

### Another Consideration Besides the Weight of Roots per Acre.

In crops of roots grown in competition for premiums there seems to be but one thought in the minds of exhibitors and judges, that is, the great size of the root exhibited. Its quality is entirely overlooked. The Professor's remarks in the Agricultural Gazette are well worthy of consideration. He makes "Jack at College" say:

"Although my knowledge of farming is very limited, there is one thing I have learned—that there is a good deal of difference in the quality of swedes. In some cases they are scarcely worth eating, whilst in other cases they are good sound food. I have seen our ewes at home eating as many as they could hold, and yet not able to satisfy their hunger. I have seen them at other times satisfied with a much smaller quantity, and doing well with less than half the supply of roots. Our shepherd and I have often talked the matter over, and he was satisfied from the use of swedes that some were three times as good food as others were, that is weight for weight. Chemistry, he knew, had done a great deal for good of farm crops; but for all that, he had learned that it was possible to use the whip too much, and make root crops grow too fast for them to be got of the best quality. He had also been taught that nothing was so dear as when you got too much for your money, and this was a lesson which should be more generally learned. Their experiments had been suggested by the late tutor, Mr. Nicholson, of Wrexborough, and they showed that it was quality the farmer wanted to secure in the first place, and the more he could get, without a sacrifice of quality, the better it was both for the person who farmed the land and for the person who owned it."

Prof. Armstrong, who followed, complimented Mr. John Holmes upon the correct views he had expressed and in which he fully agreed. He added:

"Speaking as I do from a professional point of view—as a veterinary surgeon—my experience has proved to me, that food of a low nutritive character is a very fertile cause of disease in all kinds of animal life. The desire for food remains unsatisfied when a fair bulk of food has been taken, and consequent upon the craving for more food—to supply the deficiency in nutriment—the system gets overloaded and deranged, and the animal is thereby predisposed for sickness and disease. For the preservation of the health of farm stock, it is clearly the farmer's first duty to grow food of the highest nutritive character, and it was also his interest to grow as much as he could grow without a sacrifice of quality."

Now that we have seen that monster roots are inferior to those of medium size for stock feeding, we need hardly say that they are much more unfit for human food. Especially is this the case with potatoes. Potatoes of moderate size and fully matured are much to be preferred to those of extraordinary size forced by heavy applications of manure.

### Drainage with Gravel.

Col. Waring, the author of "Ogden Farm Papers," says: "The most striking, and I think the most valuable suggestion that has been made in connection with drainage the past few years, comes from Professor Wilkinson, of Baltimore, Md., who recommended that the conduit be made of gravel." Mr. Wilkinson, of Harvard, Illinois, in the Prairie Farmer, says: Drainage with gravel is no ideal theory with me; but I have now had sixteen years experience with the use and efficiency of this material for drains.

It is not only economical but I have never known a drain to clog; it is impossible that any kind of injurious vermin should get access to drains; in fact, it is perfect.

The above seems well worthy of consideration and I trust will be put into practice under the proper conditions.—[Prof. Shattuck, in Drainage Journal.]

Mr. D. N. K., Pennsylvania, tells an agricultural exchange that 24 whole potatoes planted in as many hills, with a handful of bran in each, gave a yield of three pecks, and the same number right alongside of them, but without bran, yielded only half a bushel.

### Use of Salt in Preserving Hay.

I note in the late number of your paper the following quotation, with which I feel constrained to differ: "Science tells us that salt is not a preservative of hay, and hay would be much better without it." It appears to me that the above quotation is too sweeping an assertion for a fact, and needs some qualification as a fancy. All vegetable organism requires an addition of salt to render it most palatable and, of course, nutritious to animal organism. Salt renders moisture much less liable to must hay. Salt preserves moisture to hay, which it would otherwise lose. These I take to be undeniable facts. Then it follows that salt is a preservative of the best quality in, or of hay, preserving it from must and dust, which in a great degree in clover is apt to give horses the leaves. So much in point of fact. Now, as to fancy. It may be said that hay, when properly cured, needs not the foreign aid of salt as a preserver. Perhaps so, if the keeping qualities are the only requisite; but if the seeding quality is also considered, then salt is a constitutional desideratum. The hay and the salt could be fed separately, but I think the animal economy would prefer it mixed. At any rate it is the rule with bread-makers and bread-eaters. Again, if the hay is to be sold, then salt has a preservative value. I think it would be generally allowed that salted hay holds its weight much better than unsalted; or, that 100 pounds of salt applied to hay will cause it to weigh out the next spring 200 pounds more than it would without the salt. This is my theory, and I think there's science in it; and if it is true "that the best of farmers use no salt, and their hay is better than those who do apply it," then I am in that most undesirable category, the misinformed.

