Food goes to war:
4-H and Extension during World War II

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Abstract

4-H and the Extension Service were instrumental in the nationwide increase in food production that sustained the United States and its armed forces during World War II. At the onset of the war, the Extension Service distributed essential information at the national, state, and local levels through universities and the 4-H program. 4-H drew upon the intellectual and cultural tradition that they had cultivated to motivate and organize the food effort and help the Allies win the war. 4-H's national influence and resources provided eager allies to war-oriented programs. The war had a lasting impact on 4-H as wartime programming and innovations stayed with the organization, leaving 4-H stronger than before. The aid provided by the 4-H program during the war was rewarded with greater funding from the national government, culminating in the Bankhead-Flannagan Act of 1945. This new funding allowed the 4-H program to continue to expand and impart intellectual and cultural traditions to future generations of 4-Hers. The 4-H and Extension that we know today were born of the exigencies of World War II.

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Introduction

"I pledge my head to clearer thinking, my heart to greater loyalty, my hands to larger service, and my health to better living, for my club, my community, and my country."[1]

The 4-H pledge was officially adopted in 1927 at the first National 4-H Camp in Washington, D.C. The author of the pledge was Otis Hall, the Kansas state 4-H leader from the Kansas State College of Agriculture. The only change to the pledge occurred in 1973 when "and my world" was added to the end.[2] Ever since then, 4-Hers have committed their hearts to the pledge. The 1990 National 4-H Alumni winner and Secretary of Agriculture from 1989 to 1991, Clayton Yeutter, noted that "4-H really gave me my start in life. The heart of 4-H is values--especially people values." He continued, "Until I started showing beef cattle, I had no exposure outside an area of 10 or 12 miles. County and statewide 4-H competition made me realize the broader world."[3] For alumni such as Yeutter, 4-H had a profound impact upon them—the life skills it taught them, their experiences at camp and fairs, the projects they completed, and the people they met left a mark on them in some way. The pledge calls for 4-Hers to think clearly and devote their health to better living. The pledge also asks that they use their hearts and hands in larger service for not only their clubs and communities but for their country as well.

World War II was a way for 4-Hers to make a difference in their country. When asked to deliver, 4-H met the call with enthusiasm and joined farmers in increasing agricultural production across the United States.

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[1] "4-H Motto, Creed and Pledge." *National 4-H History Preservation Program*. 2018. [cited 11/6/2018]. https://4-hhistorypreservation.com/History/M-C-P/.
[2] Ibid.
[3] "4-H Quotes." National 4-H History Preservation Program. 2018. (accessed November 27, 2018). https://4-hhistorypreservation.com/History/4-H_Quotes/.

4-H represented intellectual and cultural traditions that helped the Allies win the war. In addition, the Extension Service and 4-H evolved during the war, laying the groundwork for the Extension Service and the National 4-H organization of today.

From the very beginning, Extension and 4-H have had intertwined stories. Both had their roots in the early twentieth century. After their initial formation, they evolved into organizations that were trusted by the rural population, putting them into a position to lead educational programs and campaign drives during the Second World War. Broad changes occurred within Extension and 4-H in the months preceding the bombing of Pearl Harbor, during the war itself, and in the immediate postwar period. The educational programs and campaign drives were distinctly wartime, but they had many overlapping themes and messages. Educational programs were an important part of Extension's wartime services, which they expanded from prewar days. Through joint effort with 4-H and other agricultural organizations and businesses, their message became more cohesive and reached a broader audience. Just as with the educational programs, Extension and 4-H were aided by other agricultural organizations and businesses in spreading their campaign drives to a broader audience.

Extension and 4-H had different purposes, administrative structures, and origins stories, yet their common dedication to service and the national demands of waging global war reshaped them and their relationship with each other. The 4-H and Extension that we know today were born of the exigencies of World War II.

Chapter 1 - Background of 4-H and Extension: 1900-1941

During his time as president, Theodore Roosevelt promoted the conservation of forests and natural resources. In 1901-1909, more than 148 million acres of land became a part of the national forests. On 8 June 1908, Roosevelt appointed Gifford Pinchot as Chairman of the National Commission on Conservation. Pinchot was also a part of the County Life Commission, which was commissioned by Roosevelt in mid-1908. The Commission was tasked with studying rural life, and they submitted a report to Congress in February 1909. However, the findings of the report were not acted upon until 1913 when the USDA created the Rural Organization Service.[4] Liberty Hyde Bailey was selected by Roosevelt to chair the Commission, and he was the principal author of the report that was submitted to Congress.[5] Bailey was a botanist who transformed horticulture in the United States from a craft to an applied science. He accomplished this through his study of cultivated plants. Bailey would go on to have a direct impact on the development of genetics, plant pathology, and agriculture.[6] Due to the influence of Bailey and other dedicated people who worked on the report, the Commission became a forerunner of the Extension Service.

Another important antecedent to the Extension Service, the Rural Organization Service (ROS), was funded by the General Education Board. The goal of the organization was to improve country life, which was exactly in line with that of the USDA. However, the ROS was radically different from the USDA. ROS was under the jurisdiction of the USDA, but instead of being funded by the USDA with federal monies, the Board financed their work, a crucial factor

[4] Gladys L. Baker. 1963. *Century of Service: The First 100 Years of The United States Department of Agriculture*. Washington, D.C.: U.S. Department of Agriculture, 53.
[5] Larry L. Krug. "4-H Sunday." *National 4-H History Preservation Program*. [cited 7/26/2020]. https://4-hhistorypreservation.com/History/4-H_Sunday/.
[6] Editors of Encyclopedia Britannica. "Liberty Hyde Bailey." *Encyclopedia Britannica*. 11 March 2020. [cited 7/26/2020]. https://www.britannica.com/biography/Liberty-Hyde-Bailey.

in how the ROS was run.[7] However, on 31 December 1913, the USDA and the Board agreed to terminate their agreement, which would end on 30 June 1914.[8] The Extension Service was established through the partnership of the USDA and agricultural colleges across the United States. In April of 1913, plans were being made by the USDA for the merger of the demonstration work conducted by the Office of Farm Management and the Farmers' Cooperative Demonstration Work. Shortly after, the proposal that brought the Extension Service into existence included the designation "Office of Extension Work" for the organization, to be applied after the merger. The proposal also provided for a director to be initiated into office. However, this was not enacted until the passage of the Appropriation Act. In fiscal year 1916, the Appropriation Act authorized the establishment of the States Relations Service. This organization included the Office of Experiment Stations, the Office of Extension Work in the South, the Office of Extension Work in the North and West, and the newly established Office of Home Economics.[9]

The National 4-H program attributes the beginning of 4-H to youth programs in Clark County, Ohio founded by A.B. Graham in 1902. Originally the groups were based around one crop that club members grew. The clubs existed at local or county levels and had very little interaction with other organizations. The focus of the groups was varied although largely agricultural in nature. They sometimes held crop-judging competitions for prizes. These clubs had names such as the "Corn Growing Club" or the "Tomato Club." The clubs existed across the United States and were most often hosted out of schools.

[7] Baker, 73.
[8] Ibid, 74.
[9] Ibid, 80-1.

Before 1910, club work had two main motivators. The first was that colleges wanted to obtain higher crop yields and introduce better farming practices. Youth organizations provided the most receptive candidates to change. The second motivation was that schoolteachers wanted to increase the usefulness of schools in their pupils' lives. Teachers also wanted to create an environment in their communities that encouraged parental cooperation in solving school problems.[10] In March 1911, Charles Turner of Franklin, Kentucky advertised in the local newspaper the establishment of a Corn Growing Club for boys aged 10 to 15. The ad noted that W.H. Strange would present a lecture at the inaugural meeting that "will be of great value to all the farmers as well as the boys." The United States Department of Agriculture pledged free seed for every boy who joined the club.[11]

A 1911 article in an Alabama newspaper extolled the virtues of club work and the positive impact it might have on not only individuals but entire communities. For the individual, this work might lead them to become better crop growers. By participating in club work,

> [C]ollectively they have learned the value of organized effort of co-operation, and of compromise; and the social instinct has been developed in them—a matter of great importance in rural districts, where the isolated condition of the people has long been a great hindrance to progress…The influence upon the communities at large, the parents as well as the children, has been wholesome. Beginning with an awakening interest in one thing—better seed corn, for example—communities have rapidly extended their interest to other features of rural improvement, with the result that in the regions affected by the agricultural-club movement there has come about a general upward trend in the thoughts and activities of the people.[12]

The article also claimed that competition would help students further their own education. The author noted that these clubs were of great value and that a more permanent club structure in the future was something to consider.[13] In the early 1900s, a three-leaf clover pin with an "H" on

[10] Franklin M. Reck. 1951. *The 4-H Story: A History of 4-H Club Work*. Chicago, National Committee on Boys and Girls Club Work, 47.

[11] "Boys' Corn Growing Club," *The Franklin Favorite* (Franklin, Kentucky), Mar. 9, 1911.

[12] "Agricultural Clubs for The Boys and Girls," *The Birmingham News* (Birmingham, Alabama), May 27, 1911.

[13] *The Birmingham News.*

each leaf was created by O.B. Martin and Jessie Field Shambaugh and used to reward children for their work. About 1910, the fourth "H," for "health," was added by the 4-H leaders.[14] At their 1911 meeting in Washington, D.C., club leaders approved the four-leaf clover with an H on each leaf.[15] By 1912, these programs were beginning to be called 4-H clubs although there was virtually no national oversight.

Over time, 4-H has become a community of volunteers, mentors, 4-H professionals, 4-H alumni, and youths aged seven to eighteen. The 4-H program provides hands-on experience in areas such as health, science, agriculture, and leadership with flexible programming to meet the individual interests of 4-Hers. 4-H seeks to give youths the experience and knowledge to become leaders.[16]

On 8 May 1914, President Woodrow Wilson established the Cooperative Extension Service (CES, Extension, or Extension Service) by signing the Smith-Lever Act. The Smith-Lever Act nationalized 4-H by placing it under the jurisdiction of the Cooperative Extension Service. The Extension Service was designed, with some exceptions, to have at least one Extension professional stationed in each county of every state, in each of the territories, the District of Columbia, and at each of the land-grant universities. The Extension Service was divided into two units: the southern states, which were initially under the authority of Bradford Knapp, while C.B. Smith ran the northern and western states.[17] However, on 1 October 1921, the

[14] Wayne D. Rasmussen. 1989. *Taking the University to the People: Seventy-five Years of Cooperative Extension*. 1st edition. Ames: Iowa State University Press, 88.

[15] "4-H Emblem." *National 4-H History Preservation Program*. 2018. (accessed December 10, 2018). https://4-hhistorypreservation.com/History/Clover/; National 4-H Program. "4-H History." *4-H*. 2018. (accessed December 10, 2018). https://4-h.org/about/history/.

[16] National 4-H Program. "What is 4-H?" *About 4-H*. 2018. (accessed November 6, 2018). https://4-h.org/about/what-is-4-h/.

[17] Baker, 81.

two offices combined into a single office, which was named the Office of Extension Work by the USDA.[18] The laws that created the Extension Service were broad, legally allowing the states to incorporate their counties, creating an interdependent partnership between the counties, the states, and the federal government. Designed as a partnership between land-grant universities and the United States Department of Agriculture (USDA), the Extension Service was established to make the knowledge produced within the land-grant universities available to the broader public. The goal of Extension was to bring the university to the people through educational programs.[19] Extension programming provided people with research-based knowledge and resources to respond to local problems.

The Extension Service rapidly expanded across the nation, as did the number of agents they employed. In 1915, there were 1,136 white agents, and by 1917, Extension employed 66 black agents. In 1918, 2,435 counties had agriculture agents, and 1,715 counties had demonstration agents.[20] This paper does not address the full story of the role that segregation had on people of color. Segregation and racism stunted the experience of 4-Hers who were people of color. People of color who wished to work for the federal government faced great challenges or were outright denied access to those positions.

After World War I, Extension projects reflected the needs of the postwar United States. Extension increasingly became entrenched in local communities. Members of rural communities who participated in Extension projects and think tanks saw value in the Extension Service. Similarly, scientists who worked with Extension gained valuable information from the practical

[18] Ibid, 108.

[19] Rasmussen, 3-5.

[20] Baker, 82.

experience of farmers.[21] Demonstration work was an important way that Extension engaged with the local community. County agents went out into communities to give presentations and disperse information. Wisconsin Extension agents in 1920 invited high school teachers to a summer conference to share information and give them the tools to become better educators.[22]

World War I also had a positive influence on 4-H. The emergency of the war and increased funds to Extension and 4-H stimulated club growth. In 1916, club membership was 169,000, and by 1918, 4-H had over 500,000 members. During the same period, the number of paid, part-time club leaders expanded from 391 to 985.[23] The duties of Extension agents doubled during the war. Agents mobilized volunteers for food production organizations, such as the Women's Land Army. Additionally, Extension agents worked with the organizations to help prevent panic food hoarding and speculation.[24] Although the Smith-Lever Act of 1914 did not account for 4-H moving into urban centers, doing so during World War I was welcome in an emergency setting. But it would not be until World War II that 4-H really began to take hold within cities.[25] However, the wartime drive to increase food production and conservation left little time for developing local organizations or creating lasting objectives of club work. The main goal of club work was to aid the national war effort. During World War I, shortages stimulated multiple clubs across the nation to create projects where members developed substitutes for critical items. For many youths and adults, wartime club work was the first

[21] E. R. McIntyre.1962. *Fifty Years of Cooperative Extension in Wisconsin, 1912-1962*. Madison, WI: University of Wisconsin Extension Service. College of Agriculture, 85.

[22] McIntyre, 95.

[23] Thomas R. Wessel. 1982. 4-H, *An American Idea, 1900-1980: A History of 4-H*, ed. Chevy Chase, Md. Chevy Chase: National 4-H Council.

[24] McIntyre, 78.

