

# Victory Gardening in the Undergraduate Classroom: Enhancing Student Research and Combating “Nature-Deficit Disorder” Across the University

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“‘FOOD WILL WIN THE WAR’: Food Policy during World War II” is an undergraduate upper-level history course I developed at Virginia Commonwealth University in 2016 that combines traditional classroom instruction with outdoor lessons in a class Victory Garden. Previous to this class, my experiences trying to lead outdoor lessons had been hit or miss. Class discussion circles in the grass on the quad? Largely a miss. Nearby distractions along with ambient noise stymied student input. Walking tours to see nearby Civil War monuments and memorials? A hit. Even then, issues such as high temperatures and the students’ poor physical stamina undermined at least some of the value of these treks. My experiences with the “Food Policy during World War II” course, however, indicate that outdoor learning—and specifically gardening—as a key component to a course can enhance the college history curriculum in rewarding and unexpected ways.

Literature on outdoor learning dates back at least to the educational reformer John Dewey, who in 1899 urged the integration of intellectual and practical instruction with the natural environment:

No number of object-lessons got up *as* object-lesson for the sake of giving information, can afford even the shadow of a substitute for acquaintance with the plants and animals of the farm and garden acquired through actual living among them and caring for them.<sup>1</sup>

Responding largely to the impact of industrialization and urbanization on American society, educators across the country embraced the “school gardening” and “nature study” movements advocated by Dewey. Promoted in varying degrees as ways to enhance learning, yield food for their schools, build character, and improve neighborhoods, these efforts provided infrastructure for volunteer Victory Gardens during World Wars I and II, but lost popularity soon thereafter.<sup>2</sup> In recent years, and in response to the impact of the screen age and suburbanization, Richard Louv argued that more outdoor play and learning is necessary to reduce “nature-deficit disorder,” a term he coined to describe the physical and mental health consequences of Americans disconnecting from nature—changes he believed affect educational performance. An advocate of environment-based learning as key to educational reform in the United States, Louv said that such an approach “will help students realize that school isn’t supposed to be a polite form of incarceration, but a portal to the wider world.”<sup>3</sup>

Indeed, the recent upsurge of school gardens and schoolyard habitats, as well as the increasing popularity of Waldorf and Montessori schools and the highly publicized advocacy by former First Lady Michelle Obama to educate children about vegetable gardens, indicate renewed interest in outdoor learning. However, these trends tend to involve children, not college students.<sup>4</sup> When outdoor learning takes place at the university level, it usually involves lab work as part of a science curriculum; testing water at a nearby river, for example. Some service learning projects, which have gained influence on college campuses across a wide variety of disciplines, may make regular use of the outdoors.<sup>5</sup> Current literature on outdoor learning in college-level history courses advocates the importance of “place,” as argued by Robert M. Rakoff in teaching environmental history and by Andrew H. Myers in teaching military history.<sup>6</sup> I would like to highlight the value of incorporating gardening as a pedagogical tool for teaching undergraduate history by discussing my experiences teaching “Food Policy during World War II” since its introduction in 2016.



**Figure 1:** The Victory Garden cultivated by students in the “Food Will Win the War’: Food Policy during World War II” course in 2017.

## The Curriculum

My “Food Policy during World War II” course uses food as a window to investigate multiple aspects of the war. Lizzie Collingham’s *The Taste of War: World War II and the Battle for Food* (2011) serves as the main text for the first half of the course, focusing on food in a global context.<sup>7</sup> The quest for food security played a significant role for Germany and Japan in their efforts to expand their empires in the 1930s and 1940s, but more individuals perished from malnutrition and starvation during World War II than from combat. This was a result both of wrongheaded policies (such as the Japanese military leaders’ belief that their soldiers could live off the land) as well as of deliberate efforts (as with the Nazi regime’s “Hunger Plan” in the Ukraine) to weaken their enemies. In other cases, such as in China, drought touched off widespread famine. While many victims of the Holocaust died of hunger, Collingham shows that the Nazis began the systematic killing of

Jews as a means to overcome food shortages on the German home front. Supplemental readings, including Theodore H. White and Annalee Jacoby's contemporaneous *Thunder Out of China* (1946) and Gwendolyn Chabrier's Holocaust memoir *Behind the Barbed Wire* (2011), deal with food deprivation, malnutrition, and starvation in personal detail.<sup>8</sup> The course also examines how American food supplies shaped U.S. foreign policy, particularly the Lend-Lease Act, throughout the war.

