

WORKING THE LAND: THE STORY OF CONNECTICUT AGRICULTURE

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Nature Shaped the Development of Connecticut Farms

Reading the agricultural past in soil and stone walls

The distinctive soil types in Connecticut played a part in where the early colonists settled and began farming. The drumlin, a distinctive feature of the Connecticut landscape left over from the action of glaciers, is still a reminder of the agricultural past as are the stone walls that crisscross the state. Geologist Robert Thorson leads a tour through the landscape.

Interview with Robert Thorson
Professor of geology and geophysics
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The land shaped the farms

There are a number of very distinctive soil types in Connecticut. That of the Connecticut River Valley, which attracted the settlers first, is one of the easiest to describe. It's a sandy, loamy sort of clay- and silt-rich soil that was ideal for agriculture . especially when it was down near the flood plane itself, because there it would get an annual dose of nutrients from flooding of the Connecticut River.

Above the flood plain you had a whole series of really nice, stone-free, flat, reasonably well-drained levels that are all shore lines and deposits from an ancient glacial lake that for thousands of years during the end of the Ice Age occupied the entire Connecticut River valley within Connecticut above Middletown.

If you really wanted to divide the soils of Connecticut into convenient categories, you could start with the worst ones, which would be the sugar maple country, the bush pasture, the ledge country. This is too rough for cultivation or really mowing, or even good pasture.

The second type of soil at the opposite extreme would be the really rich, luxurious soils down in the lowlands. These are called interval soils. They're composed of places where the rivers flood annually, or where glacial lakes left a nice deposit of loam.

A third category of soils, which is not that widespread but which was highly prized in an era before fertilizers, were what we call the marshy, mucky soils. People would sometimes go into swamps just to take the muck out of them because it was such good enrichment for the soils to grow crops.

One of the other most distinctive soil types are these upland soils that you see here in drumlins. A drumlin is a rounded hill that formed when the stony, silty, clay rich paste being carried along the base a glacier was literally smeared across the bottom of the landscape where it developed into these really lovely rounded and streamlined shapes.

So a drumlin is one conspicuous landform in Connecticut. These drumlins lent themselves very well for pasture because they were very good at holding water. It wouldn't run off the way it would it ledgy terrain or soak in quickly. In very sandy terrains, the rainwater would simply infiltrate straight through the sand down to the water table and the grass would parch fairly early. But in drumlin terrain, the rainfall would get

absorbed into the silt and clay and last and last and last. So the hills would stay green, right up to their summits, through much of the summers.

A drumlin is an ideal soil not so much for agricultural tillage but for pasture. They just grew grass luxuriously. So when you would have lowland terraces parched, when you would have lowland soils boggy, these soils would tend to be easy to walk on, easy to pasture, easy to mow, easy to cut, because of the smooth shape and the absence of truly jagged ledge.

What sets the state apart from others, in terms of its agricultural soils, is the overall quality. And this is higher than one would be led to believe. They love to curse the stones that are everywhere and argue that we are farming stony soils, but they have been very rich throughout history, especially those in the river bottoms.

The second thing that sets Connecticut apart is that the distinct nature of the soils, their being very different in very local areas. At the scale of a town, you could have four or five types of soil that would show up in town after town after town.

Settling on the soil

The first soils that were cleared and settled were the coastal lowland soils. These were generally soils in the river bottoms and in the estuaries where there was quite a bit of sand and gravel washed down by glacier melt water rivers. And those were useful because they were flat and stone free. The best ones were any place too wet to have forest grow. You could clear the land simply by draining the wetlands. Those were the first ones settled. The time of this settlement was a time of hostilities in the interior so before the French and Indian Wars people tended to stay concentrated in lowland cities.

In the half century before the Revolution there was a gradual inward migration to occupy progressively smaller streams and interval lands. Then all of a sudden they began to develop these upland towns. Storrs is settled that way, as is Franklin, as is Scotland. Many towns are settled on the high ground because the soils were so rich up there and the water held water so well.

In country like this you begin by clearing a little bit for the house and the barnyard, and then keep working your way out as time allowed. So, the initial grazing and pasturing was done in the woods, and, in fact, the animals helped remove the underbrush because the roughage that was there, making the tree cutting easier.

