FOUR

The Soil

THE TOPSOIL OF OUR FARM

and others about it was a dark loam averaging about twelve inches in depth. Small, widely separated patches that lay a little higher than surrounding areas were found in some fields. Farmers called such patches “clay knobs.” The soil here, dark gray in color, with a texture quite different from that of the other soil, was much less fertile. Water did not readily penetrate it, and it became hard when baked in the sun. No doubt the knobs were weathered hillocks of glacial clay that, by reason of their original relative height, were never enriched by the deposit of sedimentary material as were surrounding areas. Beneath both the knobs and the dark soil lay a bed of yellow clay several feet thick. Underlying this was a much thicker layer of tough, bluish clay, highly impervious to water.

In dry summer periods wide, deep cracks opened in the dark soil, attesting its marshy origin. If fields were worked when a little wet in spring, big clods were formed that might last through the summer. This tendency of the soil to pack and form clods gave rise to bothersome farming problems. Since the condition was common, farmers often alluded to themselves as “clod-hoppers.” Nowadays,
cultipackers and other improved implements take care of the clods and make field work much easier. A slightly larger proportion of sand in the soil would have improved it greatly. This was demonstrated by a man who worked several tons of pulverized limestone into the gummy soil of his garden: the stone not only solved the clod problem, but it made the ground much easier to work.

Our fields were capable of growing good crops of corn, oats, wheat, rye, potatoes, and grasses for hay and pasturage. Some about us occasionally sowed a field to barley, but the barbed, scratchy beards that anchored themselves in clothing at threshing time tended to lower the popularity rating of the grower. Soybeans, sugar beets, tomatoes, and alfalfa, though now familiar and important crops in the region, were not grown in my time on the farm. Sweet clover grew wild in patches about us. Called "bee-weed" by some, it was commonly regarded as an ill-smelling nuisance. Some years later, farmers began planting it extensively as a soil builder and a forage crop.

Occasionally, as we plowed our fields, boulders were brought to light. Most of the stones were so small that they caused little trouble. Now and then a big one would throw the plow out of the ground and damage its point. Such stones were dug out and hauled to some out-of-the-way place where they would be a bother no more. The largest boulders were about the size of a bushel basket. Bigger ones might be found if we dug much below plow depth. Most field stones were granite, some in varied shades of red, some blue or greenish in color. All had been glacier-borne, in all probability, from the Pre-Cambrian granite surface of the Canadian Shield (known also as the Lauren-
tian Shield or the Pre-Cambrian Shield), a vast area lying north, west, and south of Hudson Bay.

Big boulders were not always dug out and hauled away. Men sometimes dug deep holes beside them, then rolled them in and covered them, well below the depth at which plows ordinarily run. Some ridiculed this practice, declaring that the erratics would work upward in time and again become obstructions at plowing time. While this argument appears to ignore completely the law of gravitation, there was evidence that repeated freezing and thawing, which favored the deposit little by little of additional soil beneath the stones, actually lifted them gradually. I have seen boulders reappear in fields previously made free from plow-depth stones by burying some and removing others.

We picked up in our fields a few arrowheads and other stone artifacts left by Indian hunters and warriors. Like field stones, these were less common on our farm than on the slightly more elevated lands of neighbors. This was probably because the latter were originally relatively drier than surrounding areas, and for that reason conditions there were more favorable for hunting.

Because of peculiar soil qualities weather conditions have always been of special importance to Black Swamp farmers. Given reasonably favorable weather—other things being equal—we usually saw the competent farmer come through the year with a favorable balance. The wrong kind of weather, though it might prevail only during a short period, could seriously affect profits.

Unfavorable weather was not the only thing that could cause trouble. Livestock diseases or insect infestations might cut deeply into incomes. Cutworms at times worked
havoc by eating off tender shoots of corn. Army worms appeared some years to prey upon crops. Grasshoppers chewed away at field plants throughout every summer, but they never came in such numbers as to cause widespread damage.

Probably no insect pest caused as much crop damage as the chinch bug, which, coming originally from Central America, quickly spread to sections of North America in which grain crops are grown. Almost every year great hordes of these evil-smelling insects would appear in wheat fields and suck from the jointed stalks sap needed to mature plump, sound grains. After the wheat was harvested, they lost no time in moving into the oats. After oats harvest, the pests, like an invading army numbering millions, would make a beeline for the corn, entrench themselves on the stalks, and proceed, vampirelike, to suck the very life blood from the plants.

Farmers generally felt themselves helpless against the determined bugs. A few cut shallow trenches between fields and poured into them sticky creosote tar to prevent migration to untouched foraging grounds. This was laborious and expensive, but it could save crops from damage.