The second half of the course focuses on the American home front and on the experiences of U.S. troops. On the home front, the U.S. government instituted the rationing of essential supplies, including food items like coffee, sugar, meat, and canned products, in order to support American troops and the Allied nations. The class reads articles such as Mary Drake McFeely's "The War in the Kitchen" (1994) and Amy Bentley's "Islands of Serenity: Gender, Race, and Ordered Meals during World War II" (1996), which demonstrate the impact of rationing on meal-planning, as well as how changing gender and racial norms (like more married women in the workforce and the Second Great Migration) affected food production and preparation.<sup>9</sup> We also consider the various propaganda efforts that the government used to "sell" rationing and gardening, as well as Americans' changing nutritional habits (which largely improved). On the production side, the class examines how the government recruited agricultural workers in response to labor shortages after the mobilization of the armed forces. Sandra C. Taylor's "Japanese Americans and Keetley Farms: Utah's Relocation Colony" (1986) discusses the role of Japanese American farmers, both interned and not, while Stephanie Ann Carpenter's "'Regular Farm Girl': The Women's Land Army in WWII" (1997) highlights the mobilization of young women, akin to rural Rosie the Riveters.<sup>10</sup> As for U.S. troops, we consider governmental efforts to make them the best fed army in the world. The meaning and memory of food is emphasized in Bruce Makato Arnold's "'Your Money Ain't No Good O'er There': Food as Real and Social Currency in the Pacific Theater of World War II" (2017) and Bob Greene's *Once Upon a Town: The Miracle of the North Platte Canteen* (2003).<sup>11</sup>

The reading is somewhat lighter during the second half of the course, so that students will have adequate time to work on their individual research projects. For this assignment, students are



**Figure 2:** The raised bed in the campus Learning Garden devoted to the class Victory Garden in 2019.

required to find and analyze primary source materials that relate to course themes. There are four broad categories of primary sources from which they can choose: (1) government propaganda posters, films, and photographs; (2) local or national newspapers articles and advertisements, including those from African American periodicals; (3) *Life* magazine articles and advertisements; or (4) oral history interviews with individuals in the service or on the home front during the war. I selected these categories because they are all easily accessible to my students either through our library collection and databases or through the nearby Virginia War Memorial. The students also choose from a variety of themes on which to focus, which can include food production and labor, rationing, Victory Gardens, nutrition, food preparation, and/or international food shortages and famine. As should be evident, the students are reading, writing, and researching in this course as much as any other undergraduate upper-level history course. The point of tending our own Victory Garden is to enhance this learning.

To contend with the subsequent food shortages that rationing brought to the home front, the U.S. government encouraged everyday citizens to grow their own fruits and vegetables in Victory Gardens. Americans tilled everything from window boxes and vacant lots to large community gardens. At their peak, 20 million gardens across the country produced approximately one million tons of food during wartime. While this statistic is impressive, growing one's own Victory Garden deepens students' understanding of the commitment to personal food production.

### **Garden Logistics**

Having access to garden space on or near one's campus is likely a necessary precondition to teaching this or a similar course. My university recently established a Learning Garden through its Office of Sustainability. It is adjacent to campus, making it easy to access, and it includes a number of raised beds—one of which has been reserved for my course. Without some sort of designated space like this on campus, it would be difficult to incorporate outdoor learning into the curriculum in a streamlined fashion. Fortunately, most land grant and technical universities, as well as campuses with agricultural programs, should have usable garden areas, and many urban and community college campuses have established them in recent years.<sup>12</sup> If one's campus does not provide garden space, possible alternatives may be asking the campus landscape office to partner in establishing a garden bed or using a plot in a nearby community garden.

Another important campus resource is a Learning Garden Coordinator—that is, whomever is in charge of the garden space. While I as an instructor could have worked alone, working with such an expert to develop lessons for the garden was instrumental in the success of the course. To have the guidance of an expert gardener would prove helpful to most historians, and even experienced gardeners would benefit from specialized advice. In my case, I appreciated strategizing with the Learning Garden Coordinator to develop lessons that fit the themes of the course for inside the classroom, and to devise a planting schedule for outside the classroom. Knowing that she would keep an eye on the space provided reassurance that the garden would grow and flourish—



**Figure 3:** Students work with Learning Garden Coordinator Sara Barton to separate worms from their castings in a lesson on vermicomposting in 2019.

important to student morale. Working under the tutelage of an expert also reflects the spirit of the 1940s, as everyday Americans sought advice from county and university extension officers, garden clubs, and other experienced gardeners through the Office of Civilian Defense, the federal agency that promoted Victory Gardens.