[25] Reck, 153.

introduction that they had to 4-H. With the end of hostilities, the Extension Service and 4-H leaders had to build a club work structure that would support the programs as they expanded.[26]

Before the 1920s, many rural schools included agricultural curricula alongside other lessons. Books such as *Graded Lessons in Physiology and Hygiene* and *Agriculture for the Kansas Common Schools* were part of the education for established farmers during World War II. In the preface of one book, the William O. Krohn advised that "[t]he work in the classroom will be made much more interesting and valuable if the teacher will have the children actually carrying out the teaching." For example, if children live in homes that use wells, teachers were advised to instruct children to look at the conditions of their home to see where water drainage went and if it polluted well water.[27] Suggestions such as this reveal the ways in which officials thought the next generation of farmers ought to be taught. In the 1919 textbook *Agriculture for the Kansas Common Schools*, the authors, Leland Everett Call and Harry Llewellyn Kent, wrote in the preface that "[t]he way the farms of Kansas are tilled in the future depends on the way agriculture is taught in the schools now."[28] This book was prepared by the Experiment Station staff at Kansas State Agricultural College, a forerunner of the Extension Service.

On 23 February 1917, the Smith-Hughes Vocational Education Act was signed into law. The act developed vocational agriculture curricula in school. Additionally, it created the Federal Board for Vocational Education and established funds to pay part of the salaries of home economics teachers in secondary education. The Smith-Hughes Act also provided funds for the training of home economics teachers and teachers of other vocational subjects.[29] However, many

[26] Reck, 155; Wessel, 27.

[27] William O. Krohn. 1918. *Graded Lessons in Physiology and Hygiene*. Topeka, Kansas: The State of Kansas, 6.
[28] Leland Everett Call and Harry Llewellyn Kent. 1919. *Agriculture for the Kansas Common Schools.* Topeka, KS: The State of Kansas, v.
[29] Wessel, 29; Baker, 83; Rasmussen, 86.

people worried that this act would interfere with club work and create conflict between the two. The Smith-Hughes Act made it obvious that there was a need for resolution. Alfred C. True was influential in resolving the issue. True was head of the Office of Experiments Station from 1893 to 1915 and served as head of the States Relations Service from 1915 to 1923.[30] True believed that there was plenty of room for both club work and vocational agriculture education. In True's mind, the question was how to make the two work together to best promote agricultural education and youth development. True's conclusion that the two programs complemented each other prevailed, which was apparent at the 1919 Kansas City conference on club work.[31]

After World War I, clubs found that shifting the adult leadership roles from schoolteachers to community volunteers provided better results with the organizations. Club work is more flexible than schoolwork, where learning is on a fixed schedule. In the late 1910s and early 1920s, 4-H began to branch out beyond money-earning projects. Extension and 4-H leadership created opportunities for 4-Hers to participate in community service projects. Additionally, 4-H leadership developed educational programs and enrichment projects for youths.[32] In 1919, Northern and Western 4-H leaders met in Kansas City to improve club work. At this meeting, the leaders created an institutional framework for 4-H. The leaders determined that for a club to be granted a charter, they had to have at least five members who were working on a similar project with a local leader. Additionally, each club had to have officers and plans for demonstration activities.[33]

[30] Baker, 456; 461.

[31] Wessel, 29-30.

[32] Reck, 158; 168.

[33] Rasmussen, 88.

Another goal of the 1919 Kansas City meeting was to ensure that clubs could return to local control after World War I, when the USDA held most of the control. Gertrude Warren, a home economics teacher at the Teachers' College of Columbia University, was a leading voice at the meeting. In 1917, Warren was brought in to organize canning demonstrations and create canning programs for youths. At the meeting, she suggested that American youth had learned as much as needed about canning and it was time to move onto other projects such as clothing and garment making and cooking and baking. Earlier club work focused on helping male members earn money for college or some other goal, while female members were being taught how to trim and save on household budgets. The earlier programs developed for clubs were based on these objectives. The committee was to develop programs for young people to produce something tangible in a set amount of time and not comprehensive programs that taught every aspect of a subject. The Kansas City meeting was an important part of 4-H's early development. The committee was ultimately tasked with developing outlines for all the various projects based on a simple set of criteria. During this meeting, leaders established the general structure of local clubs and defined the relationship between club work and vocational education in schools. Leaders at the meeting also called for an expansion of projects that clubs offered, and the general principle of the local initiative was ratified. Despite all the challenges they faced going forward, 4-H continued to grow.[34]

On 31 September 1921, the first meeting to consider the formation of the National Committee on Boys and Girls Club Work was called. The committee was founded by the Extension Service out of a need for national supervision of 4-H clubs. The committee was under

[34] Wessel, 32-33.

the directive of E.N. Hopkins, Perry G. Holden, and Guy L. Noble.[35] Noble, an employee of Armour and Company, a meat packing company based out of Chicago, was a life-long supporter of 4-H and key to increasing funds for both Extension and club work. The Committee had four objectives: first, they promoted club demonstrations before state associations; second, they prioritized club work; third, they encouraged bank loans to youths who were completing club work; and fourth, they coordinated donations for club work.[36] On 1 December 1921, the group met for the first time, and the committee was officially founded with an initial budget of $30,000 for 1922.[37]

4-H continued to grow throughout the 1920s. 4-H and Extension were not restricted to white Americans, however the clubs were segregated. During the 1920s, 4-H grew in black communities. Thomas Campbell and John B. Pierce were the first two black agents employed by the Extension Service.[38] By 1923, there were 3,001 black 4-H clubs, which enrolled 21,893 boys and 34,078 girls. By 1948, this number had ballooned to 141,244 boys and 176,944 girls.[39] Black participation in club work was always enthusiastic because it was an important factor that led to increased farm income, land ownership, and improved living.[40]

The Bureau of Indian Affairs (BIA) established an Extension division in 1928 to serve the needs of reservations. A.C. Cooley, the former director of Extension in New Mexico, was the first head of the BIA's new division. In most places, the systematic and highly unequal

[35] Reck, 171.

[36] Rasmussen, 89.

[37] Reck, 179.

[38] Ibid, 134.

[39] Ibid, 139.

[40] Ibid.

separation of Extension with the BIA lasted until 1956.[41] Hispanic participation in 4-H was a different story, however. Unlike Blacks and Native Americans, who were part of reservations or subjected to Jim Crow laws, Hispanic children participated in 4-H from its earliest years in southwestern rural areas. Although, in many places, Hispanic children were subject to prejudices against dark-skinned people. Urban Hispanics were generally not a part of 4-H until the advent of the 4-H Expanded Food and Nutrition Education Program (EFNEP) and when special funds were set aside in the early 1970s.[42]

4-H expanded in all aspects during the 1920s. Before 1924, the name "4-H" was not associated with a singular national movement; rather it was shorthand for explaining the concept of club work. While the term "4-H" had been around since at least 1912, it was not until 1924 that "4-H" was recognized in a formal manner. Gertrude Warren is credited with making the name 4-H formally recognized as the youth program of the Extension Service. The name won out against another favored name: Junior Extension Work.[43] Warren was so influential to the program that in her obituary, she was referred to as the "Mother of 4-H."[44] In 1927, the club motto— "To make the best better"—was adopted. It was originally proposed by Carrie Harrison, a botanist in the Bureau of Plant Industry.[45] Guy L. Noble sponsored the Capper-Ketchum Act, which passed in 1928. The Act gave Extension a budget increase of $1.38 million a year, and it was the first time that club work was specifically mentioned in funding legislation.[46] To put the increase into perspective, for fiscal year 1926, the estimated budget for the national Extension

[41] Wessel, 185-86.

[42] Ibid.

[43] Ibid, 42.

[44] "Gertrude Warren Dies: 'Mother of 4-H,' The Washington Post (Washington, D.C.), Sept. 8, 1979.

[45] Reck, 217.

[46] Rasmussen, 90-91.

Service was $7,200,000. The1925 allotment had been an estimated $7,205,000, while in 1924 the Extension Service had spent $7,210,546.[47]

4-H exploded in all aspects. One development was Rural Life Sunday, which was first observed in 1929. In a 1953 circular, Dorthea F. Holstein, the current Assistant State 4-H Leader in Nebraska, explained the origins and ideas behind 4-H Sunday. Rural Life Sunday was suggested by the International Association of Agricultural Missions. 4-H Sunday was an outgrowth of Rural Life Sunday, and 4-H Sunday is the name by which it is best known. The event is observed on the fifth Sunday after Easter each year. However, 4-H Sunday did not become popularized until after World War II. 4-H Sunday came from a long tradition of the Western Christian Church observing Rogation Days, which were festival days devoted to special prayers for crops. 4-H leaders justified the observance of 4-H Sunday because it was used to connect with the local community, and they believed that 4-Hers attending a worship service aided in developing their spiritual lives. 4-H Sunday, like Rogation Days, assembles 4-Hers to "join with those of many generations in seeking the blessings of God upon the land, the seed, the cultivation of the earth, and the enrichment of home and community life."[48] Leaders believed that 4-Hers attending a worship service were improving upon one of the four Hs—heart.

The first body of musical literature focused around 4-H appeared in 1927. Club leaders used music to lift the morale of 4-Hers. Additionally, leaders used music to emphasize certain morals and values that they hoped 4-Hers would internalize.[49] Music was present at almost every

[47] *Message of the President of the United States Transmitting the Budget For the Service of the Fiscal Year Ending June 30: 1926*. (Washington, D.C.: Government Printing Office, 1924) A21.

[48] Dorthea F. Holstein. *4-H Sunday*. Extension Service Circular 0-49-2. University of Nebraska College of Agriculture, 1953.

[49] Reck, 217.

4-H event. Many states, and even some local clubs, organized 4-H bands and orchestras in the 1920s and 1930s. In 1930, the National Committee on Boys and Girls Club Work sent out a questionnaire and found that out of the fourteen states that answered, there were a total of 42 orchestras and 21 bands. Kansas had the most, with ten orchestras and five bands. A 1924 club songbook from a localized area was comparatively simplistic to the later national 4-H songbooks. The songs were included in the book without musical notations except for the name of which popular tune it followed, since before 1927, songs were typically written by 4-Hers or leaders to the tune of a popular song. The songs traveled across the nation when 4-Hers went to conventions and shared them with club members from other states. Songs were also distributed through magazines, where leaders shared the words to local songs.[50]

The name most associated with 4-H music is Fannie R. Buchanan, the first Iowa State Music Specialist. She served in 1925-27 and wrote several songs for 4-H. A 1949 booklet explains that "[d]uring the years she spent as a Rural Specialist and in the Extension Service, Miss Buchanan was coming more and more in contact with 4-H Club Leaders and members. She realized the need for 4-H songs and so she filled that need by creating inspirational songs.[51] Her songs include "Dreaming," "Morning Song, A Poem," "The Plowing Song, 4-H Friendship," "4-H Field Song," and "A Song of Health." All of her songs were introduced in the late 1920s and early 1930s. When the *National 4-H Club Song Book* was published in 1938, Buchanan's songs were included alongside patriotic tunes. The songbook also included songs for 4-H ceremonies such as the Candle Lighting Ceremony, whose song encouraged 4-Hers to "[l]et our

[50] National 4-H History Preservation Team. "4-H Songs and Music." *National 4-H History Preservation Program*. 2020. [cited 8/3/2020]. https://4-hhistorypreservation.com/Music/.

[51] Lois Winerberg. 1949. *The Music and Story of Fannie R. Buchanan's 4-H Songs*. Chicago, IL: National Committee on Boys and Girls Club Work, 2.

deeds shed cheerful ray as candles gleam from ev'ry home to light wayfarers on their way, or welcome back the ones who roam."[52] Over time, a body of musical literature was created or collected for most events in which 4-Hers participated.

Club camping had been around as early as 1907, but it culminated in the establishment of the national 4-H camp in Washington, D.C. in 1927.[53] As an article from the *Dodge City Journal* explains, attendees of camp spent their time in "4-H club lesson study, stunts, games, vesper services, camp fire ceremonies, swimming, hiking, nature study, and various other forms of recreation besides those mentioned."[54] Camping was used both to reward and to encourage 4-Hers. Thelma Hood, from Santa Rosa county in Florida, won a check for $50 for her speech on gardening and another check for $100 to be used on her trip to the national 4-H camp in 1929. Mrs. Meade A. Love of Quincy, the State Chairman of Home Demonstration of the Florida Federation of Women's Clubs presented the award. Love noted that "[i]n summer when most of the Federated clubs are taking a vacation, the Home Demonstration clubs are most active, preserving, canning, taking care of chickens, sewing, improving their homes, and keeping their record books…and attending the county camps." Love concluded that the work that the girls completed and their participation in educational demonstrations were a "very short course experience [which are] inspiring many of them to go to college at any sacrifice."[55] Going into the Depression, 4-H club work was going strong.

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[52] Ray A. Turner. and the Committee on 4-H Club Music. 1938. *National 4-H Club Song Book*. Chicago, IL: National Committee on Boys and Girls Club Work, 18.
[53] Rasmussen, 90.
[54] "Good Attendance At 4-H Camp is Assured," *The Dodge City Journal* (Dodge City, Kansas), Aug. 8, 1929.
[55] "Santa Rosa County Girl Wins Federation Prizes And Trip," *Pensacola News Journal* (Pensacola, Florida), Sept. 13, 1929.

Extension also expanded during the 1920s. Extension began to make greater use of county and local leaders. Public engagement was an important pillar of Extension work. Demonstration work was another way for Extension to engage with their communities. The national Extension Service encouraged county agents to make the results of demonstration work widely known and make regional tours to demonstration farms.[56] Extension and the USDA published a number of bulletins and circulars that were distributed to farmers, as required by the Hatch Act. These bulletins provided information on a large range of topics. A 1921 Farmers' Bulletin explained how farmers were to beautify their farmstead as "[h]omes are the foundation of a nation. With clean, attractive, pure homes the youth become strong, upright, honorable citizens. Anything that will make the home better will tend to improve citizenship."[57] The bulletin also provided multiple tips on maximizing the convenience and comfort of the farmstead.

Despite the growing economic depression, by the early 1930s, the Extension Service had become firmly established as an educational force that interdependently worked at the county, state, and federal levels.[58] Secretary of Agriculture Arthur M. Hyde made it clear in his 1932 annual report that the goals of research within the USDA were heavily influenced by the depression.[59] Indeed, the role of the Extension Service was cemented during the Great Depression years. Extension and 4-H grew in leaps and bounds during the depression. By 1930, 56 of Wisconsin's 71 counties had Extension offices. The state Extension office estimated that

[56] McIntyre, 95.

[57] United States Extension Service. 1921. *Beautifying the Farmstead*. Farmers' Bulletin 1087. Washington, DC: U.S. Department of Agriculture, 3.

[58] Rasmussen, 94.

[59] Baker, 108.

