

dinarily chosen for orchards, may fairly be presumed to be perfectly hardy in this latitude, are Green Streaked, Veronish Reinette, Flax Voronish, Koursk Anis, Pointed Pipka, Titus, Grushevka, Red Pipka, Aport Orient, Arkad, Yellow Calville, Heidhorn, Gipsy Girl '56 Vor.), Blushed Calville, Ribernal and Ostroff's Glass.

"It is not fair to assert, however, that the remainder of the list is too tender for culture in Minnesota; nor, on the other hand, can entire hardiness be claimed for the above list.

"The foregoing notes merely tell the action of the varieties named under certain conditions, and, so far as location is con-

The experiments in wheat culture are very interesting to me, particularly those on shallow vs. deep sowing. But I fear, from the short time the farm has been under cultivation, the land has not been sufficiently exhausted by cropping to admit of much dependence to be placed on any experiments that may be made in the relative values of artificial manures.

The most striking feature of the above experiments in thick- and thin-sowing is that, in both seasons, the 4 pecks plot and the 8 pecks plot ripened at the same time. Now, when in England, I tried several times this very same diversity of seeding, and I invariably found that the thick-sown



ENGLISH HATCHING HOUSE.

cerned, it should be borne in mind that these conditions were decidedly the most severe that could be chosen.

"A comparison of the foregoing list with the Duchess will prove interesting. While the average of the Duchess trees did not stand the winter much, if any, better than Auto-novka, which killed back to old wood, there were a few trees that produced good growth from buds near the base of the one-year-old branches, and averaging twenty-two inches in length. The Duchess seems to have, in an unusual degree, the power of recovery from winter injury, and it may be that many other Russians will develop the same quality. The Duchess has long been known to winter kill in this latitude, but all apple growers regard it as a safe investment, and they take it as a standard of hardiness."

came to harvest at least 8 days sooner than the thin-sown. And the reason seems to me to be clear: the thin-sown has to tiller out to make sufficient stems and ears to yield a full crop; the thick-sown can shoot up into stalk without delay.

THICK AND THIN SEEDING.—1886.

| No. of Plat. | Depth of seed. | Quantity per acre. | When sown. | When up | When ripe. | When cut. | Yield per acre. |
|--------------|----------------|--------------------|------------|---------|------------|-----------|-----------------|
| 7 | 1½ in. | 4 pecks | May 7 | May 13 | Aug. 1 | Aug. 6 | 1208 lbs. |
| 8 | 1½ in. | 5 pecks | May 7 | May 13 | Aug. 1 | Aug. 6 | 1012 lbs. |
| 9 | 1½ in. | 6 pecks | May 7 | May 13 | Aug. 1 | Aug. 6 | 1096 lbs. |
| 10 | 1½ in. | 7 pecks | May 7 | May 13 | Aug. 1 | Aug. 6 | 1162 lbs. |
| 11 | 1½ in. | 8 pecks | May 7 | May 13 | Aug. 1 | Aug. 6 | 912 lbs. |