

Education for resilient agriculture in a poor rural county

Alan Taylor Owsley County, Kentucky

Booneville Kentucky

A cool day in early summer, we arrived at the elementary school in Owsley County at 10:00 AM to meet Alan Taylor, a Vocational Agriculture teacher turned principal for the same school system. We're also meeting with him because he was highly involved in the creation of a regional vegetable cooperative which Jim Worstell, head of this research project, also helped to create in the 1980's. Today the cooperative is gone, it's building occupied by a bowling alley and local pizza place. We've come to ask Alan, and some of our other interviewees, "what happened all those years ago?"

Walking up to the school we see its central portion is obviously older than the rest, featuring stone faces probably harvested from the local area at the time of the school's erection. It is stylized with arches around the doors and a gymnasium of the same grey/black stone. Across the road sits the high school and in the low field near the river bank dirt has been tilled into neat rows with plastic lining below small corn plants and perhaps beans or squashes. Various barns sit along the hillside between the high school sitting high above the river and the tilled field below. One barn is black like all the old tobacco barns seen everywhere in this part of the country. Painted black to collect more heat for tobacco drying, it also features a small square above the large front doors. Similar squares are seen adorning most of the other tobacco barns too. These squares are like quilt blocks, different geometric designs of various colors, red, blue, pink, black, white, purple. You name it, these colored squares contain stars with varying numbers of points, squares inside squares and spirals of shapes individualized to express something special about each farm. The farmland and tobacco barn lie between the elementary and high school illustrating the centrality of these two industries to Kentucky. The only thing missing is a coal car.

This town, like most of eastern Kentucky has been slow to change in recent years. It's steep hillsides slowing the invasion of developers and builders. Meanwhile many cultural shifts in the last 50 years have left the region emotionally, economically, and perhaps spiritually depressed.

We walk into the school then, double doors opening to a long hallway painted sky blue, large trees painted at equal distances down the hall. More nature in the school. Later we would walk through the halls with Alan and he would point out a recent mural featuring a famous baseball player hailing from the local area, Daniel Boone and a tractor in a field to represent farming which he comments was inevitable with a vo-ag teacher as their principal.

Alan is a pleasant man, aged 59 who grew up in the local area, attending classes through ninth grade in the same school he now oversees. He and has always farmed actively beginning like many of his generation, growing tobacco while still in high school to earn him enough to purchase his own truck, tractor and a fair amount of livestock before graduation. His current farming focus is much different, focusing on beans favored in the area like the Greasy Beans to tomatoes with real flavor like Cherokee Purple and a local favorite Hillbilly Eye tomato. To Alan, it's a natural progression since the end of Kentucky's tobacco fueled economy to move toward vegetable production. A harder crop to grow than tobacco in Alan's opinion, he has some help from a former Vo-Ag student Nick Chandler. Nick is one of many of Alan's former students to continue in agriculture in some way. With a third of the student body

attending Vo-Ag classes in Owsley counties school system, it is no surprise. Alan himself attended Vo-Ag classes in his youth while growing up on his father's farm before becoming a teacher himself.

He began his teaching career part time as a substitute at the high school when his son began kindergarten allowing him enough free time as a single father to work. Taking over for a man named Jeff Silverman, it was likely a relief to both Jeff and the town. Jeff had, had a difficult time in Owsley county as both an outsider and a devout Jew. An unfortunate fact that, as Jeff was an outspoken and often coarse man, he earned a sour reputation with the community and his students that reached a climax when his house was burned down.

Alan's approach to agriculture was also different from Jeff's, as is the case with every new vo-ag teacher. Alan explains to us that since agro-science is such a broad subject, it is impossible for one vo-ag teacher to cover all the possible aspects from farm mechanics to agro-business which includes marketing and business management. Alan focused mostly on production, showing students how to be self-sufficient if they wanted to. This included how to farm the land, plant biology, soil health and with every new student a time to reflect on what they would do if technology was gone tomorrow. This last subject yielded interesting results, some students assuming they would still have a tractor in this theoretical "end of days" scenario. When Alan would ask about how they would find, or make, the diesel, students were troubled and unsure asking, "How would I work the ground?" Alan's response was simply to think. His approach he says was always hands on, showing his students how to do the work with their own two hands illustrating different scientific principals in real terms. For instance, during a canning lesson he would explain osmosis as the sugars were transferred to the center of whatever fruit they might be canning that day. Perhaps his most notable achievement came when he teamed up with the school's biology teacher to do an in depth lesson on slaughtering a hog. With the help of a teachers aid they were able to take high quality video of the entire lesson. With the help of his students they slaughtered the hog and went through every part of the body. The organs, bones, tissue and overall physiology of the hog. He took the opportunity to show students the heart, much the same size and dimensions as our own, to show them how a heart attack happens. He showed them the lungs which had filled with blood to illustrate how a smoker's lung looks- dark and unhealthy. This video earned him the Kentucky Agro-Science Teacher of the Year award.