850,000 people had attended demonstrations and programs hosted by Extension in Wisconsin during 1930.[60] Also by 1930, nationally over 800,000 young people belonged to a 4-H club, with 67% of the enrollees completing a project. The number of young people enrolled in 4-H nationally had passed the million mark by 1936.[61]

Several federal action agencies relied on the Extension Service in the 1930s as county agents became key coordinators. County Extension offices often became the headquarters for the Agricultural Adjustment Agency (AAA) and other federal agencies. Additionally, Extension agents helped farmers understand new rules, regulations, and guidelines through a combination of meetings, pamphlets, and phone calls. Home economic staff provided educational programs on food preservation and cooking and nutrition skills.[62] Throughout the 1930s, growing familiarity with the local agents and their knowledge of the county's needs encouraged further public reliance on Extension.

Extension and the USDA continued to send out bulletins and circulars to farmers throughout the 1930s, further encouraging farmers to go to their local Extension offices with problems. In addition to providing simple advice for the prevention of an outbreak of insects, farmers were encouraged to contact their local agent about serious outbreaks of insects and if the farmer was "in doubt as to the identity of the pest, promptly send a specimen, inclosed [sic] in a tight tin box, to your county agricultural agent, state experiment station, or nearest Federal entomological field station, accompanied by a request for information regarding it."[63] A 1935

[60] McIntyre, 121.

[61] Wessel, 47-48.

[62] McIntyre, 125; 131.

[63] W. R. Walton. 1931. *How to Detect Outbreaks of Insects and Save the Grain Crops*. Farmers' Bulletin No. 835. Washington, DC: U. S. Department of Agriculture, 20.

Extension bulletin informed farmers how to best control their garden pests. Such knowledge set precedents that farmers followed during the war years. Gardeners were encouraged to practice disease prevention methods on plants, as it was easier to protect garden plants from contracting diseases than it was to eradicate them. The bulletin tells readers that "[t]he control of insects is accomplished by mechanical means, burning plants and trash, timely tillage of the soil, and the application of chemicals that will kill or repel the insects without injuring the plants."[64] The majority of the bulletin outlines several chemicals available to gardeners along with a chart detailing the diseases of specific plants and what they look like, what insects attack common garden crops, a drawing of common insects, and how best to prevent plant disease and insect attacks.

Huge farm income losses led to dropped financial support of Extension at the local and state level. The federal government stepped in and supplemented the emergency funds with $8,000 in 1935, peaking at $12,000 annually in 1939 for national Extension work. This funding came through the 29 June 1935 Bankhead-Jones Act, which assured a steady income for both the Extension Service and 4-H club work. With both prices and production suffering in the 1930s, the Extension Service helped solve problems. Throughout the Great Depression, agents surveyed feed situations, helping to anticipate needs. Pamphlets with educational information were distributed by the thousands, and Extension agents spent time interpreting new rules and regulations. State and home economics professionals acted as project specialists in youth work and 4-Hers aided at home by trimming budgets and working with local leaders.[65]

[64] E. G. Kelly, and E. H. Leker. 1935. *Controlling Garden Pests*. Extension Bulletin No. 77. Manhattan, KS: Kansas State College of Agriculture and Applied Science, Extension Service.

[65] McIntyre, 122-123.

On 12 May 1933, the Agricultural Adjustment Act (AAA) was signed into law. The AAA offered farmers guaranteed prices if they cut down the acreage they planted or the number of major crops that they produced. The Act was declared unconstitutional in 1936 and replaced by the Soil Conservation and Domestic Allotment Act. This act was replaced in 1938 by a new version of the AAA. The AAA made county agents an important part of the program. This was because Extension was the only agricultural agency that had a representative in almost every farming county across the United States. However, under the Act, agents acted as a promoter rather than an educator. The county agent promoted certain practices that were emphasized by the AAA and the agent could withhold benefits from farmers for lack of compliance.[66]

The depression years witnessed the Extension Service gaining friends due to the tremendous service Extension provided for rural America. During the 1930s, people grew accustomed to seeking information at Extension Service offices. Additionally, Extension agents aided farmers in filling out important documents.[67] The experiences of the 1930s proved critical to maintaining support for the Extension Service and the 4-H program during World War II. By the late 1930s, multiple federal action agencies were relying on Extension agents to coordinate the educational meetings and to guide farmers in the newly established programs.[68] This familiarity with local Extension agents encouraged continued public reliance and trust when World War II broke out.

In 1938, the USDA underwent a reorganization, although it did not fully go into effect until 1 July 1939. Soon after, Claude Raymond Wickard became the twelfth Secretary of

[66] Rasmussen, 96-97.

[67] McIntyre, 134.

[68] Ibid, 125.

Agriculture on 5 September 1940.[69] Wickard was born 28 February 1893, and he graduated from Purdue University. From 1 March 1940 to his appointment as the Secretary of Agriculture, Wickard had served as the Under Secretary of Agriculture, making him well acquainted with the position. He served as the Secretary of Agriculture throughout the war years, and on 29 June 1945, he was appointed Administer of the Rural Electrification Administration, a position he held until 1958.[70]

Before entering the war, the United States had in storage enough wheat and cotton for two years or more and enough corn to last over a year.[71] Farmers were encouraged to shift from growing staple crops to special war crops by following the guidelines laid out by the agricultural adjustment and conservation programs. By September 1941, the programs emphasized a need to increase production of milk and eggs and to raise more hogs, cattle, sheep, and chickens. The programs also provided safeguards for farmers so that they would not be faced with unreasonably high or low prices. Additionally, safeguards were put into place so that the farmers would not be saddled with war surpluses. Three months before the bombing of Pearl Harbor, agricultural programs showed significant progress in shifting production to meet wartime needs.[72]

During the 1920s and 1930s, there was tension between the national Extension Service and the National Committee on Boys and Girls Club Work. Some believed that 4-H was the exclusive domain of the National Committee, a perception that led to conflict. Worsening the conflict was how aggressively the National Committee sought out private donations to fund club

[69] Baker, 273.

[70] Ibid, 451.

[71] Ibid, 274.

[72] Ibid, 282.

work.[73] The national director of Extension at the time, Clyde W. Warburton, had expressed concern about the actions of the Committee as early as 1925. As historian Thomas Wessel described it, a lot of the tension arose due to "the lack of experience with a federal-state-county arrangement."[74] Throughout the 1920s and 1930s, conflict continuously arose, and it finally reached a boiling point in 1937. The conflict ended in 1939 when the Extension Service gained control of 4-H.[75] The timing was perfect. Going into World War II, the Extension Service and National Committee had some guidelines for how to navigate their relationship and work together for the war effort.

On the cusp of World War II, Noble was especially concerned about the future of general youth work in the United States. He noted that the Nazi German youth group, *Hitler Jugend*, was a powerful tool of indoctrination. Noble encouraged leaders in the United States to pay more attention to youth organizations such as 4-H. He believed that youth organizations were vital to retaining a democratic spirit within American youths.[76] During a September 1940 meeting in Wisconsin, Noble proposed a plan that would give several more million dollars to expand 4-H and rural youth work. By spring of 1941, he had a plan set in motion. With the aid of Hampton P. Fulmer, a South Carolinian in the House of Representatives, Noble managed to get House Resolution 4530, "4-H Club and Rural Youth Act," put in for congressional consideration. However, the bill lacked support from the federal Extension Service and the Extension

[73] Wessel, 50.

[74] Ibid, 51.

[75] Ibid.

[76] Ibid, 58.

Committee on Organization Policy (ECOP), the representative leadership and governing body of Extension.[77]

The lack of support came because if the act passed, Washington, rather than state and local Extension offices, could dictate how Extension funds were spent. HR 4530 was favored by the House Committee on Agriculture, and it also had support from the House Rules Committee. Sam Rayburn, then Speaker of the House, wrote to Noble on 3 December 1941 that the bill was on the calendar and soon up for consideration. However, four days later Pearl Harbor was bombed, and the bill received no further consideration.[78] All thoughts and effort were turned toward war mobilization.

[77] Association of Public and Land-Grant Universities. "Extension Committee on Organization and Policy." Cooperative Extension Service. [cited 7/18/2020]. https://www.aplu.org/members/commissions/food-environment-and-renewable-resources/board-on-agriculture-assembly/cooperative-extension-section/.

[78] Wessel, 58-59.

Chapter 2 - Wartime Changes to Extension and 4-H

In the introduction to the 1940 Agriculture Yearbook, *Farmers in a Changing World*, Secretary of Agriculture Claude R. Wickard told readers, "In a deeper sense, indeed, modern wars result from some of the very causes back of farm distress."[79] Many changes occurred rapidly in the United States, inside and outside of the agriculture sector as World War II drew more nations into the fray.

Before the United States entered the war, speeches were being made over the radio and at conferences about the role of youths and farmers during wartime. Wheeler McMillen, president of the National Farm Chemurgic Council, gave an address before the Seventh Annual Chemurgic Conference in Chicago, Illinois on 26 March 1941. Chemurgy was a branch of applied chemistry that dealt with preparing organic raw materials, especially from farm products, for industrial use. McMillen addressed the theme of the meeting, "Chemurgy in Defense—and Beyond." He held that it is important for chemurgists to reaffirm their patriotism to the United States that they hold dear and cherish. Not only do they reaffirm their patriotism, chemurgists

> want to keep our America. Living and dynamic, it is still in [the] process of creation...we want to keep on creating it. We know the way. The way is to produce. Production built the nation great, and only production can either preserve or advance our country. At this present interval the task of defense demands vastly increased domestic production in order that every military and civilian need may be safely and continuously supplied. Should the needless tragedy of war engulf our people, the ultimate effort in production will be desperately required throughout the conflict. The after-era following defense or war, whatever the eventual shape of the world, will present conditions from which the only rescue will be production balanced to create jobs as well as goods.[80]

Like much of the wartime literature produced by the USDA, Extension Service, 4-H, and other agricultural companies and organizations, patriotism and production went hand-in-hand. For farmers and rural youths, increasing production was one of the best ways to serve the United

[79] Claude Wickard, "Foreward," in *Farmers in a Changing World: The Yearbook of Agriculture 1940*, ed. Gove Hambidge (United States Government Printing Office, 1941), v.
[80] Wheeler McMillen, "We Want to Keep Our America" (speech, Seventh Annual Chemurgic Conference, Hotel Stevens, Chicago, Illinois, March 26, 1941).

States during the war. Extension and 4-H projects and objectives accordingly changed to encourage increased levels of production.

The Lend-Lease Act with Great Britain played a large role in driving earlier calls for increased production. By 5 March 1941, the USDA had received requests from the United Kingdom for $500 million of American farm products. The passage of the Lend-Lease Act on 11 March 1941 allowed the British to gain American products. The Act simultaneously made it clear that farmers would need to increase production.[81] All sectors of agriculture literature began to encourage farmers to increase their food production. Farmers and 4-Hers alike were also asked to plant their own gardens so more commercial goods could be put toward the war effort. On 27 March 1941, The *Okfuskee County News* in Oklahoma reported that the Lend-Lease Act passed 67 to 9 in the Senate, which provided Great Britain and the other Allies with "large quantities of warplanes, ships, tanks, guns and food."[82] After the bombing of Pearl Harbor, increased production goals and encouragement to produce began to take on patriotic connotations.

Secretary of Agriculture Claude R. Wickard established state and county defense (later war) boards which were headed by Agricultural Adjustment Act (AAA) personnel. The boards provided coordination among department agencies.[83] In his address concerning the agricultural production goals for 1942, Claude R. Wickard concluded that Americans "can't live in comfort, or in dignity in a world dominated by Hitler."[84] Wickard explained that the United States needed food stockpiles so that the American people had sufficient nutritional food and so starving

[81] Rasmussen, 108.

[82] *The Okfuskee County News* (Okemah, OK), 27 March 1941.

[83] Rasmussen, 108.

[84] Claude Wickard, "Food Will Win the War and Write the Peace" (speech, National Farm and Home Hour, San Francisco, California, September 8, 1941). http://www.ibiblio.org/pha/policy/1941/1941-09-08a.html.

populations in Europe could be fed. Wickard believed that stockpiled American food would aid the United States at future peace talks and "will greatly reinforce the American views on what arrangements to make a just and lasting peace."[85] As such, Wickard stressed in his address that Americans ought to increase consumption of leafy and green foods and other foods rich in vitamins and minerals. The AAA was tasked with visiting each farm across the nation and working out a plan with farmers. Wickard assured farmers that they were guaranteed protection from price collapses at the end of the emergency period.[86] *The Kansas City Star* on 21 July 1943 reported that wheat farmers were asked to increase production 26% over that of 1942, which amounted to 68 million acres. In Kansas, that raised the total acreage to 5 to 6 million acres. Additionally, all restrictions on planting and marketing wheat were removed.[87] Similar production goals appeared for multiple other crops, and farmers were also asked to increase their herds of livestock.

On 3 November 1941, Wickard made a speech over the National Broadcasting Company, on the National Radio Forum. His speech encouraged farmers to produce food as "[f]ood is just as much a part of our total war effort as is the raising of armies and the production of munitions. Food is one of our strongest weapons. The lack of food is one of Hitler's greatest weaknesses."[88] Wickard encouraged farmers not to worry about surpluses or what would happen with prices, as the USDA was taking measures to protect them and their incomes. Wickard placed food production and the wise use of it as "one of the best ways [he] know[s] to defend and protect democracy."[89]

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[85] Wickard, "Food Will Win the War and Write the Peace."

[86] Ibid.

[87] *Kansas City Star* (Kansas City, MO), 21 July 1943.

[88] Claude Wickard, "Food is Too Precious to Waste" (speech, National Radio Forum, November 3, 1941).

[89] Ibid.

Protecting farmers and their profits continued to be discussed after the United States entered the war. President Franklin D. Roosevelt's 7 September 1942 Fireside Chat addressed inflation and food prices. Roosevelt stated that he believed he understood the American farmer and knew that "they are as wholehearted in their patriotism as any other group. They have suffered from the constant fluctuations of farm prices...Nobody knows better than farmers the disastrous effects of wartime inflationary booms, and post-war deflationary panics."[90] Roosevelt went on to explain that he had sent suggestions to Congress for measures to stabilize the agricultural economy that would help ward off crashes or inflations in the post-war period. Production goals throughout the war were crafted to meet current needs and encourage farmers not to worry about the post-war period as measures had been taken to protect them.