Indeed, in planning garden activities, we tried to embrace the wartime era without going to extremes to recreate it. For example, we avoided using plastics, chemical fertilizers, and other materials not commonly used by home gardeners in the 1940s. However, we did not require the students to use heirloom seeds. Our work in the garden reflected both the communal engagement and individual responsibility many Americans practiced during the war. We started the semester course with a seed swap, giving everyone access to variety of different seeds. Each student was responsible for adhering to a schedule to water the plants and weed the bed on the days between class visits to the garden. Students also started seedlings and cared for them on their own so they could be transplanted at the end of the course in a lesson on succession gardening. Some of our other classroom lessons at the garden included:

- Soil preparation
- Seeding and transplanting
- Composting and mulching
- Vermicomposting (with red wiggler worms—a class favorite!)
- Pest control
- Trellising
- Harvesting
- Transitioning between seasons

I have taught this class three times: a six-week summer term in June and July, a five-week summer term in late May and June, and a regular semester during the spring. For the summer terms, we held class at the garden for about one hour each week. For the semester course, we met for an hour every other week. The six-week summer term was the most successful in terms of the abundance of the harvest. The spring semester course suffered from an unusually long winter and anemic harvests, and the longer lapses between garden visits seemed to weaken the communal spirit



**Figure 4:** Students transplanting seedlings into the Victory Garden.

of the class. If I were to teach it during a regular semester again, I believe that fall would be more successful, as there would still be summer crops to harvest at the beginning of the term, cold-hardy fall crops to seed and transplant in the middle, and soil preparation for winter near the end. And while the six-week summer term resulted in the biggest harvest and was probably my favorite time to teach the class, we did suffer through 100-degree temperatures (or higher) on several occasions.

Indeed, one must be prepared to contend with a variety of potential problems. Planning is key. It is important to work with a specialist or do adequate research on the types of crops most suitable to the climate during a given season in order to reach optimal harvesting results. It is also crucial to grow back-up seedlings in the case of seed or transplant failure. Although the failure can be a teachable moment in itself, new transplants can help the class move forward efficiently. Having a shade structure or cover (a simple foldable tent should be adequate) will also prevent needing to reschedule or cancel class due to inclement weather, such as rain or extreme temperatures. Students also just appreciate having a place to cool off and enjoy a refreshing drink. It is likewise useful to consider the practical complications of the students getting dirty in the middle of the day. One student worked a shift at a high-end clothing store immediately after class, and thus avoided the most labor-intensive tasks. He nevertheless donned gardening gloves and dug in with the rest of us for most of the activities.

One must also be prepared for the students' lack of background knowledge in plants and nutrition. Although there were a few avid gardeners in the class, a couple of whom regularly took the lead in the outdoor activities, the vast majority of the students had very little experience. Some expressed fond childhood memories of gardening with grandparents or parents. Several students had never worked the soil at all, and one frequently commented about a gardening video game as his only reference point to the subject. Additionally, several students rarely consumed fresh vegetables in their diets. One student ate his first radish in the course. On one hand, this lack of experience meant that the students had a lot to learn, and many embraced these opportunities. On the other hand, some were quite apprehensive and needed constant encouragement and prodding to do fairly simple tasks and try new foods.

## Results

Despite some challenges, students responded with enthusiasm to the gardening component of this course. It attracted a larger variety of majors, with more students from environmental sciences, urban and regional planning, political science, and health sciences than I typically see in my courses. Combined with the history, English, and mass communications majors that normally enroll, we had an interesting variety of student background and interests. Students also reported that they felt as if the gardening activities recharged them for the classroom. As one history major said:

I think it provides a lot of energy to the class, which made me excited about my studies...It definitely connected a lot of the students with what's going on, as far as topics in the class, just by getting hands in the dirt.<sup>13</sup>

Others felt as if the realism of growing our own garden, as opposed to reading about other people growing them, deepened their understanding of the course material. In the words of an urban and regional planning student:

This is a much more realistic interpretation of what a Victory Garden would have been like for someone...The learning hit home a little harder because we weren't just reading and sitting inside.<sup>14</sup>

The students also used the garden as an integral aspect of their assignments. One was a "cooking on rations" assignment. For this project, students were required to consult Lola Wyman's cookbook, *Better Meals in Wartime* (1943), which emphasizes dealing with rations and making the most of Victory Garden produce in everyday cooking, and to choose a recipe to prepare.<sup>15</sup> The students shared the prepared recipe with the class while also explaining (in a presentation and a written paper) its appeal and usefulness to wartime cooks and the number of ration points it would have used. Students were encouraged to use vegetables and herbs from the class Victory Garden in order to keep the ration points (as well as their personal expenses) low. I was a little apprehensive about how students would react to this admittedly unconventional assignment, especially given their lack of experience with food preparation. However, I wanted to try it as another form of "experiential learning" that not only made use of the Victory Garden, but also

gave insight into using cookbooks as primary sources. Students made everything from baked cucumbers to oil-free mayonnaise (using potatoes) with produce from the Victory Garden, while others chose to make baked items. I was pleasantly surprised by their enthusiastic response to this assignment, as well as how good (most of!) the recipes tasted.

