromus Inermus covered three inches were less vigorous than the others.

The months of September, October and November were very dry, and the only severe drouth of the season occurred during these months; at the end of November the clover covered three inches was the most vigorous.

The soil is sandy loam.

The indications for such a season as that of 1892 are that, clover covered two and three inches deep stands a severe fall drouth better than that covered less, while lighter coverings give better yields at first cutting.

Timothy covered one inch deep gave most hay at first cutting, but that sowed two inches deep stood drouth best.

Tall Meadow Oat Grass covered two inches deep gave the most hay at first cutting and showed the best fall conditions.

The Bromus Inermus, covered one inch deep gave most hay at first cutting, and that covered two inches deep showed the best fall condition.