Increased production was only useful if there was the manpower to bring in the harvest in a timely manner. In 1943, the War Food Administration was established within the USDA, and the Extension Service became a part of it.[91] Extension was responsible for all intrastate agriculture labor, including the Women's Land Army (WLA), and work with the WLA was primarily carried out by Extension home economic agents, who were typically female. The Extension Service was also responsible for the Victory Farm Volunteers (VFV), a program aimed toward high school and college students. VFV employed students during their summer vacations, and in some areas, summer vacations were adjusted to coincide with times when farmers needed the most help. A lot of the VFV's work was channeled through 4-H clubs, with many members joining the program.[92] Franklin Reck perhaps best describes the attitude 4-Hers

[90] Franklin D. Roosevelt, "Fireside Chat 22: On Inflation and Food Prices" (speech, September 7, 1942).

[91] Rasmussen, 109.

[92] Rasmussen, 110.

had to the war effort: "With their youth and idealism, club members were a potent force in unifying farm effort in support of the war."[93]

As with most other organizations and businesses, the draft took a significant amount of people from the 4-H program during World War II. Across the nation, 4-H lost 17,000 Extension agents, community leaders, and older 4-Hers.[94] This vacated space opened new opportunities for younger members to step up and have a larger role within their 4-H programs. This gap also presented the Extension Service with a new problem: the lack of agents. Though much of 4-H's support system was taken due to the draft, they were not without allies. There were nearly 1.5 million current members, 10 million former 4-H members, and 150,000 local leaders that the national program called upon.[95] Additionally, more than 620,000 volunteer Neighborhood Leaders aided Extension Service agents.[96] The draft led to a new era of 4-H, one where the players were different with new roles and responsibilities.

At the helm of the entire agricultural sector was the Secretary of Agriculture Claude Raymond Wickard, and the Extension Director was Milburn Lincoln Wilson, who took office in 1940.[97] Wickard, a graduate of Purdue University, became the Under Secretary of Agriculture on 1 March 1940 and quickly advanced to the position of Secretary of Agriculture on 5 September 1940. On 29 June 1945, Wickard was appointed as the Administer of the Rural Electrification Administration, a position he held until 1958.[98] Wilson was born on 23 October 1885 in Atlantic,

[93] Reck, 268.

[94] Warren Prawl. 1976. *Kansans' Right to Know: 108 Years of Extension Service*. Kansas State University. Cooperative Extension Service. Manhattan, Kan.: Kansas Cooperative Extension Service, 13.

[95] Reck, 268-9.

[96] Rasmussen, 109.

[97] Ibid.

[98] Baker, 451.

Iowa. He got his Bachelor of Science from Iowa State College and his Master of Science from the University of Wisconsin. He held the position of Assistant Secretary of Agriculture from 1934 to 1936. Wilson was then the Under Secretary of Agriculture from 1937 to 1940, after which he became the Director of Extension Work in 1940, a role he held until 1953.[99] Both men were extremely influential, but it was the farmers, Extension agents, and 4-Hers that saw the production goals to realization.

Extension agents from the USDA played a key role in 4-H's contribution to the war. To fill the gap within the agency created by the draft, the Extension Service temporarily lowered their educational requirements. Females had roles within Extension before the war, typically as home economic agents, and during the war, females filled more positions within Extension. In some counties, females were not only home economics agents but also agricultural ones. Though these changes were mostly temporary, they opened the door for future changes with what females were able to do in the Extension Service program.[100] In late 1941, the Victory Garden program was launched by the USDA and the Office of Defense Health and Welfare Services. Extension was given responsibility for rural gardens, expanding their wartime responsibilities. An estimated 15 million families planted Victory Gardens in 1942 and 20 million in 1943.[101] The Victory Garden program was mostly experienced in urban settings as many farmers and residents of small towns already planted a yearly garden.

A 1916 bulletin from Wisconsin aptly explains what the Extension Service believed the role of community was to fruitful farming and community growth: "Without some vigorous

[99] Ibid.

[100] Prawl, 13; Earl H. Teagarden. 1964. *History of the Kansas Extension Service from 1868 to 1964, Kansas State University* vol 1. Manhattan, KS: Kansas State University, 195.
[101] Rasmussen, 111.

circulating agency for the regular exchange of ideas and impulses, a neighborhood is, to say at least, in a state of undeveloped possibilities."[102] The bulletin included a drawing that was captioned "A community with a good community heart pumping ideas in and out is prepared against the evils of stagnation." In the drawing, community clubs are placed at the center of the "community heart" with multiple farms branching out from it, relying upon the heart.[103] Rural clubs were centered as the heart of any community, the base from which county, state, and national projects were based during the war [Figure 1].

4-H community leaders and members made up the majority of people working towards the goals of 4-H in their war efforts. An article in *The Charlotte Observer*, published in April 1943, explained how 4-H was adjusting to the war: "No fundamental changes were necessary in adjusting the club program to meet wartime needs. It only meant highlighting those activities already in the program, which would help to win the war; stressing the importance of all-out participation of our present club members in these activities; and expanding the organization to give every boy and girl of club age an opportunity to make his or her contribution."[104] 4-Hers who lived in rural areas continued to have a large role in the war effort, and the emerging class of city 4-Hers became an invaluable part of the program. The end of 1942 brought with it over 650,000 new 4-H members, pushing program membership over 1.5 million.[105] Regular club

[102] C.J. Galpin and D. W. Sawtelle. *Rural Clubs in Wisconsin.* Bulletin, 271. Madison, Wisconsin: Agricultural Experiment Station of the University of Wisconsin, August 1916, 4.

[103] Ibid, 5.

[104] "4-H Club Work Is Shifted From Peace To Wartime Basis," *The Charlotte Observer* (Charlotte, North Carolina), April 12, 1943.

[105] Rasmussen, 114.

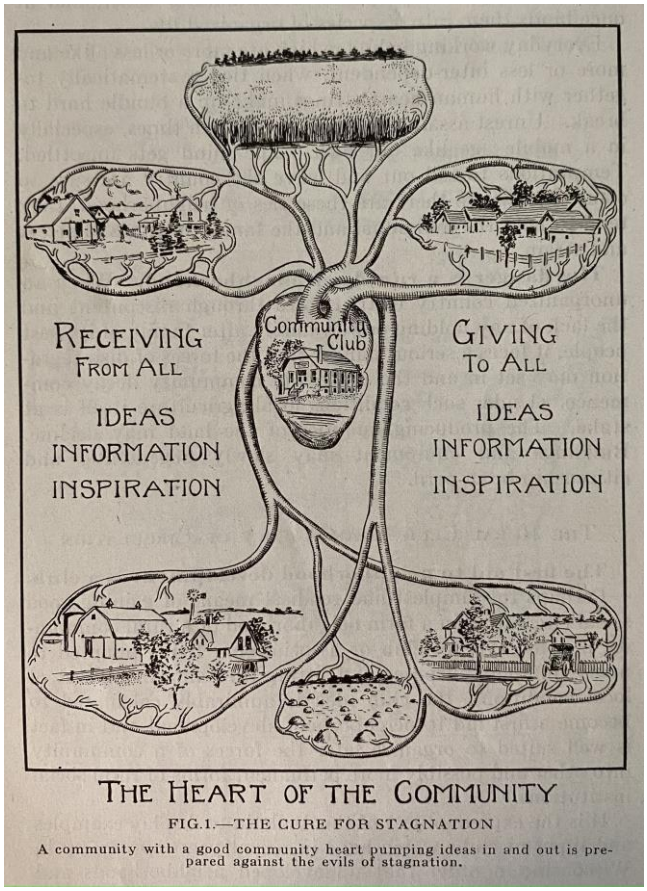

Figure 1 The Heart of the Community

community leaders existed, but for more efficient communication a new branch of community leaders was developed, called the Neighborhood Leaders. Leaders were chosen through the division of the townships, and their main role was to get information from the Extension Service to their neighbors.[106] Wartime programs and projects were extensively planned, starting from grassroot action at the county level all the way up to national plans. County agricultural committees helped to select township leaders, who in turn named Neighborhood Leaders to contact people in their area of the township.[107] This created a more efficient contact system that sent pertinent information tailored to local conditions. Previous 4-H members were also

[106] Teagarden, vol. 1, 196.

[107] McIntyre, 139.

important to the war effort. The process of being a 4-H'er helped to foster life skills that made for better-informed farmers, workers, and homemakers. The past two decades of 4-H farmers being taught valuable skills and techniques resulted in greater quantities of food and fiber produced during the war years.[108]

People and organizations who were not a part of the Extension Service or 4-H also provided aid. Non-4-H farmers that the 4-H program worked with were large supporters. Lists of farmers with specialties were compiled by Extension agents and those farmers were provided with accommodations to help boost their production levels.[109] This allowed farmers to better aim their efforts and get the most out of the equipment, supplies, and cropland that they already owned. Due to 4-H's national reach of resources and with personal reasons to see food production rise, war-oriented programs found an eager ally in the 4-H program. Like most every other American, 4-Hers wanted their Extension agents, family, and friends brought home as soon as possible. As such, they were eager to help the nation any way that they were able, and Extension provided the tools for them to amplify their work. The broad reach of 4-H allowed war-oriented programs to have larger spans of influence, reaching schools and other places where they might not normally have been able to. Additionally, Extension combined their educational efforts with other organizations to create a more cohesive and comprehensive education for youth, as discussed more in-depth in the next chapter.

The national 4-H program was also supported by several congressmen. Early efforts to gain the Extension Service, specifically the national 4-H program, more resources and funds were futile. Congressman Hampton P. Fulmer of South Carolina was the Chairman of the House

[108] Wessel, 59.

[109] Teagarden, vol.1, 195.

Committee on Agriculture in 1940. He was a vital asset in the fight to gain funding for 4-H before and during the war.[110] Guy L. Noble was concerned about the future of general youth work. Noble recognized that the Nazi youth program, *Hitler Jugend*, was a power indoctrination tool and he urged the United States to pay more attention to their own youth programs. He was of course most concerned about 4-H, which drove him to craft a plan to provide more funding for rural youth work. In September of 1940, Noble proposed his plan in Wisconsin. His plan called for several more million dollars to expand 4-H and rural youth work. By 1941, he had a plan set in motion. With the aid of Fulmer, Noble got H.R. 4530, "4-H Club and Rural Youth Act," slated for congressional consideration. Notably absent was support from the federal Extension Service and the Extension Committee on Organization and Policy (ECOP). ECOP is the representative leadership and governing body of Extension and it provides guidance on issues that directly impact the Extension Service.[111] ECOP holds to four core themes:

1. Build partnerships and acquire resources
2. Increase strategic marketing and communications
3. Enhance leadership and professional development
4. Strengthen organizational functioning.[112]

The lack of support from ECOP stemmed from the potential change of who dictated how funds would be spent. In Noble's plan, now Washington, DC would dictate how funds were spent rather than the decision lying at the state and local levels. H.R. 4530 was favored by the House Committee on Agriculture, and it had support from the House Rules Committee. Noble received

[110] Wessel, 58.

[111] Cooperative Extension. "ECOP Resources." *Association of Public & Land-Grant Universities*. [cited 7/26/2020].https://www.aplu.org/members/commissions/food-environment-and-renewable-resources/board-on-agriculture-assembly/cooperative-extension-section/ecop-members/.

[112] Association of Public and Land-Grant Universities. "Extension Committee on Organization and Policy." *Cooperative Extension Service*. [cited 7/18/2020]. https://www.aplu.org/members/commissions/food-environment-and-renewable-resources/board-on-agriculture-assembly/cooperative-extension-section/.

confirmation on 3 December 1941 from Speaker of the House Sam Rayburn that the bill was on the Union Calendar for consideration. However, four days later, Pearl Harbor was bombed by the Japanese, and the bill received no further consideration.[113]

4-H turned its efforts toward the war effort, but the National Committee and others continued to seek out additional funds for the program. Fulmer was an eager advocate of House Joint Resolution 75 in 1943. The House passed a bill authorizing Congress to give 4-H $2,500,000 for clubs to create a pool of labor to replace those lost to military service. When the bill went to the Senate it failed because, at that time, congressmen did not think that the extra funding was warranted. The Bureau of Budget, an ally essential to the bill's passage, refused to endorse the bill. When Fulmer tried again in 1944, the bill did not get out of committee.[114] In October of 1944, Fulmer unexpectedly died, and Congressman John W. Flannagan of Virginia took over as chairman of the House Committee on Agriculture. Flannagan's aid proved to be invaluable in the passage of a funding bill in 1945.[115] However, as the Extension Service was a part of the War Food Administration, they received a sum of $2,035,000 for emergency war funds in 1944.[116] These funds were used to better educate and reach out to the rural people in the Extension's war efforts campaigns. The same year Congress gave $4,070,000 to Extension for the same efforts.[117] No specific funds were set aside for 4-H with the emergency funds granted to the Extension Service.

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[113] Wessel, 58-59.

[114] Wessel, 61.

[115] Ibid, 62.

[116] War Food Administration Extension Service. *National Report of County Agriculture Agent Work: July 1, 1943-June 30, 1944*. Extension Service Circular; 418. Washington, D.C.: Extension Service, Dept. of Agriculture, July 1944, 2-3.

[117] Ibid.

After the war, the Bankhead-Flannagan Act of 1945 increased funding for 4-H from the national government.[118] The language of the Bankhead-Flannagan Act was more in keeping with the goals of Extension, which garnered greater support for the bill. Noble was unable to muster majority support from ECOP in April 1945. However, despite the lack of support from them, the bill passed.[119] The bill did not exclusively provide funding to the 4-H program, unlike the failed 1943 House Joint Resolution 75 bill. The Bankhead-Flannagan Act was the first bill that contained language that identified 4-H as one of the principal responsibilities of the Extension Service. Though funds were not directly identified as going to 4-H, the program saw an increase in funding and resources through the Act.[120] 4-H continued to see an increase in support and funding through the Extension Service.

Wartime literature published by the USDA, Extension Service, and other agricultural organizations and businesses provided information on saving and conserving resources. This literature also encouraged farmers and 4-Hers to more efficiently produce crops and raise healthier livestock. *Five Acres and Independence*, published in 1943, displays that through the publishing of the literature they emphasized the importance of conservation. This appears at the beginning of the 18th edition of the book:

> THIS IS A WARTIME BOOK
> In accordance with the regulations of the War Production Board, the format of this book has been designed to save paper and other materials essential to the war effort. Although this volume is smaller in bulk, has narrower margins, and other features not found in peacetime books, its contents are complete and unabridged in every respect.[121]

[118] Wessel, 62.