The Victory Garden also became a venue for displaying the students' primary research findings. This was a development that I had not anticipated, but came about "naturally" as the class proceeded. The Learning Garden Coordinator indicated that the Victory Garden had become somewhat of an attraction, as it was located in a space surrounded by considerable pedestrian traffic. That we decorated it with red, white, and blue paint, as well as other signage reminiscent of the era, also drew attention. Thinking that it would be a useful way for her to promote the Learning Garden as a whole, the Coordinator offered to keep the Victory Garden as a permanent bed. In turn, I saw this offer as a public history opportunity, in which the garden could be a source of public information and inspiration by displaying the compelling primary sources the students had been finding. The students selected and captioned their favorite primary sources from this research, which I collated into an informational booklet that is on permanent display in an information stand. These sources provide insight into the multifaceted elements of American food policy, show how the media often worked in concert with government efforts, and are a lively window into the issues of the time. Examples included articles from *Life* magazine on the pros of eating horse meat (as opposed to rationed beef) and the benefits of raising rabbits for food, excerpts from an interview with a student's grandfather who had been a cook in the Navy, pages of a comic book for children about growing Victory Gardens, and advice from the local newspaper's "The Mixing Bowl" cooking column explaining how to cook unfamiliar produce.

Also included in the information stand are "Grow Your Own Victory Garden!" flyers that interested parties can take with them. In many ways, this display brought the course full circle, showing students how the combination of the garden and their historical research can be part of an ongoing conversation about food policy that does not have to be limited to the classroom.

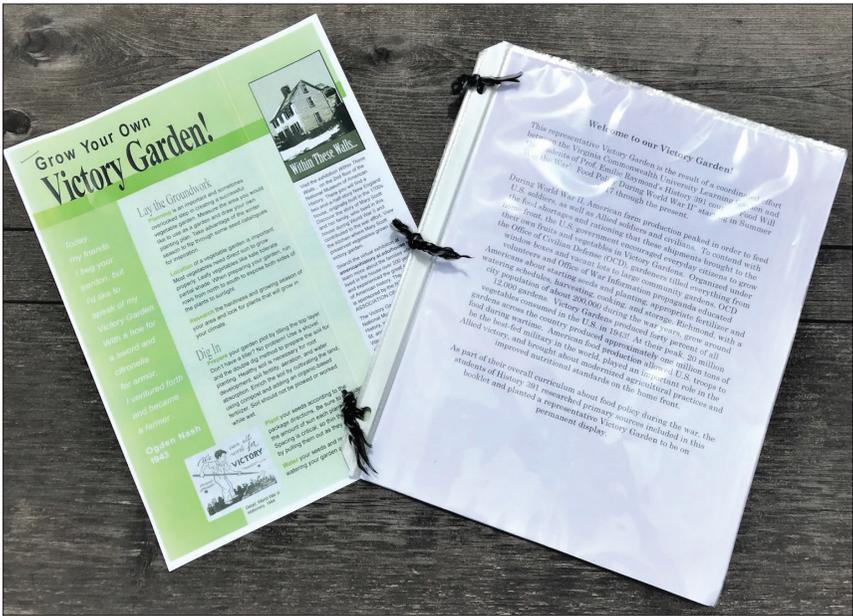


Figure 5: The informational sheet and booklet of primary sources included in the permanent display structure at the Victory Garden.

Another important outcome was the number of students who continued to garden on their own time. Some volunteered at the Learning Garden throughout the summer, and even the rest of their collegiate careers. One student earned a scholarship based on the number of hours he devoted to volunteering at the Learning Garden. Others took skills learned from the class to their own backyards. One student repurposed an old wooden door into a green wall, an inspiration from a lesson on vertical gardening. Another student, inspired by a passage in Collingham’s text describing soldiers’ food preparation techniques in the field, grew his own peas in a can during a hiking trip down the Pacific coast. More students have kept in touch with me from this course than from my more traditional classes, perhaps in part because we worked side-by-side in the garden, which fostered a different kind of collegiality, but also because of the new-found skills they learned. One student, so taken by the gardening aspect of the class, recently secured a position in the Peace Corps, where he will be serving as a community gardening volunteer in The Gambia.

