



Cool, Calm, Clean

Dairies were the most elaborate of outbuildings, and the cleanest.

BY MICHAEL OLMERT

IF CLEANLINESS IS NEXT TO GODLINESS, dairies are the great shining temples of the Anglo-American backyard. Because when you're dealing with milk and its products—cream, butter, cheese—anything less than perfect sanitation can be lethal and, well, unprofitable.

In the Middle Atlantic colonies, fastidiousness created a class of small vernacular buildings fitted with brick or stone floors, ceilings and inside walls plastered and whitewashed into a bulwark against dirt. Because coolness also was vital, the floors of most were two to three feet below grade, and the dead space between the exterior walls and the lathed and plastered interior was sometimes insulated with brick nogging or sawdust. Milk is troubled by heat.

In Virginia, the tax enumeration called the "List of White Persons and Houses taken in the County of Halifax, 1785," gives a good sense of the size of these structures, these dairies, in the landscape. It lists fourteen: seven are perfect squares, four 8 by 8 feet, and one each 4 by 4 feet, 10 by 10 feet, and 12 by 12 feet. Seven are squarish: of these, three are 12 by 10, three are 12 by 8, and one is 6 by 4. How regular they all must have seemed, the purity of design so closely allied to sanitary service.

Instead of windows, dairies have long horizontal openings high up on their walls, beneath wide eaves. It's passive cooling: the rays of the summer sun cannot directly penetrate the cool, dark interior of the structure.

Calm overwhelms you when you walk into a dairy. It's like entering a chapel. So maybe the idea of dairies as little temples in the landscape isn't so farfetched. You sense a need to light a candle.

I felt that when I first set foot in the dairy at His Lordship's Kindness, a 1787 estate in Prince Georges County, Maryland. This 14-by-14-foot frame structure with a pyramidal roof sits between a smokehouse and a slave infirmary. It's a lineup of confident, well-designed little outbuildings, typical of many Anglo-American plantations, which in 1775 put British traveler Nicholas Cresswell in mind of picturesque English villages.

This dairy had long been interpreted as a laundry because it was transformed into one, complete with in-

dustrial boiler, about 1900. But the diagnostic features of dairies are clear. The floor is three steps down into the earth, twenty-one inches. In no other sort of outbuilding, except an ice house, do you step into a pit. The walls have been replaced with sheet rock, but there is evidence of lathe and plaster underneath, on the original wall posts. The ceiling is still eighteenth-century lathe and plaster. That detail is decisive. Dairies needed ceilings, mainly to prevent dirt and insects from dropping into the cooling milk pans from the forest of rafters and struts.

IT'S THE WILDLY OVERHANGING EAVES that give the dairy its characteristic shape, almost top-heavy, like a toadstool. Examples are Colonial Williamsburg's Archibald Blair Dairy, now called the Grissell Hay Dairy, and the dairy at Sherwood Forest on the James River, eighteenth-century outbuildings with plastered upward-sloping "coving" that flows from the vertical walls to the horizontal soffit under the eaves. It's an influential design seen on upscale dairies at such places as Eyre Hall on Virginia's Eastern Shore, but no one's certain where it originated or which dairy first had the shape.

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Milk could only be processed in near-antiseptic surroundings—

clean buckets, clean trays and milk pans, clean hands. The building, as well as the dairy utensils, had to be spotless. Bugs, dogs, and mice had to be kept at bay. Spills were immediately cleaned up lest they attract more flies and more contamination.

DAIRIES WERE ALSO called milk houses. According to Carl R. Lounsbury, an architectural historian at Colonial Williamsburg, "The terms dairy and milk house are interchangeable, though the latter seems to be preferred before about 1725. After that, dairy supplants milk house, at least in Virginia. But in Maryland and Delaware, milk house remains by far the more common term.



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The Peyton Randolph House dairy, above;
Wetherburn's dairy, with S-curved slats, opposite.

“Originally, English dairies were part of the house, not a separate building. That plan seems to have been followed early on in Virginia. There’s often a room called a dairy or dairy chamber that is a part of the house. Sometimes the room is underneath the parlor; in the basement.”

Plainly, it was cooler down there. Hence, the tradition of the sunken floor. Earth, even a few feet underground, is colder than at ground level. That is why, at a major plantation like Shirley, which has a full suite of well considered and well built outbuildings, it was thought sufficient to do the dairying in one of the big-house basement rooms.