[119] Ibid.

[120] Ibid; Prawl, 18.

[121] M. G. Kains, *Five Acres and Independence: A Practical Guide to the Selection and Management of the Small Farm* (New York: Greenberg, 1943), iv.

The 1940 Agriculture Yearbook, *Farmers in a Changing World*, also reflects the need for conservation and innovation in the face of wartime shortages. In the postscript to the introduction, Secretary of Agriculture, Claude R. Wickard writes that

> Since the preparation during 1939 of most of the material in this book, the international situation has changed swiftly and tragically. The thoughts and lives of people all over the world have had to be reoriented to these changes. Unquestionably the turn of world events will profoundly affect the problems of agriculture in the United States in ways not entirely predictable. The reader should keep this in mind in everything that follows.
> Yet the underlying theme of the book—the necessity in the modern world for constant and adequate adjustment to change—is powerfully emphasized by these recent events. The lesson should be well learned by a generation that has seen within half a lifetime the two greatest wars and the greatest depression as well as many of the greatest scientific advances and political upheavals in all history. Furthermore, the fundamental problems of our agriculture are not likely to be lessened by the changing international situation. They are more likely to be intensified, and there will be more need than ever to meet them with courage and intelligence in order that we may strengthen our country to the utmost.[122]

How the Extension Service, 4-H, and other agricultural organizations and businesses encouraged conservation of supplies will be discussed further in-depth in the next two chapters. Campaigns and educational programs targeted at farmers and 4-Hers for the conservation of farm materials—including seeds, mechanical parts, and farm equipment—was one of the many tools used to instill certain values within the rural population.

Music was one of the tools that was used to encourage a specific set of values in 4-Hers from a young age since songs were sung at many 4-H events, such as 4-H camp and ceremonies. In the introduction to a songbook called *Songs for Early Childhood at Church and Home* (1946), the editor of the book, W. L. Jenkins, explained, "Music is one of the most important experiences for young children, for it can contribute so much to their lives. It is an effective way of communicating ideas and feelings...The use of music adds pleasure to associated experiences, and since learning that occurs in a pleasant setting tends to be more complete and lasting, music

[122] Yearbook Committee, "A Necessary Postscript," in *Farmers in a Changing World: The Yearbook of Agriculture 1940*, ed. Gove Hambidge (United States Government Printing Office, 1941), xi.

is a valuable aid to learning."[123] According to this line of thinking, youths would associate the good feelings evoked by the music with the values 4-H was teaching them, and the youths would internalize the message. 4-Hers had a body of musical literature created just for them, but they also sang many traditional folk songs, popular tunes of the day, and Christian music. This is evident in the songs that made it into the national songbooks. Many of the songs appearing in wartime song books included a variety of patriotic songs and working songs meant to uplift the spirits of 4-Hers. Sending children to 4-H camp was another tool to uplift the spirits of children and songs aided the lessons 4-Hers were meant to learn at camp.

As the war came to a close, music became a tool to foster the idea of global connection. This was the goal of *Songs for Early Childhood at Church and Home*. The author explains, "Music is truly a universal language. Because of this, the songs selected represent different cultures...the music of other peoples becomes for them a vehicle for the expression of their thoughts and feelings."[124] The 1945 National 4-H Club Song Book did not yet reflect this change as it contained mostly the same songs as the 1938 book. These songbooks included many patriotic songs, which were placed at the front of the book, implying the strong value the editors placed on these songs. They would be some of the first songs that the 4-Her saw when they opened the book, which showcased their importance. The 1954 song book reflects the global minded change that appears in *Songs for Early Childhood at Church and Home* after World War II. The 1954 National 4-H Club Song Book contains many of the same songs as previous editions, with two new peace-minded songs. The first is "Dona Nobis Pacem (Give to Us Peace)," which is a three-part round song repeating the Latin song title. The second is "Study

[123] W. L. Jenkins, ed., *Songs for Early Childhood at Church and Home* (Philadelphia, PA: The Westminster Press, 1958), 5.

[124] Idid, 6.

War No More," arranged by Phil V.S. Lindsley. The second verse of this song says that they are "Going to lay down my sword an' shield, Down by the river side" and the chorus repeats that "I ain't goin't [sic] study war no more."[125] If the feelings of the songs were meant to encourage youths to follow the values of the songs, then patriotism and peace began to be two values 4-Hers were encouraged to internalize.

Ceremonies were an important part of the 4-H experience for youths. The Candle Lighting Ceremony was used at the closing of a significant 4-H event, and it could be held inside or outside. The ceremony was typically used on the last night of camp or at the end of an evening event to impress upon the participants the importance of the event and the ideals those in 4-H should hold themselves to.[126] The candle lighting was used to ceremonially pass the talents of an older 4-Her to a younger one. The Candle Lighting Ceremony remains a part of a body of 4-H ceremonies, also including the Initiation Ceremony and the Sunset Ceremony.[127]

The *Green Bay Press-Gazette* in Wisconsin reported on 21 July 1941 that the Brown County superintendent of schools talked about citizenship and the meaning of being an American. The event also included the Candle Lighting Ceremony, where 4-Hers carried lit candles through the camp and placed them on the lake, where they burned for several minutes.[128] In the aftermath of the Pearl Harbor bombing, "[a] flood of citizenship material issued from national and state Extension offices. In discussions, pageants, and ceremonies, in solemn pledges

[125] National Committee on Boys and Girls Club Work, *National 4-H Club Song Book* (Chicago, IL: National 4-H Service Committee, 1954), 54-55.

[126] Lignell, Sandra. "Candle Lighting Ceremony." *University of Illinois Extension*. 2020. [cited 7/26/2020]. https://web.extension.illinois.edu/ceremonies/candlelighting.cfm#:~:text=The%20candle%20lighting%20ceremony%20is,4%2DH%20work%20should%20stand.

[127] Larry L. Krug, and Rick Moses. "Wartime 4-H Support – World War II." *National 4-H History Preservation Program*. 2020. [cited 8/3/2020]. https://4-hhistorypreservation.com/History/WW-II_Support/.

[128] *Green Bay Press-Gazette* (Green Bay, WI), 21 July 1941.

of allegiance, 4-H Clubs everywhere pondered their coming duties as free citizens in a democracy."[129] The first 4-H Citizenship Ceremonial was held at the National 4-H Camp in 1939. During the ceremony, parts of the Declaration of Independence were quoted, and 4-Hers pledged to uphold the duties of an American citizen.[130] Ceremonies were meant to elicit good feelings in 4-Hers in the same way as music. Positive feelings about music and ceremonies were intended to translate into good feelings for the values that leaders discussed during the event or the children sang about in song.

The post-war structure of Extension and 4-H reflected the changes that took place within the organizations during the war. Like all other fighting men coming back from the war, the 4-Hers and extension agents came back to a different America and a different 4-H program. Extension agents returned to their posts, displacing those that had temporarily taken their jobs. The war had brought people from farms into cities and the Extension Service followed, increasing the scope of the extension and 4-H influence.[131] The war forced the Extension Service and the 4-H program to change at all levels. The aftermath of the war forced 4-H councils and committees to think about their future and the programs they wanted to pursue. A special national committee met after the war to study the Extension Service and determine how it could best meet the problems of the future. The committee was also set to develop a set of guidelines that illustrated how 4-Hers strove to keep the peace that they helped to create.[132] The council first met in 1946, and two years later they submitted a report that found "Extension's goals should be to maximize efforts on education and to guard against the tendency of becoming largely an

[129] Reck, 267.

[130] Ibid, 268.

[131] Prawl, 18.

[132] Ibid.

emergency or administrative agency...Extension should concentrate on the development of a far greater degree of local thinking and planning."[133] The Research and Marketing Act of 1946 was approved by the President on 14 August 1946. The Act authorized an expansion of the existing research divisions, and it provided for large-scale marketing research. This included contract research and the establishment of a system of committees to advise on the research. Additionally, the Act authorized the Secretary of Agriculture to establish a marketing agency.[134] The outcome of the Act was to greatly expand the marketing done by Extension in the early 1950s.[135]

Food projects remained an important part of the 4-H program, and nutrition continued to be especially emphasized. The nutrition and food programs expanded with changes in technology and the increasing availability of electricity in rural areas. Through rural electrification, preserving food through freezing became widely available. Initiatives such as the tractor program helped farms become more mechanized. Former 4-H members and leaders returned to the war to find that their family farms were not only larger, but they were flourishing from the effects of the new mechanized programs.[136] Practices learned during the war stuck with the 4-Hers, and many of the projects created during the war remained a part of the 4-H program.

However, changes were not limited to the United States. Similar to the music encouraged in the post-war period, 4-H began a process of globalization. After the war, the United States turned attention to the "global countryside," and the USDA held interest in promoting youth programs abroad based on the 4-H model. Claiming that it helped with postwar reconstruction, several countries founded 4-H organizations. 4-H followed where the United States military

[133] Baker, 347.

[134] Ibid, 341.

[135] Baker, 400.

[136] Prawl, 18.

went, and by the 1960s, international 4-H was growing strong.[137] In 2021, 4-H reaches more than 7 million youths in fifty countries around the globe. 4-H continues its plans to grow 4-H and double the number of youths it reaches.[138]

Overall, the program left World War II stronger than it was before the war, and the effects the war had on 4-H were long-lasting in both traditional and practical matters at home and abroad. These are many of the broad changes that occurred during and immediately after World War II.

[137] Rosenberg, 185.

[138] National 4-H Program. "4-H Global Network." *4-H*. 2018. (accessed 19 August 2019). https://4-h.org/about/global-network/.

Chapter 3 - Education

In *Farmers in a Changing World*, the 1940 Agriculture Yearbook, an article by Howard R. Tolley demonstrates that many academics believed in the importance of education for rural youths. Tolley believed that the nation could not prosper if agriculture did not prosper. He maintained the opinion that "rural young people, whether they are to remain on farms or to migrate to the cities, where they help to maintain the urban population, should be brought up in homes in which at least a minimum standard of living prevails and that they should be properly educated" is a commonly held belief.[139] Another article in *Farmers in a Changing World* by Edwin R. Embree was on the importance of education. Embree maintained that "[i]f education is to be of real service to farm life and to rural children, we must cease to be awed by traditional subjects and procedures and build our schools on the essential needs of the country side and the country children."[140] Providing rural children with a good education is important to cities as well as rural communities because many rural children will one day become citizens of Chicago, New York, and other large metropolitan centers. Furthermore, Embree went on, creating a standard of quality education in rural communities can provide a model for schools across the United States. Embree believed that reading, writing, and arithmetic must be the basis of education, with the processes of nature and handcrafts providing important supplements to their education. According to this model, children need to be given practical experience so that a school is a place for learning rather than just reciting material.[141] Embree's vision of education was not baseless,

[139] Howard R. Tolley. "Some Essentials of a Good Agricultural Policy,," in *Farmers in a Changing World: The Yearbook of Agriculture 1940*, ed. Gove Hambidge (United States Government Printing Office, 1941), 1176.
[140] Edwin R. Embree, "Education for Rural Life," in *Farmers in a Changing World: The Yearbook of Agriculture 1940*, ed. Gove Hambidge (United States Government Printing Office, 1941), 1033-34.
[141] Ibid, 1036-40.

as many textbooks from rural states in the 1910s provided practical experiments and simple research projects for teachers to have students perform.

Embree continued to outline the importance of schools cooperating with other organizations. He held that "[o]f course small children cannot with impunity undertake to change the habits of their parents. But the school, working in unison with the agricultural extension teachers and the farm agents, can help both parents and children to follow better practice on the basis of modern knowledge."[142]

The argument was that schools should become a focal point for cooperation among government agencies, such as public health, home demonstration, farm extension, and library service. Coordination between schools and these organizations would give them all a larger audience, help them convey clearer messages, and boost rural development. It follows that interwar literature came from a variety of sources, including school textbooks and Extension bulletins. Interwar literature taught farmers and 4-Hers how to increase crop yields and take better care of their farm and animals. School textbooks and Extension literature from the interwar period gave many farmers and 4-Hers valuable information that they could take with them into the war years. Additionally, wartime literature followed many of the same themes. A 1931 Farmer's Bulletin noted that "[i]n a sense, farming might be called a warfare against weeds."[143] This was not the last time that agriculture literature likened farming to warfare in educational and campaign literature.

The Extension Service recognized the value of allowing state and county 4-H programs to individualize the war efforts to suit them. J.E. Carrigan, an Extension agent, in a report wrote

[142] Embree, 1041.

[143] H. R. Cox. *Weeds: How to Control Them*. Farmers' Bulletin, 660. Washington, D.C.: U.S. Department of Agriculture, 1931, 1.

that "…the programs may be adjusted locally and the practices carried out through it be as sound as possible. This is good Extension."[144] He continued on about the importance of the Extension Service, recognizing that their role in the war was to act as an informational service concerning good agricultural practices. This is a sentiment that the Extension Service embodied throughout the war in their efforts to get information out to the people in rural areas.[145] In 1943, Neighborhood Leaders reported having reached 88,269 families and having held over 5,000 meetings where they discussed food production and preservation.[146] Extension agents gave valuable information to the leaders through a monthly newsletter called "The Neighborhood Leader." Along with holding community meetings, they made personal visits to families who were too remotely located to make it to a community meeting, and they utilized phone lines to save gasoline. Leaders oversaw responsibilities concerning Victory Gardens, transporting farm products to market, producing war crops, securing labor and custom equipment for harvesting crops, and fire prevention to help preserve crops yields.[147]

4-H created new projects and programs to counteract the changes that the war and new technology brought. 4-H also integrated existing programs into the larger war mobilization, such as the citizenship program. The citizenship program was well established before World War II, and once the United States entered the war, the goal of the program was changed to fit new wartime needs. 4-H leaders created the citizenship program to teach youths how to solve

[144] J.E. Carrigan, and United States Extension Service. Extension's Job in the War. Extension Service Circular; 381. Washington, D.C.: Extension Service, Dept. of Agriculture, March 1942, 3.

[145] Ibid.

[146] Earl H. Teagarden. 1964. *History of the Kansas Extension Service from 1868 to 1964, Kansas State University* vol 2. Manhattan, KS: Kansas State University, 422.