Another writer, of acknowledged scientific ability, is reported as saying that "the best hay is that cut on the richest land." This is very apt not to be the case. I suppose that hay from land producing about one and a half ton to the acre, is of much better quality than that which will produce three tons to the acre. The former will be sweeter and also weightier, bulk for bulk; and the latter will not gain the nourishing element and value which light and air impart, and has more of the character of rowen or second crop of a later season. Then, again, the soil, whether of highland or lowland, materially affects quality; and we know that moderately low lands produce most, but not the best. Still again, land may be so rich in the productive element as to be incapable of yielding the best hay, as it forces a too succulent growth. But it is the attrition of mind upon mind, thought upon thought, which shall resolve our opinions into facts. Truth-seekers cannot be dogmatical, but must be as truthful as the well-poised vane, which will change to unerring law. Thus ideas tend to theory, theory leads to opinion, opinion develops into fact, and fact progresses to thinking and doing well.—[Cor. American Cultivator.]

### Paris Green and Potatoes.

I never believed Paris green could be absorbed by the roots of any plant, for plants do not take up through their roots anything but soluble matter, and Paris green does not dissolve in water, but floats in it for a short time. It doubtless decays in time and becomes mingled with the earth, but by that time its nature will be changed, and the poisonous effects neutralized. It is probable that this change takes place before the particles decay, or at all events they are so thinly distributed in the soil as to be harmless. This is proved by the fact that we used the baby's nut grove, where Paris green had been liberally applied to the potatoes (grown under straw), for a feeding yard for a score or more of little pigs, and they rooted it over many times seeking stray potatoes and feeding on the angle-worms which were made plenty by the covering of straw. None of the old hogs have rooted over the potato ground thoroughly with no harm to themselves, and here the poison was applied three times. We can raise good crops of potatoes by using plenty of Paris green, and without it we cannot, so long as the beetles stay with us. The vines should be gathered in heaps and burned as soon as the potatoes are dug, and then all danger is over. This is my judgment and experience, and I shall act on it, although it may be contrary to science.—F. D. C., in N. Y. Tribune.

### Level Culture.

At the beginning of farm life, in order to learn the most improved methods, I employed a first-class farmer and gardener, fresh from England.

He persisted in a mode of cultivation precisely the reverse of what I had been used to see—allowing the mangels and sugar beets, the corn, potatoes, peas, beans, cucumbers, melons, tomatoes, cabbage, etc., to go without any hilling up. The mangels and sugar beets stood high above the ground, the bulbous parts exposed to the sun, many of the mangels falling over and growing crooked. The part of the cucumbers above ground, which I insisted was rather a root than stem, and should be surrounded by earth, was left entirely exposed to the sun. I thought the sun would parch the roots and they would break or be injured, when the stem should fall from the upright to a horizontal position.

The Englishman would have his way, but agreed I should treat some of each sort of plants in my own way. So a few of all sorts were hilled up, and fully as well worked in other respects as his, during the season.

For a few weeks mine grew as well as his, and the cucumbers, peas, etc., bloomed as early. After one gathering of cucumbers, peas, etc., and the dry season set in, mine perished, while his continued to bloom and bear, and so of the melons.

My potatoes made about half a crop of small tubers, dug from dry hills; his yielded bounteously of large ones, dug from moist earth, at the same time in the same field. So with the mangels, sugar beets, etc. The hilled peas, beans, etc., fired early in the season, and succumbed to the drouth.

Without this experience, if one had said that hilling up growing plants would kill them, I should have joined in the response of a million farmers, denouncing it as false and contrary to experience because they did not perish on the day they were hilled up.

Ever since I have avoided hilling and ridging about growing plants, and cultivated the soil as levelly as possible.—[Correspondent of the American Farmer.]

### Variety in Cropping.

A mere enumeration of the topics which at the present time occupy the farmer's attention could scarcely be compressed into our opening column. We are more than ever convinced that a greater variety in the acreage devoted to roots would be to the advantage of the farmer. The old routine too often followed even by first-class business men, of swedes and turnips, with a few acres of mangels, requires to be modified. Many sound arguments may be adduced in support of this view; and, as there appears to be a disposition to continue in the old grooves, we think it advisable to marshal them on the present occasion in the hope that some of our readers may adopt a sounder system of cropping.

First, then, it is a fact that a crop which has never been before grown upon a field thrives better, and has more chances in favour of its complete development, than has a crop which has been cultivated at four years' intervals upon the same field for generations. We all know the effect of constantly growing clover, potatoes, and turnips. Their repeated cultivation is followed by sickness, scab, and anbury. In a less degree, and perhaps less evidently, the repeated growth of any crop tends to make succeeding crops of the same description less thriving.

Viewed merely as a question of root nutrition, is it not incontrovertible that a crop which takes its food from a different (a deeper or shallower) layer of the soil, which possesses a different system of roots, and which selects its food in different proportions from crops previously cultivated, must stand a better chance of succeeding than an established crop which has been preceded by hundreds of similar crops, all of which have hunted for the same sort of food, in the same sections of the soil, and in the same manner?

By growing a greater variety of crops we diminish risk from untoward seasons, as it is not often that a season is unfavorable to all crops alike. We also provide a wholesome change of food for stock, a most important consideration, as the health, and often the life of sheep, is materially affected by such changes. How often do lambs suffer by enforced continuance upon swedes? How much better would it be if a few acres, say of kohlrabi were provided for them as a change.—[Agricultural Gazette, Eng.]