## Looking Forward

While I plan on keeping the materials much the same as I continue this course, I would like to develop ways to further the community outreach we started at the Learning Garden. Nearby institutions seem to be interested in the possibility, as our state library asked me to speak on the topic last summer, and I have been in discussion with officials from the state war memorial about developing a Victory Garden on their grounds. Such partnerships would provide even more opportunities for students to display their work and connect with professionals in the field.

Other college courses in which gardening potentially could be a key element of the curriculum are those under the rubric of environmental history, rural and agricultural history, and indigenous history, among others. Specific to American history, one could incorporate a medicinal herb garden and/or a Native American garden (depending on the local indigenous group) in a colonial history class, an ornamental garden in a Victorian-era class, or a commune-type garden (sans any illegal substances!) in a class on the 1960s. Overall, my experiences with a classroom garden show the potential for enhancing the skills and mindsets of history majors and, by reflecting the multidisciplinary aspects of history, for drawing students from across the university to our courses. Such classes can enhance learning in a more wholistic fashion and help prevent “nature-deficit disorder” from becoming a permanent affliction.

## Notes

1. John Dewey, *The School and Society: Being Three Lectures* (Chicago, IL: The University of Chicago Press, 1899), 24-25, available via Project Gutenberg, <<https://www.gutenberg.org/ebooks/53910>>.
2. See Sally Gregory Kohlstedt, "'A Better Crop of Boys and Girls': The School Gardening Movement, 1890-1920," *History of Education Quarterly* 48, no. 1 (February 2008): 58-93.
3. Richard Louv, *Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder*, revised ed. (Chapel Hill, NC: Algonquin Books of Chapel Hill, 2008), 226.
4. See Dilafruz R. Williams and P. Scott Dixon, "Impact of Garden-Based Learning on Academic Outcomes in Schools: Synthesis of Research Between 1990 and 2010," *Review of Educational Research* 83, no. 2 (June 2013): 211-235; Simon Jorgenson, "The Logic of School Gardens: A Phenomenological Study of Teacher Rationales," *Australian Journal of Environmental Education* 29, no. 2 (December 2013): 121-135.
5. See Mark Wild, "Incorporating Service Learning into a General Education History Course: An Analogic Model," *The History Teacher* 48, no. 4 (August 2015): 641-666.
6. Robert M. Rakoff, "Doing Original Research in an Undergraduate Environmental History Course," *The History Teacher* 37, no. 1 (November 2003): 29-37; and Andrew H. Myers, "Teaching History in the Backyard," *The History Teacher* 35, no. 4 (August 2002): 455-464.
7. Lizzie Collingham, *The Taste of War: World War II and the Battle for Food* (New York: Penguin Books, 2011).
8. Theodore H. White and Annalee Jacoby, *Thunder Out of China* (New York: William Sloane, 1946), particularly chapters eight through eleven; and Gwendolyn Chabrier, *Behind the Barbed Wire* (Hong Kong: Orchid Press, 2011).
9. Mary Drake McFeely, "The War in the Kitchen," in *Produce and Conserve, Share and Play Square: The Grocer and the Consumer on the Home-Front Battlefield During World War II*, ed. Barbara McLean Ward (Portsmouth, NH: Strawberry Banke Museum, 1994); and Amy Bentley "Islands of Serenity: Gender, Race, and Ordered Meals during World War II," *Food and Foodways* 6, no. 2 (1996): 131-156.
10. Sandra C. Taylor, "Japanese Americans and Keetley Farms: Utah's Relocation Colony," *Utah Historical Quarterly* 54, no. 4 (Fall 1986): 328-344; and Stephanie Ann Carpenter, "'Regular Farm Girl': The Women's Land Army in WWII," *Agricultural History* 71, no. 2 (Spring 1997): 162-185.
11. Bruce Makoto Arnold, "'Your Money Ain't No Good O'er There': Food as Real and Social Currency in the Pacific Theater of World War II," *Food and Foodways* 25, no. 2 (2017): 107-122; and Bob Green, *Once Upon a Town: The Miracle of the North Platte Canteen* (New York: Harper First Perennial, 2003).
12. These include Swarthmore College, Portland Community College, Virginia Commonwealth University, and the University of Cincinnati.

13. As quoted in Patrick Kane, “Seeds of War and Peace: At Monroe Park Campus Learning Garden, a VCU History Class Explores the Roots of Rationing, Victory Gardens and Wartime Food Policy,” Virginia Commonwealth University, September 1, 2017, <<https://vcu.exposure.co/seeds-of-war-and-peace>>.
14. As quoted in Kane, “Seeds of War and Peace.”
15. Lola Wyman, *Better Meals in Wartime* (New York: Crown, 1943).