Trees were cut over a period of time usually by girdling or else just by sawing. The stumps were a problem, and they let the stumps sit for a number of years. So it was a pretty ragged, rough-looking place for the first half a generation, or perhaps even for a whole generation of the life of a farm.

Building stone walls

As the stumps rotted away, stump fences were replaced by stone walls. You would get more and more stone appearing on the soil surface, which was brought over to make more and more stone walls along fence lines. Gradually, the landscape took on a bucolic, pastoral look, not totally unlike what we are seeing here today.

At any level of detail you like, you can look at the size of a wall to tell you something about the stoniness of the ground, or the intentions of the builder. You can look at the shape of the wall to see if it was there as a prideful fence, or whether it was there as merely a waste heap for stone.

Another thing you can see is whether the stone in the wall is locally derived or whether it comes from far away. The vast majority of walls in southern New England are built with material right there on the

spot, recovered from the fields. But some of the walls were actually imported and moved around here because they liked stone to look a certain way.

The most enigmatic stone walls today are those in the woods where the trees have grown up to the point where you don't even have the undercover of grape leaves and underbrush. You have just wall, underneath tall forest. Those inform you how much time has elapsed, even if it's only 150 or 200 years, which is enough time to grow the forest back, make the land soft again and cover it with forest mulch.

Who built the walls is a question. You can get a different answer depending on who you ask. It's part of folk wisdom. I've had people tell me that slaves built almost all the walls; I've heard people tell me that Indians built almost all the walls. Some believe most were built by labor crews and work gangs and prisoners.

And there's really no way, with hard numbers to document it because so little was written. But if you look at the walls, their layout, their form, their character within towns, at the scales of farmsteads, all the way to the scale of states, I think it's fair to say that the vast majority of walls were built by the farmers' sons and daughters who lived on the farms and helped clear them.

'Something there is that does not love a wall'

What we can take from the stone walls today is this: You shouldn't take archaeology and turn it into architecture just because you have the money to do so. I think the loss of an old stone wall, no matter how sad it looks, is much sadder than that wall ever was.

Now in terms of housing developments, what I see is this: One of the things that I find most fascinating is that housing developments tend to be curved. Today, we like curved cul-de-sacs and properties that aren't rigid and laid out square. And yet the predecessors who cleared the forest and built the walls before the housing developments preferred their space rectilinear, or in an x-like or checkerboard pattern.

So, after the square and rectangular fields were overgrown with forests, people came back in to clear the landscape and turn it into suburban developments and superimposed the curved geometry of our modern preference onto the checkerboard geometry of the preference of our predecessors. It makes for a really interesting, and sometimes jarring and conflicting pattern.

I think the saddest part of the modern housing development is that everybody still wants to reach back and touch the past. They want a piece of stone work on their own property, whatever their house looks like. Often what happens is that they basically strip-mine old stone walls and then bring that material to their property and rebuild it. In the process, they're substituting archaeology for architecture. And I just don't think that's appropriate in most cases.

The walls, sometimes a last physical remnant of the agricultural past, are definitely speaking to us. I think what they're saying is three things in three different circumstances.

The first thing is that life was hard as a subsistence farmer. When you see fairly unkempt and not really well assembled stone walls in the landscape, you're seeing the effort it took to create a farm out of nothing. And I think that's really important that we know that.

The second thing is not about pioneering struggle, it's about American pride. There was a sense that developed after the American Revolution and after the War of 1812, in the era of the New Republic, in which people said, "This is America, this is great, let's show the Brits." who'd complained about our walls for centuries. "Now well we can do." There was an effort to really improve the walls and make them look better. Walls weren't so much built as rebuilt in many places. And that's the second thing that a pattern of stone walls will say to you.

There's a third category of wall: This is gilded age, this is early 20th century. You've got an industrial economy. People make money in cities and yet have country homes. Walls were built not to recreate that past image of agricultural America; they were built to create estate boundaries. There are a lot of these in the wealthier districts of southern New England.

Summing up, what you see are three basic categories of walls: those built by farmers that reflect agricultural origins of our country; those built by pride, which are post Revolution; and those built by the Gilded Age wealthy who were looking for things to do with their money.