In the second half of the seventeenth century, a little earlier than the smokehouse, a separate purpose-built building, the dairy or milk house, begins to take off. “You’re dealing with products sensitive to heat,” Lounsbury says. “They’re always looking for ways to keep milk cool: sunken floors, cool bricks, plaster. For the ventilated openings, they come up with slots, grilles, lattices, louvres, all kinds of ways to let the air flow through.”

The most stylish of the up-market grillework is a row of “cyma” or S-curved wooden slats, as at the Sherwood Forest dairy, where the row of elongated S’s is clear, making it *cyma recta*. By contrast, on the dairy at Eyre Hall, the row of S-curves is backward, making it *cyma reversa*. It’s all in imitation of Greek and Roman decoration in limestone.

And at the Old Dairy, Suffolk County, Virginia, the grille slats were cut out to resemble, in silhouette, a classical egg-and-dart border. It’s the temple of purity saga all over. It’s also a declaration that this family was in touch with ancient learning. The dairy tells us something about their society as well—because it’s a fairly empty and expensive gesture to allude to classical antiquity if nobody else gets it.

MOST DAIRIES are one-room affairs. Occasionally they have a second small chamber for storing utensils or butter and cheese. Colonial Williamsburg chose a two-room format for its reconstructed Peyton Randolph House dairy.

Edward A. Chappell, director of architectural research, looked at many dairies before building this one,

Top to bottom: the Lightfoot House, Bassett Hall, and Powell House Dairies. The slatted openings just under the roofs kept the sun out and allowed warm air inside to escape, both necessary to preserving as much coolness as possible for producing cream, butter, and cheese.



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completed in 2004. “It’s clear that dairy operations were relatively high-stakes activities,” he says. “They were often for the white women in the house, much more elevated work than any other activity in the yard, the laundry, or the smokehouse. Dairies tended to be closer to the house and better built.”

Still, this is a utilitarian dairy, no elaborate grille-work, just simple lattices, and no external coving. All painted a no-nonsense Spanish brown. Only the inside is whitewashed. The orientation of the dairy in the yard suggests the women who milked the cows and processed the milk lived a less smoky and dirty existence than women working in the more industrial zone, farther away from the house. Archaeology has found evidence that a fence demarcated the two zones.

There’s something real, not just symbolic, about these zones. Milk, cream, and cheese readily absorb the smoke and unsavory smells associated with kitchens, laundries, smokehouses, and farming and industrial work. But there was always something Marie-Antoinette about dairying as well. With their milk pails and peasant frocks, the aristocrats of the French court played at work. We can see them, in period paintings, in their couturier countryside fashions, collecting milk in their Sèvres pails at the faux dairy at Versailles.

This was a pose, in the teeth of the revolution, showing the upper classes could partake of the ordinary life. But for most of the household women of the Chesapeake region, life wasn’t play. Milking had to be done. And it had to be done cleanly—not because dirt was unseemly, but because it spoils the milk.

THE WORD DAIRY is derived from Middle English *deye*, a female servant. So the *deierie* was a place where females worked. It was, not without reason, a bastion of female industrial and domestic busyness.

People who have milk cows, whether to sell the milk or use it for the family, have always been on about spotlessness and purity: hence, the dairymaids of folktale and poetry, virginal and unsullied, who come to represent a font of available rural chastity, constantly under threat from the urbane wandering knights of the Middle Ages.

It was a fantasy, of course, but based on the tradi-

Top to bottom: the dairies of Archibald Blair House, now Grissell Hay; Graden Plantation, with current owner Andrew Wallace; and His Lordship’s Kindness, the last two in Maryland. The neatness and underplayed elegance of the buildings spoke to the owners’ taste as well as to their pocketbooks.

tions and real demands of milking and dairying. This was women's work and it had to be clean. Elaine Shirley, a Colonial Williamsburg historian and manager of rare breeds, has been dairying her whole life. "But I feel I'm nothing compared to the women in the past," she says. "A big part of a dairymaid's job was to say, 'Oh, that cheese is no good.'" This was serious. These women were the only Food and Drug Administration there was.

"They could tell when it was not going to be a good day for making butter," Shirley says. "But I don't have a clue. Was it a pressure or temperature change they were sensing? Or a coming hurricane? Who knows?"

