

LESSONS ON THE POTATO.

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No single lesson on any plant completes the topic; for, being alive, plants must be studied in all stages of their life history. A winter lesson on potatoes, therefore, merely opens the way to more careful study the following summer.

A study of the tubers is interesting in winter. Aside from the shape, size and color, which vary with the individual and the variety, the "eyes" are worthy of observation. Do they look like human eyes in any way? What are they? This question is answered by watching the sprouts grow during the next month or two. What are the sprouts? In summer, the children will discover that when these sprouts come above the ground, they bear leaves. It might be wise not to decide what the "eyes" and sprouts are until we can observe the summer development.

In the meantime, examine the twig of a tree — say that of an apple or a willow. On this twig are buds, systematically arranged. Make sure that the arrangement is systematic. Where are the buds closer together, near the tip of the twig or towards its base? Where are the "eyes" of the potato most thickly clustered? Are they systematically arranged. Look at a long slender potato for this. Keep the comparisons between the twig and the potato in mind until spring. When growth begins, compare them again. Your children will then find that buds on the twigs develop into leaf-bearing branches, just as potato "eyes" develop into leaf-bearing sprouts. Moreover, one can always trace branches back to stems. Buds on the stems made branches possible. If the children should conclude that "eyes" must be buds, what is the tuber?

Another proof that the tuber is a stem, is the fact that sometimes little tubers instead of sprouts grow from the "eyes." If a little tuber is a branch, it follows that a big tuber bearing it might properly be called a stem.

Of course, it is much shorter to tell the children a tuber is a stem, and save all this time. But think of the pleasure of discovery you thus deny them!

In the winter, one might profitably collect as many varieties of potatoes as possible. Study the points considered in judging potatoes. The color of skin, its roughness or smoothness, depth

of "eyes," uniformity of size, firmness of flesh, etc., are points to observe.

Even now children will plan what potatoes they will plant in their home gardens next year. Discuss with them the kind of soil best suited to potatoes. Will they do well on clay soil? When potatoes are "wet" after being cooked, is the variety always to blame; or might the same variety be "dry" on a different soil? Try planting the same variety on different soils.

At planting time, a lesson on propagation is in order. Do we plant potato seeds? What do we plant? Why? Do we propagate any other plants by cutting up and planting pieces of the stem? Try it with willows, roses, snapdragons and geraniums.

Do potatoes produce seed? We'll begin to suspect they do when we see the blossoms grow next July. What are blossoms for, if not to produce seed?

Why do we not grow potatoes from seed? Save some potato "balls" next fall to plant the following spring. We may learn something by so doing.

Do you know anything about seed selection in general? That is a very important topic. In particular, selecting seed-potatoes now suggests itself. How many of your farmer-friends select theirs in the field at digging time? Can you find out why that is best?

What diseases affect potatoes? The potato beetle ("bug") is not a disease, but a pest. Study the insect, its life-history and methods of control.

The commonest diseases are the blight and the scab. Both are caused by extremely small plants (fungi), which feed upon the tissues of the potato. The blight affects the leaves, and the scab attacks the tuber.

Since these are of so great economic importance, I suggest that those interested should write to the Department of Agriculture, Ottawa, and ask for a bulletin on Potato Culture. Text-books on botany will give information about fungous diseases; but the technical language there used should not be passed out to children. If the teacher wishes the information for herself, all right.

Try to learn, through bulletins and otherwise, which varieties of potatoes are best in any given locality. Besides studying potatoes from the gardening and botanical standpoint, consider