[147] Teagarden, vol. 2, 422; Teagarden vol.1, 196.

problems in their community and how to take action in a positive way. The federal government utilized club work that had had a decade to develop to mobilize 4-H's efforts more efficiently.[148]

Further, 4-H created guideposts for programs to better assist the war effort. The guideposts were developed by a committee of state and federal leaders appointed by M.L. Wilson. Their list was comprehensive, with two of their goals directly related to the food effort. Number five stated that 4-H would work towards "Producing food and fiber for home and market," and number seven committed 4-H to "Conserving Nature's resources for security and happiness."[149] Further, the federal Extension office created ten wartime "musts" in 1943. They acted as guideposts for Extension agents and their body of supporters:

1. We must raise and conserve more food needed for our armed forces, Allies, and civilians.
2. We must conserve essential materials and equipment.
3. We must participate in all wartime activities.
4. We must be ready for more rationing.
5. We must manage our money wisely and buy only what is absolutely needed.
6. We must buy more war stamps and bonds.
7. We must carry on as never before if mother is needed to do farm work or is employed.
8. We must assume more farm labor responsibilities.
9. We must collect more scrap.
10. We must ask ourselves before deciding what to do, "Will it contribute to winning the war?"[150]

They helped guide what information was distributed to farmers and members of rural communities.

4-Hers eagerly set wartime goals and joined local and national campaigns. Pamphlets sent out by the Extension Service gave 4-Hers a way to commit to their projects and show what they were working towards that year. The pamphlets contained notices urging 4-Hers to choose

[148] Gabriel N. Rosenberg. 2016. *The 4-H Harvest: Sexuality and the State in Rural America*. Philadelphia, University of Pennsylvania Press, 165.

[149] Reck, 275.

[150] Larry L. Krug and Rick Moses.

their projects wisely and to conserve as much food as possible.[151] The National Mobilization Week for Farm Youth 1942 urged 4-Hers to take on projects only they were able to complete. Though it changed in its form over the following decades, the mobilization week became a staple of the 4-H program. 4-Hers in the twenty-first century still practice a national 4-H week every year where they show off their projects and advertise their clubs to the local community. During the Mobilization Week in 1944, Franklin Delano Roosevelt wrote a letter addressed to the 4-H program: "For this year more than ever, members of the 4-H Clubs will be among the shock troops on the food production front to give that extra impetus to the war effort so essential to ultimate victory."[152] It was a call to increase the amount of food that was being produced. Roosevelt asked the 4-H program to put in a significant amount of effort to keep the soldiers fed.

One of the ways 4-H members increased their productivity was by following the instructions set by the nutrition program. During the war years, new information about nutrition from medical doctors became available. In 1942, medical doctors knew that soldiers were not able to survive on hardtack and salted meat alone. Commercially produced bread was mandated to be enriched as a wartime measure, so all bread going to the troops was enriched with ingredients other than the basic flour, water, salt, and yeast to provide extra nutrients. An article in the March 1945 Neighborhood Leader explained that enriched commercial bread "is a program that has been undertaken as a step in improving...national health."[153] Soldiers need vitamins from fruits and vegetables to stay in top form. Because of this, the field rations system

[151] W. Aiton and United States Extension Service. *Men and Women of Tomorrow: Progress and Achievements of the 4-H Clubs of America.* Extension Service Circular; 433. Washington, D.C.: Extension Service, Dept. of Agriculture, September 1945, 2; North Carolina Agricultural Extension Service, "Join the 4H Club in the Food for Freedom Fight", 1944. Special Collections Research Center, North Carolina State University Libraries.

[152] Reck, 270.

[153] "Flour and Bread." *The Neighborhood Leader*, March 1945, 2.

was developed with four different kinds: A Rations, B Rations, C Rations, and D Rations. A Rations were fresh food that was served in the mess halls, and B Rations were canned food. C Rations was for combat, and the meals were packaged with a day's worth of food for a single soldier. D Rations were provided to the soldiers as emergency bars that they ate when there was no other available food source. K Rations were later developed to give soldiers 3,726 calories but with the added benefit of only weighing 33 ounces.[154]

A strong nutrition program was emphasized not only for the men in the armed services, but for civilians as well. The Extension Service created the new position of nutrition agents because of the emerging information about nutrition. These agents were meant to create and spread the idea of nutritional plans for people on the home front. Nutrition agents were concerned with making sure that people were still getting all the vitamins that they needed even on the reduced wartime rations.[155] The Extension Service provided 4-Hers and their families with information from food nutrition to better farming practices. Home economic and nutrition specialists used the Neighborhood Leaders to spread their information to a broader audience. The agents were concerned with making sure that homemakers and schools were thinking about smart and efficient wartime meals. Contemporary literature emphasized healthy living, home gardens, canning, and preserving.[156] The USDA and Extension Service produced literature for distribution that addressed these concerns.

In the foreword of the 1942 agricultural yearbook, *Keeping Livestock Healthy*, Secretary of Agriculture Claude R. Wickard addressed the war situation. He told farmers that where "Keep

[154] David Walbert. "Food for Fighters." North Carolina Digital History in UNC School of Education. (accessed October 12, 2016). http://www.learnnc.org/lp/editions/nchist-worldwar/5900.

[155] Teagarden vol. 2, 421.

[156] Ibid.

'Em Flying" was a slogan for the general war effort, farmers had their own slogan: "Keep 'Em Healthy." Wickard wrote that "applying that slogan to both human beings and animals in the crisis that faces us today is a patriotic service. I hope this guidebook to animal health, the 1942 Yearbook of Agriculture, will be a contribution to that end."[157] Before each section of the book, the USDA included the same blurb about the impact of war on the printing of the book. It reads as following:

> At the time this book went to press, the drugs and other materials mentioned in various articles—chiefly as disinfectants, insecticides, and anthelmintics— were still available for veterinary and medical use. Under war conditions, however, it is possible that some of these materials may become scarce or unavailable. In that case, the reader should obtain professional advice from the United States Department of Agriculture, the state experiment station, a local veterinarian, or the county agent as to available substitutes.[158]

In all their wartime literature, the USDA and Extension emphasized contacting local agents when needed material was scarce and they needed a substitute. It was important for everyone involved in gardening and farming not to substitute material, especially medicines for livestock, without consulting a professional. To use untested substitutes without the proper knowledge and training could lead to harmful, even deadly, results.

Interwar literature provided information that was relevant to wartime propaganda and fit the wartime narrative being pushed by the USDA and Extension Service. A 1936 school textbook told children that maintaining their personal well-being and making sure others remained healthy were a part of being a good citizen. This was especially important, since "[t]he carelessness of a single person may endanger the health or life of many others. Each has a

[157] Claude Wickard, "Foreward: Keep 'Em Healthy!," in *Keeping Livestock Healthy: The Yearbook of Agriculture 1942*, ed. Gove Hambidge (United States Government Printing Office, 1942), vi.
[158] Yearbook Committee, *Keeping Livestock Healthy: The Yearbook of Agriculture 1942*, ed. Gove Hambidge (United States Government Printing Office, 1942), 108.

responsibility for all."[159] That responsibility extended awareness to all of their actions, from food handling to ensure their own personal health.

Nutrition was an important part of gardening for 4-Hers. A club bulletin from 1945 informed 4-Hers that "planting a garden also enables us to make certain that members of our family have plenty of healthful, garden-fresh vegetables at all times during the spring, summer and fall."[160] To achieve this, Extension agents told youths to plant vegetables that their family would like and eat. However, to improve the variety of food that the gardener's family consumes, "it would be well to plant one or more new kinds [of vegetables] each year for your family to learn to like."[161] The same theme appeared in a baking project bulletin. The bulletin included recipes and instructions on how to organize baking practice to get the best results. The bulletin explains that "[t]he purpose of practicing the making and baking of bread is to give the club member the ability to make a light, wholesome, and digestible product."[162] Similar sentiment ran throughout the bulletin for the other recipes.

Gardening literature was produced in abundance during both the interwar and war years. A 1919 textbook provided students information about vegetable gardening. The textbook emphasized homegrown food since it was of better quality and was a healthy and engaging activity for the whole family. Students were advised that "more gardens fail because of improper preparation of the soil than any other cause."[163] Garden plots produce better crops when they are

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[159] Charles P. Emerson and George Herbert Betts, *Living at Our Best Book Two* (Topeka, KS: The State of Kansas, 1937), 177.

[160] Kenneth Ousterhout. *4-H Vegetable Gardener*. 4-H Club Bulletin, 52. East Lansing, MI: Michigan State College Cooperative Extension Service, 1955, 3.

[161] Ibid, 9.

[162] Olga Bird. *4-H Club Baking Project*. Club Bulletin, 45. East Lansing, MI: Michigan State College Extension Division, 1941, 5.

[163] Call and Kent, 405.

plowed in the fall to let insects be exposed to frost and if the gardener liberally spreads manure across the plot before plowing once more. However, certain parts of the country have harsh winter conditions where it is better to leave the brush on top of the soil to provide cover and prevent erosion over the winter months. Additionally, the garden ought to be planned to yield the most product with minimal labor and so that the soil is always occupied by a crop during the growing seasons.[164]

In the prewar years, the Extension Service provided multiple leaflets and circulars on gardening. Several of those circulars were edited and reprinted during World War II in addition to the new literature that Extension produced. In late 1941, the USDA and the Office of Defense Health and Welfare Services launched the Victory Garden program. A great deal of gardening information, specifically about Victory Gardens, was produced during the war years. The Extension Service was responsible for rural gardens.[165] Leaflet number 203, published in 1943, provided an in-depth outline of common diseases and pests that plague vegetables and what vegetable varieties were resistant to them. As the leaflet noted, "Home vegetable gardens, which add so much to better family living, would usually be easier to maintain if it were not for the ravages of plant diseases and insect pests."[166]

USDA publication number 483, from 1943, addressed inexperienced gardeners contemplating Victory Gardens. "Beginners," the publication explained, "who are able to make a vegetable garden are more likely to succeed if they confine their efforts to a few staple and productive kinds of crops, such as those mentioned in the following pages."[167] Vegetable

[164] Ibid, 405-6.
[165] Rasmussen, 110.
[166] R.J. Haskell and V. R. Boswell. *Disease-Resistant Varieties of Vegetables for the Home Garden*. Leaflet, 203. Washington, D.C.: U.S. Department of Agriculture, 1943, 2.
[167] Victor R. Boswell. *Victory Gardens*. Miscellaneous Publication, 483. Washington, D.C.: U.S. Department of Agriculture, 1943, 2.

production and consumption were deemed important because the American diet was lacking in vitamins and minerals. Victory Gardens would allow most of the country's agricultural resources to go to the military and the Lend-Lease program. Following common pleas found in most farming resources, the pamphlet urged gardeners not to waste products, as "[u]nusual demands are being made on domestic supplies of vegetable seeds and fertilizers. Do not waste them. Tools are scarce. Take good care of them."[168]

Everyone, not just farmers, was encouraged to plant a Victory Garden. The gardeners were encouraged to plant their gardens near home because distance created neglect, and "[w]artime restrictions on travel and on the use of automobiles will keep people at home more and give them more time for gardening."[169] The publication also emphasized the need to grow foods that the household would actually consume, otherwise it was a waste of seed and of the gardener's effort and time, since Victory Gardens were meant to provide fresh food for their family. So household produce preferences and local climate were critical in choosing what to plant, but "[t]he green leafy vegetables...are of greatest importance, and one or another of them should be available from early spring onward to severe freezing weather."[170]

The publication goes on to advise the beginner gardener on care and upkeep of the garden. Those who lived in cities were warned that while they could grow a garden, it would need to be small and they could not expect high yields from their crop. Additionally, the publication suggested picking crops that did not require a lot of space. For instance, sweet potatoes and corn are good energy foods, but since they require a large space to grow, they were

[168] Boswell,2.

[169] Ibid, 5.

[170] Ibid, 6.

impractical for small garden plots.[171] To enhance quality and size of yield, the publication advised Victory Gardeners to work about a bushel of "[w]ell-rotted leafmold, horse manure, or cow manure, or other decayed organic matter" into the soil per twenty-five square feet or about twenty tons per acre.[172] The publication further advised keeping commercial fertilizer from contact with seeds and avoiding over-seeding, which would necessitate later pruning. Continuing the comprehensive guide, the publication advised gardeners to weed their garden and to mulch between rows of plants. When it came to watering their garden, they should not lightly soak the soil but instead "the garden should be thoroughly and deeply soaked, as by a fairly heavy rain, and watered again only when the soil shows signs of becoming dry."[173] For further information, gardeners were directed toward other USDA and Extension publications and to their local Extension office.

The literature provided to non-4-Hers and 4-Hers alike was mostly identical. 4-H Club Bulletin 52 was first published in 1945 to teach 4-Hers how to create and maintain a good garden when production was incredibly important. The bulletin went through additional publications in the immediate postwar years, demonstrating how important Extension held the contents of the bulletin of ground as possible.[174] Gardeners should "[w]ait at least two years before planting gardens on newly broken sod land. If this is not possible, hand pick the grubs while preparing the soil" to make sure the plot is as insect free as possible.[175] Rotating where the garden is planted

[171] Boswell, 6.

[172] Ibid, 12.

[173] Ibid, 15.

[174] Ousterhout, 5-6.

[175] Ibid, 20.

and how the crop types were placed helped avoid plant diseases, by enabling crops to leave their unneeded nutrients behind and so enhance the soil for a different crop the next year.[176]

Gardeners would be best off if they first created a garden plan. A good garden plan would include a map of where specific crops were to be planted over the course of the growing season, so as to maximize the number of crops that could be grown between spring and fall. A garden plan would outline when crops were to be planted in the garden, since early harvested crops left an open part of the garden where another crop could be planted.[177] Gardeners should plant quick-growing vegetables alongside slower growing ones to make weeding the garden easier. Weeds need to be pulled as soon as they can be identified apart from the vegetables to prevent their spread.[178]

A garden plan might also include the use of hotbeds and cold frames, which are still used by gardeners in the twenty-first century. Hotbeds and cold frames allow gardeners to get an early start on their crops and to extend the growing season in autumn. In structure, hotbeds and cold frames are identical, and the only difference is their source of heat. Cold frames rely on only the sun to supply the heat, whereas a hotbed is supplemented by another source.[179] A practical advantage of hotbeds and cold frames is that gardeners can "propagate a personal stock of favorite plants and thus be sure" that the seed produced a desirable crop.[180] Cold frames are

[176] Ousterhout, 20.

