German Fellowship

by Rob Collins

Thirty years as a high school teacher means I've attended more than 150 days of "professional development." I'd rather not think of how many classes, seminars, and online training sessions I've done as well. Not all have "developed" my craft of teaching as much as I'd like. A couple do stand out.

First, through the National Endowment for the Humanities (NEH), I took a course on The American Farm in U.S. History at Tillers International. Day three of that class involved a short demonstration of Tillers' oxen, Marco and Polo, pulling a McCormick-Deering grain binder. I was hooked, and the course of my life was changed. Since then, I think my high schoolers benefit from a more hands-on, authentic approach to history in my class.

The second, the subject of this column, was less formal, but no less meaningful. Last summer, I spent a week at Lauresham open-air museum in Lorsch, Germany. Claus Kropp, who directs Lauresham and farms his own land with oxen on the side, also founded the Center for Draft Cattle Research and Education in 2024. In 2025, the Center made several fellowships available for specific studies related to oxen use. While attending the fellowship, I hoped to develop some new oxen driving and teaching skills. I think I did, but those skills came with a

Rob Collins line driving Enyo, a Raetian Grey ox with a three-pad collar and a sledge.

David, Lauresham's 17-year-old ox hitched to a hay tedder.

hundred other eye-opening connections between history, agriculture, animal power, and teaching. So let me take you along.

Built on the grounds of the Lorsch Abbey, which was a sizable monastery founded in 764, Lauresham is a purpose-built medieval village that acts as both a living history farm and as an experimental archaeological site. Claus Kropp describes experimental archaeology this way:

It is called experimental archaeology because it means scientific experiments. When we do our agricultural experiments, we say we have this historic field type of ridge and furrows.

So, we want to know why people chose this field type. So, we set out as many things that collect data as possible. We provide the whole data sets of our weather station, the soil sensors, the soil moisture sensors.Then, we have the wind, we have the rain, we have the furrow depth and the width. We have the yield analysis. We can tell them exactly when our crops grew, why at a certain point in the year. We do

Close-up of a three-pad collar.

Gathering fresh-cut grass from one of the town meadows in Lorsch. Claus Kropp agrees to cut the meadow and remove the hay each year ahead of a town fireworks display in this meadow.

One of Lauresham's replica medieval plows, based on an example from Denmark.

draft measurements with the animals and therefore know how much draft power we had to put in it. For me, learning a skill is the precondition of doing good experimental archaeology. So, when I think about early medieval farming, I first have to learn how to use a plow of that time and I have to learn how to broadcast a field or work an ox. Because if I don't, then I'm kind of assuming that the people back then did the work as primitive as I did, because I simply didn't have the skill.

This experimental archeological approach felt similar to what we do at Tillers. While not usually working in a medieval context, the experimental attitude is something we try to cultivate back on the farm in Scotts, Mich.

Of course, a highlight of the trip was getting a chance to work with the oxen

in the medieval village and on Claus' farm. Most of the oxen are an old, triple purpose European breed: Raetian Grey. Similar in height to my Devons, they are blocky, solid, willing workers. While not as quick stepping as Devons, they move right along when they have a load hooked.

Much of the time, the oxen we worked were harnessed in three-pad collars rather than the neck yoke used in much of England and the United States. However, as part of the fellowship, while I was learning about the three-pad collar, we were also trying out neck yokes – some made at Tillers in the past – on the oxen teams. While three-pad collars are a 20th century development in Germany (they allowed family milk cows to provide draft in the period after World War I when many of the horses and oxen had been killed), Claus uses them to do medieval draft work as a bit of a compromise. In order to replicate farming practices around the year 800, it only made sense to employ oxen. Plow horses were not common for several hundred more years. Learning to drive oxen meant connecting with local farmers and enthusiasts, most of whom were using collar systems.

On the weekend of my visit, we hosted a small gathering of oxen enthusiasts at the farm where I helped demonstrate the fit and function of a neck yoke. Ahead of that visit, we spent an hour the previous day putting a Tillers yoke on David and Nancy, Lauresham's ox and freemartin team. The fit for David was quite good, while Nancy's smaller neck was adequate although not ideal. After spending years in a three-pad collar, I expected the team to need time to adjust to the yoke, but

Claus Kropp with David and Nancy, an ox and freemartin team in the medieval village — their first time in a neck yoke.

The remains of the original Lorsch monastic site from the 700's. Just outside of the frame is a large tithe barn that was run by the abbey.

they walked out immediately just like they'd been yoked together for years, a testament to the work the team does on a regular basis.

Since I've returned, Claus has started a young team in a neck yoke, and I've prototyped a 3-pad collar with help from Spring Valley Harness in Centreville, Mich. In the works is a PVC collar system, which is influenced by Bob Erickson's excellent donkey collars made from PVC pipe. Being available in much of the developing world, our thinking is that a single cow or bull could be effective pulling a cultivator – perhaps even without much training if being led. We will see.

Unfortunately for me, I visited at the wrong time of year to plow. We spent some time looking over the replica medieval plows at Lauresham. Based on the plows found preserved in bogs in Denmark, they employ a wheeled cart to carry the beam, along with a single handle and several wedges and mortises to aid in adjusting the depth and angle of the wooden moldboard. It's worth noting that I could see a straight-line evolution in looking

at 20th century European walking plows in their collection. Wheels and, occasionally, a single handle on these plows made them oddly reminiscent of those from the Viking age.

Although we didn't get to plow, we did tour the test field, which was plowed into the "ridge and furrow" pattern so common across Europe, tracing back to medieval times. Claus explained ridge and furrow this way: "It is basically, like the name suggests, very long strips of fields that are characterized by a change of ridges that can be 6 meters wide and then followed by a furrow area and then the next ridge comes. The ridge itself can have a height of up to 60 centimeters, maybe a meter, and they're really long, up to one kilometer, half a mile length. They're often preserved in Germany in forests because modern agriculture didn't plow them away." In these fields was an old variety of wheat with long stems, straw being nearly as valuable as the grain in the Middle Ages. Testing shows that in dry years, the furrow sections of the field produce more, while in wet years the ridges perform well, meaning that this system provided an early type of crop insurance: no harvest was likely ideal, but some part of the crop performed well each year, a lesson in the resourcefulness born of experience.

So, a week at "medieval oxen camp" and a robust exchange of ideas made for some powerful professional development training for my role as a Tillers instructor. Did it help my classroom teaching as well? Stay tuned, because that's a story for another day.

Claus Kropp next to his ridge and furrow wheat field. Note the height of the stems.