

Under the ordinary field culture of wheat in this country the usual produce of wheat is estimated at about sixteen grains to one; the unusual produce, under the highest order garden culture, has gone as high as seven thousand four hundred and forty-five grains to one.

At the late trial of implements at Utica, under the auspices of the new York state Agricultural Society, six kinds of potato diggers were exhibited. One was a hand digger, sold for \$7, which the operator threw out nine hills of potatoes in one minute and ten seconds.

The *Country Gentleman*, speaking of hair as a fertilizer says that it contains a large amount of nitrogen. It may be spread evenly over the ground at the rate of a peck or so to the square rod, and turned in by shallow plowing; or better, mixed in a compost heap at the rate of a tenth part more or less in successive layers.

A correspondent of the *Country Gentleman* urges co-operation among farmers for the following purposes:—To lessen the costs of production of farm produce. To lessen the cost of articles required to be purchased. To cheapen the marketing of farm produce. The maintenance of a reasonable price upon all farm products.

A great many farmers are coming to the conclusion that it does not pay to run their homes as boarding houses for hired help and are building tenant houses and getting married laborers. Said a New York farmer:—"I have always hoarded my help until the present season, but I shall never do it again. I built a tenant house yonder," and he pointed to a neat little domicile twenty rods from his own, "and it has paid its costs already in the added privacy and quiet it has enabled me to enjoy, and in the great blessing of work for the women folks."

Victor Hugo eloquently says:—"These heaps of garbage at the corners, these tumbrils of mire jolting through the streets at night, these horrid scavengers-cars, these fetid streams of subterranean slime which the pavement hides from you—do you know what all this is? It is flowering meadow, it is green grass, it is marjoram and thyme, and sage, it is game, it is cattle, it is the satisfied low of huge oxen at evening, it is perfumed hay, it is golden corn, it is bread on your table, it is warm blood in your veins, it is health, it is joy, it is life. Thus wills that mysterious Creation which is transformation upon earth and transfiguration in heaven."

The *Western Farmer* gives the account of a farmer who bought a field which had been plowed for twenty successive years, with a soil only four or five inches deep. He applied a subsoil plow, running it fourteen inches deep, then run it the other way, and then harrowed it twice, with an interval of a few days, and had his ground broken up without the aid of the ordinary plow. At one time he marked ground for corn by running a subsoil plow fourteen inches deep, both ways at proper distance, and planting at the crossings. He had a good crop notwithstanding a severe drouth.

A correspondent of the *Western Farmer* recommends the use of a "Smoother" in preference to the "Roller" for smoothing and pulverizing the soil. The "Smoother" is made of two or three hard wood planks about three inches thick, and pieces of 3x4 joist put on cross-wise, the forward ends extending

a foot or so over the front of the implement to which to attach clevises. It should be nine feet long. The inventor finds that it crushes lumps, levels and smooths the land much better than a roller.

The Live Stock.

SUCCESSFUL BEE-KEEPING IN A NUT SHELL.

BY ELSHA GALLUP.

"The great secret in successful bee keeping consists in knowledge how to keep all stock strong, or having them strong with brood in all stages, nursing bees and outside laborers at the commencement of the honey harvest. To illustrate this: A and B both have the same resources in their respective localities, or, we will say that both reside in the same locality, and their honey harvest commences on the first of June and the last half of July, and first half of August there is no forage for bees. June and the first half of July is good, and the last half of August, and the month of September is good.

"A commences in spring to stimulate, equalize, &c., and replaces all old queens or queens that do not come up to the standard of fertility with young prolific queens, allows but little increase (that is, providing surplus honey is the object). Here I will remark that with young prolific queens and abundance of room there is but very little danger of increase, and on the first day of June when the harvest commences he has every stock completely filled with comb brood in all stages, nursing bees in abundance, less than sixteen days old, honey gatherers over sixteen days old, and they are in the very best possible condition to commence storing surplus honey immediately. Then during the scarce time, in the last of July and first of August, stimulates and keeps up the fertility of the queens until the harvest again commences in the middle of August. His bees are then ready to commence storing surplus again as soon as the harvest commences. The consequence will be that A receives a profit in surplus honey, and pronounces the season a good one. In fact, meets every one with a smiling countenance, and is well satisfied that bee keeping pays, &c. On the other hand, B commences with the same number of stocks, in the spring lets them manage themselves, and on the first day of June they are not in condition to store surplus, or at least but very few of them, and those few he allows to swarm themselves to death, or which amounts to about the same thing. When the honey harvest commences his stocks commence breeding very rapidly, and by the time his stocks get in condition to store honey the harvest is done, or nearly so, for it takes twenty-one days to hatch out a worker, and sixteen days more, or there about, before they commence laboring outside, &c. Now the scarce time comes on again, and B has got no surplus honey, but perhaps has a number of extra swarms. The queens stop breeding entirely, or nearly so, especially so if the forage is entirely dried up or cut off. Now, when the honey harvest commences, in the middle of August, his stocks, instead of being in condition to commence storing, have to go to raising brood again to replenish their stock of workers, for recollect that the brood hatched in June and July is very soon used up with old age, for the lifetime of a working bee is only from six to eight weeks during the working