[177] Ibid, 8.

[178] Ibid, 16.

[179] Michael N. Dana and B. Rosie Lerner. *Hotbeds and Cold Frames*. General Horticulture, HO-53-W. West Lafayette, IN: Purdue University Cooperative Extension Service, 2005, 1. https://ag.purdue.edu/hla/pubs/HO/HO-53.pdf.

[180] Kains, 137.

especially practical for planting plants that are slower-rooting.[181] Gardeners were advised to locate the hotbed or cold frame close to the house so that it was easily accessible for frequent attention. Hotbeds and cold frames located near the farm house also had the advantage of being in a well-drained space that was likely safe from flooding, assuming the house was built in a location secure from flood risk.[182] Manure was commonly used in hotbeds, so the bulletin contained a list of substitutes for farmers with limited access to manure. However, manure could be obtained in dried, pulverized form through garden supply stores or straight from the manufacturer. The difference between fresh and dried manure is in the way it is applied to the soil. Fresh and rotted manure is applied to the surface of the soil before the land is dug and plowed over. Dried, pulverized manure is applied after the soil is plowed, and then the manure is thoroughly raked or harrowed into the first inch or so of topsoil.[183]

After gardeners have planted and grown their gardens, storing their crops was the next essential step. Gardeners were told that the "[s]uccessful storage of fruits and vegetables depends on maintenance of favorable temperature, ventilation, and humidity."[184] Many vegetables for home consumption could be stored in a cool, dry place such as a cellar. Crops such as potatoes and onions keep especially well when stored in cellars. However, each type of fruit and vegetable required different methods to maximize the shelf life of the food. Canning was a common method to extend the shelf life of foods. Canned food was an easy way to add a healthy variety to family meals. The storage of seeds was equally important, as a loss of them made the

[181] Kains, 137.

[182] W. R. Beattie. *Hotbeds and Coldframes*. Farmers' Bulletin, 1743. Washington, D.C.: U.S. Department of Agriculture, 1941, 3.

[183] Kains, 154-55.

[184] Ibid, 317.

next planting season more difficult. Leaflet number 220, published in 1942, outlines the importance of proper vegetable seed storage:

> Under present conditions it is necessary that the supplies of vegetable seeds be conserved for the growing needs of our own country and of others dependent on us for vegetable seeds. It is even more important than usual that there be no unnecessary depletion of stocks resulting from loss of viability due to unfavorable conditions during storage and transportation.[185]

Long periods of high temperatures and high moisture were to be avoided to maintain the viability of the seeds. Fruits and vegetables react differently during storage, even when stored at the same humidity due to moisture content, so knowing what moisture content is ideal for seeds was important. Extension staff advises farmers and seed dealers not to store seeds below 40°F due to the expense of operating the storage facility. Forty to fifty degrees is the desirable temperature range for seed storage facilities, with the air humidity between 50 and 70%.[186] Seed treatment was another important part of farming.

In February 1944, the USDA updated and republished a 1934 pamphlet titled "Treat Seed Grain." This pamphlet outlined the eight ways in which farmers could control seed-borne diseases. Farmers were warned to be particularly cautious when using methods that contained copper and mercury dust, as they are poisonous. Farmers were also encouraged to wear dust masks whenever treating seed to protect themselves. The purpose of treating seed is to protect seed and seedlings from decay and blights and to improve stand, yield, and quality.[187] "Large-scale seed treatments by local elevators, seed houses, central treating plants, or portable treating outfits…" the pamphlet explains, are "… practical and valuable, and [are] increasing in

[185] Eben H. Toole. *Storage of Vegetable Seeds*. Leaflet, 220. Washington, D.C.: U.S. Department of Agriculture, 1942, 3.

[186] Ibid, 4; Ibid, 7.

[187] A.G. Johnson. *Treat Seed Grain*. Miscellaneous Publication, 219. Washington, D.C.: U.S. Department of Agriculture, 1944, 2.

popularity. This kind of custom service is of great convenience to farmers, particularly when farm labor is scarce."[188] In January 1942, the Riley County Farm Bureau in Kansas sent out a letter encouraging farmers to use the seed treatment program to reduce crop losses. Signing up for the program prompted a visit from specialists who treated seeds, specifically oats, barley, and sorghums, which were particularly vulnerable to crop losses. The letter emphasized that the machinery was only going to be hauled around once on a route, so farmers were encouraged to sign up early to be put on the route. As an incentive, farmers who participated received a decrease in their Farm Bureau dues for 1943.[189]

Another important part of gardening and farming was the control of weeds, although it was more important for the gardener. A national Farmer's Bulletin from 1931 was dedicated solely to educating people on eradicating weeds from their crops. The bulletin identifies three main principles of weed control: prevent weeds from maturing, prevent introduction of weeds to farmland, and prevent perennial weeds from making top growth.[190] Readers were advised not to depend on weed-killing chemicals as a substitute for tillage, pasturing, and cropping methods for eliminating the top growth of perennial weeds, but that chlorates, oils, common salt, and soluble arsenicals were practical for destroying small and otherwise unmanageable patches of weeds.[191] Larger crops, if they are of a good variety, tend to smother weeds, and so good crop rotation could reduce weeds on a given plot. Grasses, clover, or forage crops naturally encourage weed destruction due to their shading effect and "as they are cut for hay before seeds of most weeds

[188] Johnson, 11.

[189] Leonard A. Rees. *Stop the Leak!: Treat Your Oats, Barley & Sorghums*. Agent Letter. Manhattan, KS: Riley County Farm Bureau, 1942.

[190] Cox, ii.

[191] Ibid, 21.

ripen."[192] The bulletin provided a list of the fifty worst weeds, where they commonly grow, and what crops they damage. Readers were advised to contact their local Extension agent with questions not covered by the bulletin.

Thinning or removing garden crops to deprive insects and plant diseases of their food are important gardening practices. Removing runt and infested plants prevents the loss of plant food and moisture that healthy plants derive from the soil.[193] In *Five Acres and Independence,* Kains advised gardeners that "[o]ne [fungicide or pesticide] spraying...carefully done is worth more than many done poorly."[194] In March 1944, the Idaho Extension Service office published a 63-page bulletin with recommendations for insect control. The bulletin detailed various insects, how to identify them, and the best methods to control their population. Like many other war publications, the bulletin included a sentence that emphasized the need for farmers and gardeners to be frugal: "USE ONLY THE NEEDED AMOUNT OF INSECTICIDES— DO NOT WASTE."[195]

Preventing weeds and insects from taking over the garden and field is an important contribution to growing crops with higher yields. Another method to increase crop yields was the proper maintenance of soil, which was an important part of farm literature throughout the early 1900s. The Anaconda Sales Company produced an informational booklet on the topic in 1939. It began by informing farmers that "[t]he better farmer you are—the more nitrogen, phosphate, and potash leaves your soil and your farm forever."[196] Each year, more was taken out of the soil than

[192] Cox, 25.
[193] Kains, 331.
[194] Ibid, 340.
[195] W.E. Shull. *Idaho Recommendations For Insect Control*. Bulletin, 252. Moscow, ID: University of Idaho, 1944, 2.
[196] Anaconda Staff, *Pay Dirt: The Anaconda Book of Farm Facts* (Anaconda, MT: Anaconda Sales Co., 1939), 4.

is returned [Table 1]. Potash typically was not a problem for most soils, and nitrogen was easily replaced by spreading manure or by maintaining a proper crop rotation system. “Barnyard manure is one of the best natural fertilizers,” the booklet explained before informing farmers that manure “supplies much needed humus, and promotes bacterial action in the soil. It also contains relatively large amounts of nitrogen and potash. Its only weakness is a deficiency in phosphate.”[197] Phosphate was the problem, since there was no natural way for farmers to replenish their soils with it. Farmers thus relied on commercial fertilizers to replace lost phosphate, and since no accurate phosphate test yet existed, farmers could gauge their phosphate levels by the quality of their crops.[198]

Table 1 What You've Withdrawn from *Pay Dirt* (1939)

Crop	**Pounds Phosphate Removed Per Acre**	**Crop**	**Pounds Phosphate Removed Per Acre**
Sugar Beets	40 pounds	Lettuce	15 pounds
Alfalfa	70 pounds	Peas	15 pounds
Clover	55 pounds	Carrots	25 pounds
Wheat	30 pounds	Parsnips	27 pounds
Barley	25 pounds	Cabbage	30 pounds
Oats	20 pounds	Onions	25 pounds
Corn	35 pounds	Tomatoes	20 pounds
Potatoes	35 pounds	Apples	16 pounds
Beans	35 pounds	Peach	20 pounds
Celery	30 pounds	Pear	10 pounds
Muskmelons	20 pounds	Plum	10 pounds
Watermelons	25 pounds		

[197] *Pay Dirt*, 14.

[198] Ibid, 6-7.

Wartime literature gave farmers further information and suggested substitutes when material was scarce. One textbook told students that "[t]he soil must be fertile and rich if the farmer is also to be rich and happy."[199] Another textbook from 1915, *The Essentials of Agriculture*, described the best method to create a profitable crop rotation system. There were three important stages: a cleansing crop, a resting crop, and a money crop. This system allowed farmers to get the most out of their land.[200] To provide cover for land, brome grass was a popular choice, as it creates "a dense sod which holds and binds the soil and thus resists erosion."[201] Brome grass also provides pasturage from spring to late fall. Planting only regionally adapted seeds made for hardier crops and ground cover.

Agriculture literature included sections devoted solely to manure because of its importance to the process. What animals were fed had a profound effect on the value of the manure. Protein-rich feed produced nitrogen-rich manure, while diets deficient in protein produced manure of comparatively poor value. Using nitrogenous livestock feeds and saving the resulting manure allowed farmers to reduce commercial fertilizer bills, thus increasing farm profits, while providing valuable organic material often not found in commercial fertilizers.[202] A textbook from 1918 advised that manure be "scattered over the fields at least once every ten days" so that, "not only will the breeding places of flies be abolished, but very valuable fertilizing material will be saved to enrich the soil and increase crops grown thereon."[203]

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[199] Call and Kent, 173.

[200] Henry Jackson Waters, *The Essentials of Agriculture* (Boston, MA: Ginn and Company, 1915), 87.

[201] E.A. Cleavinger and L.E. Willoughby. *Brome Grass in Kansas*. Circular, M-52. Manhattan, KS: Kansas State College of Agriculture and Applied Science, 1944, 3.

[202] Waters, 93.

[203] William O. Krohn and S.J. Crumbine, *Graded Lessons in Physiology and Hygiene* (Topeka, KS: State of Kansas, 1918), 284.

Students were taught that commercial fertilizers cannot be used alone to provide all the needed nutrients to soils, as they lacked the proper organic material. When animal manure was not available to the farmer, a good way to provide the soil with needed nutrients was using green manuring crops. These crops are "grown and plowed under for the purpose of furnishing organic matter to the soil…"[204] For example, green manure crops for Kansas included cowpeas, soybeans, sweet clover, and red clover.[205] During a time when the highest quality crops were wanted, it is unsurprising that Extension included information about manure in so much of the literature for 4-Hers and farmers.

The Extension Service was committed to creating and encouraging farm efficiency and good farming practices. Extension wanted to circulate information not only about growing crops but how to maintain the quality of farms in a time when many materials were scarce or completely unavailable. They put most all their resources into getting farmers and 4-Hers information on how to be more resourceful in their farming. Setting 4-Hers as examples, they sent out informational pamphlets and ensured that community 4-H leaders passed on this information to local families. The agents were especially concerned with the preservation and safe use of farm machinery. The need for rest was especially important for children to be aware of, since fatigue easily leads to accidents, especially if the student is operating a vehicle or machine.[206] Of course, cautionary literature did not directly equal people—children or adults—operating farm equipment safely or smartly all the time. In 1944, there were 98 farm accident deaths, 27 of which involved the farm tractor, making it the most deadly farm machine. The *Neighborhood Leader* newsletter from March 1945 reported: "it has been found that by far the

[204] Call and Kent, 180.

[205] Ibid.

[206] Emerson and Betts, 289.

most of them were due **entirely to carelessness**."[207] Extension worked to circulate information to decrease the frequency of such accidents.

Extension agents made sure that people knew how to take care of their existing equipment and how to get the most use out of it.[208] Taking care of machines was crucial, since the production of supplies for the war was the main concern of suppliers. New information was given to 4-Hers and farmers on the wartime mechanical changes. The tractor program increased the amount of power used on farms. The program also informed 4-Hers on safety procedures for mechanical farm equipment. In South Carolina, 4-H programs incorporated health, home safety, accident prevention, and rural electrification into their already existing home-management and home-furnishing projects.[209] Farmers were encouraged to save steel by reconditioning their machines rather than replacing old parts. Engineers such as John M. Ferguson, an extension engineer at Kansas State University, emphasized the usefulness of technology such as welding to give new life to old frames, making them "as strong and rigid as new" without the bother and cost of obtaining new steel.[210]

Some states put out wartime leaflet series with farming information and Kansas was one such state. One leaflet from the Kansas Wartime Educational Activities Leaflet Series included information on farm machinery maintenance. The leaflet urged farmers always to consult the manufacturer's instruction book. The leaflet went on: "[t]he four areas at which grain can be lost correspond to the main units of the combine." The combine's main units were the cutter-bar,

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[207] *The Neighborhood Leader*, March 1945, 1. Emphasis in original.

[208] Teagarden, vol.1, 196.

[209] "National 4-H Service Committee: Services of the Forties." National 4-H History Preservation Program. 2016 (accessed September 26, 2016). http://4hhistorypreservation.com/History/Service_Committee/; Turner, R.A., and United States Extension Service. The 4-H Clubs Line Up for Uncle Sam: National 4-H Club Report for 1943. Extension Service Circular; 420. Washington, D.C.: Extension Service, Dept. of Agriculture, October 1944, 12.