Where are his students today? Most have dispersed into the world without a trace, others have either stuck around, or made a name for themselves. Several have gone into farming locally, some have moved into professional agriculture around the country and others have stayed locally as extension agents. One is the Supervisor for Soil and Conservation in central Kentucky, even the assistant principal has American FFA degree while one student has gone on to be an MD in Baltimore. Alan is obviously proud of his former students saying that all that's necessary with kids is to remove whatever barriers they have to learning, be it disinterest or inattention. Most often his best tool comes back to the work being hands on. The one issue that Alan began to have as a Vo-Ag teacher and now has as a principal is children born with drug addiction.

Drugs are a common challenge for people in Eastern Kentucky as meth, heroin and prescription pills are ruining lives starting with the user, down through their relationships with friends and family. Easy, cheap and fast to produce, some people make meth or other hard drugs to try and escape poverty only to find themselves fast addicted. Alan tells us, "they keep the sheriff busy" as homes explode from meth labs and domestic violence calls come in. Drug use is commonly the white elephant in the room, it is an

uncomfortable subject for all our interviewees and Alan has seen a particularly uncomfortable side of it through children. With reluctance he tells us, some children are only helped by more drugs, "it's the only way they can control themselves".

This is perhaps an inevitable though unfortunate outcome for a part of the world that has been economically abandoned on many levels. Most recently in the last 3-5 years Owsley county alone has lost a factory and prison, two large employers for the area that offered a decent living wage as well as benefits for their workers. Further back 10-15 years was the fallout of the burley tobacco cooperative which brought in 3 million dollars to Owsley county alone. Lastly, as coal mining in Kentucky continues to shrink as employers move to new reserves in other parts of the country, the remaining industry has become increasingly more mechanized requiring fewer workers for the remaining mines. Locally this has translated in a reduction in opportunities for employment. Where there were tractor and agricultural suppliers, there are none. Where there were three grocery stores in Booneville around the schools, now there is one that resembles a small convenience store rather than a towns only grocer. As the economy collapses, so does the community infrastructure.

In response to these challenges local organizers have been doing their best to leverage grant opportunities and network within their own community to conserve resources and build healthier, stronger communities. Just around the corner from the school sits the Owsley County Action Team's headquarters. The not for-profit organization is one of many in the area that are tackling particular challenges, in their case they're focusing on the technology gap and the obesity epidemic. The access to tech jobs has been critical to miners left behind from coal looking for work they can do from Kentucky. Meanwhile, as Allen reminds us in our interview Owsley County is one of the unhealthiest counties in the country. Health is a growing focus for the community and the school system. Charlotte, the cafeteria director for the Owsley County School System joins in our conversation to help us understand what's happening to combat obesity in the school and community. Most recently she has been implementing both a summer feeding program for area youth and the Farmacy program through the local medical center, Mountain Comprehensive Care.

The summer feeding program has been made possible by grants to purchase two distribution vans and pays for the food that normally feeds 350 students, 5 days a week, making up nearly half the student population. Taking into account that nearly 80% of students are on reduced or free lunch, it is a necessary program as they make 18 different stops around the county. As we speak with Charlotte, she's rushed to begin the circuit distributing food to hungry children. It is apparent that she always has something she's headed to, managing the grants for the farm to school program on top of the high demands of managing the cafeteria. This includes adjusting the menu to recent changes in federal dietary standards while incorporating farm to school produce. She does all this by working long hours and sleeping very little. It requires a particular finesse to merge a farm to school program with federal dietary standards. Cafeteria food providers like Aramark make it easy by providing prepared meals that comply with the low sodium and whole grains required in the new federal guidelines. Today, cafeteria managers are required to send in their complete menus months in advance for approval from the government, making the prepared meals from large companies extra appealing. Charlotte on the other hand must consider the crops that will be available from their school farm or other local farmers later in the year, planning menus meticulously, calorie be calorie, to comply with federal guidelines. Perhaps this is why she has received national recognition for her work with the farm to school program.

The farm to school program in Owsley County has pivoted around their 10-acre plot run by the FFA class. The school purchases everything grown from the farm, at or below market value and saving the school system approximately \$50,000 a year. Furthermore, whatever the farm doesn't sell to their own school can be sold to neighboring districts since it is GAP (Good Agricultural Practices) certified, a requirement for farms that sell to schools. The program has gone remarkably well with the farm producing up to 4 tons of food over the season, except one spring when flooding from the nearby river wiped out their entire crop. Today in their 6th year, risks of flooding aren't stopping them. With help from an implementation grant of \$79,000 Charlotte has overseen the purchase of two walk in coolers, one freezer, and critical farming tools like plows, fertilizer spreaders, spJeffers, a used corn picker with an accompanying bucket as well as the equipment to lay long plastic sheets below the plants to keep weeds down. All of this has been critical to increase production and thereby save money while adding nutrition to the school's menu.