Colonial Williamsburg has thirty-two dairies, of which twenty-seven are reconstructions on top of old squarish foundations interpreted as dairies. Five original dairies survive from the eighteenth century: at Bassett Hall, Wetherburn's Tavern, the Lightfoot House, the Grissell Hay House, and the Benjamin Powell House, an up-market brick structure.

Inside, dairies ordinarily had two sets of shelves, wide ones for working at waist height, and narrower ones for storage above. The shelves remind us that these little temples were for work. "Making cream and butter was a way women could make cash," Shirley says. "There are situations in Williamsburg where people are milking twenty cows, almost all of it going into butter. But they apparently didn't make much cheese for sale. The stores in town sold hard cheese from England, where it doesn't get so hot in summer. Here it's too hot to make good cheeses."

The first step in processing the milk is to strain it, removing the chunky bits, cow hair, and flies. Then you pour the milk into wide, shallow pans, leaving it twenty-four to forty-eight hours on the shelves while the cream rises. The pans were earthenware, glazed on the inside, or lead, both of which are found in the probate inventories of people who owned dairies.

Once the cream rises, it's skimmed off with big flat spoons and stored in salt-glaze pots. As with meat in a smokehouse, water is the enemy; it makes things go off. Since cream is more fat than water, it has a longer shelf life than milk. To make butter, the cream is worked in a plunge churn. The agitation causes a physical change in the cream, so the fat accumulates in bunches while the water gets separated. "Dairymaids learn to listen to the churn," Shirley says, "for the diagnostic *slop, slop. . . slush*. That thin watery sound means the butter has formed."

To make cheese, take the fresh milk and add rennet, which is derived from the lining of a calf's stomach. It contains an enzyme that curdles milk and starts the solidifying process. After standing for twelve hours, the ren-



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Top, this page and opposite, manager of rare breeds Elaine Shirley milking one of Colonial Williamsburg's Devon cows.

net-milk mixture resembles Jell-O. "If you take the pan and shake it," Shirley says, "the whole thing wiggles. You then cut the cheese into squares with a knife or a 'cheese harp.' This makes lines where the whey, the watery part, can weep out of the solid curds. The cubes are then ready for the cheese press, to force out the rest of the water."

IT MUST HAVE BEEN a cool place to relax in the heat of the day." The speaker is Andrew Wallace, and he's referring to an old dairy from a 1760



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Bottom, this page and opposite, Shirley carries the milk into the Randolph dairy and strains it into a milk pan.

plantation called Graden in Prince Georges County, Maryland. The structure, roughly 12-by-12, has lately been salvaged and moved to a site on his property. It's sagging and in dire need of restoration, but even in this sunken state, it's an amazing outbuilding. It's octagonal.

It also has high-style beaded weatherboarding outside and complicated structural joinery inside. Its brick-paved floor was once three cool steps below grade. Inside, the walls were plastered. For insula-

tion, between the inner and outer shell of the building, the hollow was nogged with bricks, clinkers, soft bricks, and mortar.

Archaeology revealed that its brick floor was underlain by an earlier circular brick pit about three feet across and several feet deep that may have served for a drain. Sometime later, either the sump stopped working or was found unnecessary. It was filled and paved with bricks. Something was happening here.

The degree of detailing—the beading, the lattice-work grilles, the window shutters, the eight-segmented roof—suggests the dairy was meant to be seen as a prestige structure. Quite possibly this little octagon was not only the most modish outbuilding for miles around, but the coolest place to be on a summer's afternoon.

And suddenly, in this quiet quarter of Prince Georges County, at some stage in the late eighteenth century, an octagonal dairy also became a summer house, a shady and cool grotto, a serene and serious folly. It was a little temple not just for butter and cream. It was for us.

THE DAIRY BOOMLET lasted from the middle of the eighteenth century to the Civil War. Then dairies passed out of architectural fashion because dairying—unlike smoking meat, for example—did not require a separate building. It could as well be done in a shaded, well-ventilated room in a house, or in a basement as at Shirley. Dairies had become expensive garden follies.

When dairies were at their peak, they appealed to an agrarian and plantation mindset that liked to dramatize and compartmentalize every aspect of life and work, as if the yard were a theater. It was a matter of control. The landowners were the directors; their slaves, servants, and families were actors.

More important, they wanted their charges to feel they were acting out a drama that was as sacred and cyclical and unimpeachable as the ecclesiastical year. "This is what we do," they were saying, "and this is where we have always done it." Dairies were one of the stages on which the acts of this life were performed. And when the play closed, the sets began to wither away. ▲

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