Before Charlotte heads out she explains the aforementioned Farmacy program to us in greater detail. The county has been allotted \$30,000 in funds to distribute to patients of the Mountain Comprehensive Care. Patients that have diabetes or are pregnant automatically receive the \$1.00 a day per person in the household if they continue returning to the clinic every 2 weeks to have their blood pressure, weight, and other metrics checked by Jamie Becknell, a recent graduate of the school system. At the end of the year Jamie will take her findings and depending on the success of the program more money will be allotted to Owsley county to expand the program. Patients with high blood pressure and other ailments will qualify if they meet income requirements. Eligible patients take their vouchers from the clinic and bring them to Farmers Market Manager Clinton Bishop for small wooden coins to exchange for produce from the market. Farmers then turn around, headed to the town square to exchange the wooden coins with the Farm Bureau for a check.

Charlotte is hopeful that with this stimulus of \$30,000 a year, with potential for more annually as the program grows, that more farmers will be willing to participate in the farmer's market. Right now there are a select few who participate and their attendance is unreliable depending on if they have produce to sell that week. She has used the stimulus to convince local grower Teddy Johnson to come to their market in addition to other local markets that have a notoriously higher attendance than Owsley County.

In light of the limited participation of farmers at the Owsley county market one proposal has been to encourage more vegetable production with the creation of a new regional cooperative. This revived enthusiasm has been made possible by a few different variables. The construction of a new highway that would greatly reduce shipping time as well as a new industrial park paid for by the coal severance fund. The park has been largely underutilized with only one of the large industrial buildings in use. Alan isn't very specific but assures us that people are, "very interested", in forming a new vegetable cooperative.

In the past the idea and implementation of cooperatives has been challenging. The largest obstacle being the farmers themselves, used to growing tobacco and specific vegetable crops for personal use, many were unwilling to change. The difference now is simple; a genuine lack of options has made the notoriously stubborn farmer willing to work with what's available.

The Kentucky Vegetable cooperative from years ago that Alan helped organize was a prime example of this problem of inflexibility. Originally developed to work with the large distributor Georgia Vegetable,

there were demands on what crops to grow at what time of the year. Farmers started out willing to plant the required produce but after a few years of intermittently failed crops, instead of working with Georgia Vegetable to switch to something with a higher success rate. Many farmers left the cooperative. Those that remained chose to disband from Georgia vegetable and attempt their own marketing and distribution, which turned into more work than anticipated. As Alan put it, "Georgia Vegetable knew what they were doing. We didn't."

While the Kentucky Vegetable cooperative was dissolving, so did the nearby sorghum and craft cooperative. Developed around the same time as the Kentucky vegetable cooperative, it served as a hub for regional crafts like quilts, birdhouses and sorghum. It was housed in a complex of three barns that kept all the equipment and materials for common use. Unfortunately, they were all burned down as the cooperative was just picking up speed. Alan suspects arson, but it remains unknown what happened. To this day Alan receives calls requesting sorghum produced by the cooperative due to its high quality. A true testament to the potential of a new wave of cooperative work. Today there is a small sorghum press near to the school farm with students that are capable of preparing the sorghum and molasses without the aid of candy thermometers, a difficult feat according to Alan and an indicator of a new generation of sorghum makers.

Today, farmers are different and are facing different challenges of a changing economy as well as a changing climate. One longtime producer well known in the region, Bill Best, has necessarily begun to use hoop houses in the past few years and has decided he won't be going back to conventional growing. Farmers who used to only grow peppers, cucumbers and watermelon are more willing to expand to brassicas like broccoli and cauliflower that are more resistant to flooding and more tolerant of temperature fluctuation. These changes are being made without the help of a cooperative and many agree would be bolstered by the presence of one. Many also agree that a farmer's market isn't enough, but it's a good start.

Today, even the local government and businesses are working together to financially back projects like the new farmer's market which was a cost share between local businesses and a land donation from the school. People in this time of upheaval are seeing the value of cooperation, the very root of cooperatives. Though the number of farmers and craftsmen is small in the region, Charlotte, Alan and others in the community are confident in an agricultural revival of the region. Though they don't believe it will ever replace the income from tobacco, it is yet to be seen what kind of value and wealth can be generated from the small stretches of land that families have been preserving for generations. In Kentucky it is impossible not to see and feel the familial connection people have with the land they live on. Some folks even moving back to the old family farm after they've been gone for nearly a generation themselves. There is something intangible in Kentucky that keeps people here and manages to bring them back despite economic and social struggles that remain so predominant in the region.