[210] "Modern Welding Torch Helps Out On the Farm," The Manhattan Mercury (Manhattan, Kansas), Feb. 18, 1942.

cylinder, rack, and the shoe.[211] The second page of the leaflet included a diagram of a small combine and a trouble chart for common problems with combines. A USDA circular from 1942 provided information on how farmers could make easy substitutes for farm repairs. The pamphlet advised farmers not to "rely on common sense or ingenuity, to suggest the proper substitute for a medicine to be used in treating an animal disease, or for a fungicide needed in combating a disease of plants."[212] The pamphlet provided farmers with chemical and medicinal substitutes for common farm needs. Since some proposed substitutes might have been harmful or ineffective to treat plant diseases, "[g]reat caution should therefore be exercised in their use…"[213] Farmers were ultimately advised to contact their local USDA official when they were looking for substitutes for plants, since some combinations were potentially detrimental to crops and dangerous to animals and humans.[214]

Farm equipment maintenance applied to both mechanical and non-mechanical objects. A 1943 Farmer's Bulletin instructed farmers how to take care of the rope they had on their farms. As with other farm material, the war cut off the supply of manila fiber and hindered the shipment of sisal to make new rope. Supplies for the creation of hemp and jute rope were also impeded by the war, making the proper care of rope all the more essential. Farmers were advised to dry the ropes properly to avoid dry rot and to repair rope by using splices instead of knots, since splices "have from 80 to 90 percent of the full strength of the rope and knots have only from 50 to 60

[211] J.M. Ferguson. *Farm Machinery Maintenance*. Kansas Wartime Educational Activities, 2. Manhattan, KS: Kansas State College of Agriculture and Applied Science, 1943, 1.

[212] United States Department of Agriculture. *Substitutes for Scarce Materials*. Pamphlet, AW1-15. Washington, D.C.: U.S. Department of Agriculture, 1942, 1.

[213] Ibid, 3.

[214] Ibid, 5.

percent of its strength."[215] Other booklets were distributed. Many housewives learned how to replace common household items, such as cleaning materials, when supplies were scarce. The care of farm equipment, mechanical or not, was an important topic and appeared in not only educational materials but also campaign materials. (See the next chapter for further discussion of campaign materials.)

Many of the wartime themes concerning education continued into the postwar period. Arnold P. Yerkes gave an address to the Northwest Farm Managers Association, published in 1946, where he called for more research into soil health. In the published version, Yerkes claimed that "[t]he following pages point out the relation of soil to your health and the health of the nation. They indicate how much we still have to learn about the very dirt under our feet—and how important such knowledge may prove to be."[216] Yerkes argued that for good health, people have to consume an excess of the recommended servings of food to gain all the necessary vitamins and minerals, since food was coming from soils that lacked the requirements to be completely fertile.[217] Some plant diseases, he continued, were actually soil deficiencies that the farmer had not addressed before planting. To address these issues properly, Yerkes maintained that more soil research needed to be conducted.[218]

Even before the war, education was an important part of 4-H and Extension. Wartime bulletins and circulars provided additional resources to farmers and 4-Hers. Literature distributed by 4-H leaders, Extension agents, and other agricultural organizations gave farmers and youths

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[215] J.R. McCalmont. *Care and Use of Rope on the Farm*. Farmers' Bulletin, 1931. Washington, D.C.: U.S. Department of Agriculture, 1943, 2.

[216] Arnold P. Yerkes, "Soil: A Foundation of Health" (speech, International Harvester Company, Farm Practice Research, Chicago, Illinois, 1946), 2.

[217] Ibid, 5.

[218] Ibid, 8.

solutions to common problems. The literature provided resources on almost any topic farmers and 4-Hers would need, like how to make do with wartime shortages and cultivate a garden. Farmers and 4-Hers used new information to contribute to war mobilization through the campaign drives.

Chapter 4 - Campaign Drives

Many of the educational programs that Extension and other agriculture companies produced were reflected in America's wartime campaign drives. The drives fit into a broader theme of American wartime propaganda aimed at farmers. 4-Hers, school children, and farmers participated in many of the same national campaigns. Due to the overlapping nature of farming in rural America, farmers and 4-Hers were aware of a variety of simultaneously occurring campaign drives. Newspapers typically had independent sections for general farming and another for 4-H. Articles written by Extension agents might be found in either section. The themes of the campaigns promoted goals toward which the government wanted the entire rural population mobilized.

By and large, the efforts of the national 4-H program aimed at raising membership across the nation. "Food in '43" and "Food in '44" were two of the membership drive slogans. The campaigns were to gain new members to the program while emphasizing the main goals of 4-H: 4-Hers aiding the war effort and learning by doing. The 4-H recruitment drives were often associated with National 4-H Club Week, which during the war was largely synonymous with 4-H's National Mobilization Week. A newspaper article in Utah laid out four main purposes of National 4-H Club Week. First, club members were to have the chance to see how their efforts were helping the war effort. Closely related was the second purpose, which was 4-Hers reaffirming their goal of completing projects. Third, 4-Hers were encouraged to recruit at least one other young person to join. Finally, "[t]he results of 4-H club work will be published from the standpoint of nation, state, county, and local community activities so that the general public may be adequately informed regarding the far-reaching importance of the 4-H program in

helping with the war effort."[219] These four goals were common for 4-H weeks across the nation. In Garrard County, Kentucky, they hoped to enroll 1,362 new members as part of the state's goal of 200,000 new 4-Hers in 1942.[220] *The Jackson Sun* on 5 April reported that National 4-H Mobilization Week was 5 April to 11 April that year, with the slogan "Enroll for Victory, Join 4-H Club."[221] 4-Hers were encouraged to invite friends and peers to join, since "[w]e could produce and can much more food to help win this war if we had many more members."[222] Likewise, in De Witt County, Illinois, one of the membership drive leaders, home advisor Elizabeth MacClinchie, said, "[T]he purpose of the drive...is to give every boy and girl an opportunity to join a club so that they may be more effectively utilized in aiding the nation to reach its food for freedom goals."[223] By the end of 1942, 4-H clubs across the nation had enrolled over 650,000 new members, which brought 4-H to a total of 1.5 million members.[224]

The 1943 National 4-H Club Week was an important event in many parts of the nation. The production of war material was on the rise, and the need for soldiers in every war theater drew formerly deferred men away from farms. Due to this, the role of every 4-Her increased and took on new significance. An article for the membership drive in Scott County, Iowa emphasized not only increasing membership but giving young people information on how to entertain themselves at home so as to conserve rubber by not using their cars.[225] As in 1942, the largest

[219] "National 4-H Club Week Announced," *Cache American* (Logan, Utah), February 18, 1944.

[220] "4-H Clubs To Make Membership Drive," *The Lexington Herald* (Lexington, Kentucky), December 12, 1942.

[221] ""Join 4-H Club" Will Be Slogan Here This Week," *The Jackson Sun* (Jackson, Tennessee), April 5, 1942.

[222] Ibid.

[223] "Start Drive To Double County 4-H Club Membership," *Clinton Daily Journal and Public* (Clinton, Illinois), April 7, 1942.

[224] Wessel, 59.

[225] "Scott County 4-H Clubs to Stage Membership Drive," *Quad-City Times* (Davenport, Iowa), September 27, 1943.

emphasis remained on enrolling more members so that production goals could be met. The *St. Clouds Times* in Minnesota reported that in Stearns County "[p]rojects and activities in the club program have been revamped to meet the war's increased call for production and labor. Emphasis is placed on production and the use of the young people of club age on the farm to help solve the labor problem."[226] *The Havre Daily News* noted on 9 March that "[t]herefore, 1943 National 4-H Club Week becomes a particularly opportune time to help all young people as well as leaders to realize their own responsibilities in doing their full part in helping to win the war."[227] The article also encouraged 4-Hers and leaders to convey 4-H information to the general public. Counties across the nation continued membership recruitment drives during 1944 and 1945. Many counties, such as Box Butte County in Nebraska, set goals of doubling membership. In January 1945, the county had ten clubs and 175 members. By hosting a membership drive, they hoped to increase their numbers to fifteen clubs and twice the membership.[228] While the war continued to draw young people away from rural areas, 4-H grew nationwide, partly thanks to their expansion into urban centers.

Extension made sure to convey information to both demographics. A newsletter called The Neighborhood Leader was one avenue of public information. The newsletter was aimed at adults, specifically local leaders of 4-H clubs, but it had information useful for farmers as well. The newsletter had national circulation. The December 1944 Neighborhood Leader newsletter informed readers that more farm equipment was to be made in 1945, but farmers were heavily advised to keep using what they already had on the farm. They were also encouraged to take care of hand tools, since obtaining replacements was difficult due to wartime restrictions. So the

[226] "Set Goal for 4-H Membership Drive," *St. Cloud Times* (Saint Cloud, Minnesota), March 6, 1944.

[227] "Nat. 4-H Club Week Observed," *The Havre Daily News* (Havre, Montana), March 9, 1945.

[228] "4-H Membership Drive Scheduled," *The Alliance Times-Herald* (Alliance, Nebraska), February 23, 1945.

newsletter advised farmers that "[e]ssential repair and replacement parts should be ordered early and installed as soon as possible. **Excessive quantities of repair and replacement parts should not be purchased**, since this would use material and labor otherwise available for producing new machinery and equipment."[229]

House managers were asked to save at least 250 million pounds of scrap fat in 1945. The March 1945 Neighborhood Leader newsletter informed readers that "[y]ou will want to save every drop when you know that used kitchen fats go into the manufacture of explosives, military medicine, synthetic rubber...fluids for airplanes, nylons, for parachutes, and many other necessary military products."[230] An image captioned "A Tree Grows in America" depicts a female in an apron watering a potted plant, with the pot labeled "used fats." Each leaf of the plant has an image of a product that used kitchen fats [Figure 2].[231] This newsletter also argued for larger gardens for more home canning to ease shortages of commercially canned foods.[232] In this newsletter, the director urged farmers to be flexible and use all of the odd hours available on the farm since "[r]esponsibility for winning the war is confined to no individual, or class, but to the whole nation. It seems practical to organize the community to utilize every hour of available labor."[233]

[229] "1945 Farm Machinery...Prospects-Care-Repair." *The Neighborhood Leader*, December 1944, 1. Emphasis in original.

[230] Vern Ellithorpe. "Fats Feed His Gun." *The Neighborhood Leader*, March 1945, 1.
[231] "A Tree Grows in America." *The Neighborhood Leader*, March 1945, 2.
[232] Ellithorpe, 1.

[233] H. Umberger. "Director's Message." *The Neighborhood Leader*, March 1945, 4.

Figure 2 A Tree Grows in America

Several governmental national campaigns were supported by the national 4-H and Extension programs. National Extension and 4-H leaders knew that mobilizing their membership greatly aided national war aims. Two important campaigns were encouraging farmers to buy war bonds and to donate scrap metal. The latter goal was assisted by the widespread urging of farmers to take care of their equipment to minimize the manufacturing of replacement parts. 4-H members in North Carolina in 1942 collected 2,320,108 pounds of scrap, purchased $267,419 in stamps and bonds, and sold $194,317 stamps and bonds.[234]

[234] "4-H Club Work Is Shifted From Peace To Wartime Basis," *The Charlotte Observer* (Charlotte, North Carolina), April 12, 1943.

These campaigns were not unique to 4-Hers or farmers, since everyone was encouraged to buy war bonds, donate scrap metal, and take care of their belongings. But war bond advertisements were especially popular in agriculture literature. An advertisement in a farmers' magazine advised the best ways for farmers to use the money they invested in war bonds, which could be cashed in beginning sixty days after purchase. The ad was in the form of an endorsement from a farm wife who used the money from one out of every four dozen eggs she sold to buy more war bonds. She advised readers that the money could be used "to buy most of these mechanical improvements we've always wanted [in our home]—new things to make my housework easier and the farm work easier and more profitable…"[235] In a November 1944 circular, Extension informed readers how to best utilize their tractors. The circular warned farmers that due to increased demand by the armed forces, the availability and quality of gasoline was likely to change. The cost of gasoline typically outweighed the cost of the tractor, "[t]herefore, a saving in the annual fuel bill means a considerable saving during the life of the tractor."[236] Farmers were urged to follow the manufacturer's specifications when making repairs, a common theme throughout wartime literature.

The farm implement manufacturing company, John Deere, produced wartime literature that was distributed to farmers through their local dealership or through the mail. On the mailer cover of one of the booklets, "War-Time Care," there was an image of a man who is fixing his tractor with a smile on his face. A little devil-like character who is labeled "trouble" walks away from the man and his tractor, saying, "This is no place for me. I'm going where I'll get a little

[235] My Victory Nest Egg, ca. 1942.

[236] John M. Ferguson and J.W. Martin. *Getting the Most From Your Tractor*. Extension Service Circular; 43. Manhattan, KS: Extension Service, Kansas State College of Agriculture and Applied Science, November 1944, 2.

cooperation."[237] The booklet encouraged farmers to save war materials and work as efficiently as possible. Farmers were told, "Take care of your tractor and of your other farm equipment. While it's always good business, it's a patriotic duty today when Uncle Sam and his Allies are looking to you for the food, fat, and fibre [sic] they need to win" the war.[238] The booklet details how farmers could extend the lives of their tractors: watching their speed, the load they pull, fuel selection, temperature, lubrication, adjustments, and general tractor conditions. All this served to "conserve the life of your tractor at a time when it is hard to get another, when critical materials and manufacturing facilities must be devoted to the work of winning the war."[239]

John Deere propaganda emphasized that it was patriotic to use trained servicemen for repairs, since they knew all the ins and outs of John Deere machines. They compared this to a farmer who could do a good job with repairs but who might not know exactly how to take care of more specialized problems properly. They reinforced this idea with a drawing. A personified tractor is groaning and creaking as it approaches the John Deere Service Shop. The tractor has crutches instead of front tires and a bandage across its head. A John Deere serviceman gestures for the tractor to go inside. When the tractor leaves the shop on the other side of the building, it looks completely repaired and boasts that it is "[r]eady for the battle again!"[240] [Figure 3] The booklet ends with an advertisement for buying war bonds and for farmers to donate scrap metal and take it to their local scrap dealer, who would pay for it. On the final page, the booklet tells farmers to "[g]et in the scrap—slap the Jap, paste Hitler, muzzle Mussolini from your

[237] *War-Time Care: For Your Tractor and Equipment…* (Kansas City, Missouri: John Deere Plow Company), 1.

[238] Ibid.

[239] *War-Time Care*, 2.

[240] *War-Time Care*, 15.

barnyard...with your scrap."[241] Another John Deere brochure, titled "Facts from the Factory," has on its back cover a black text box with a red star border that reads: "As the war goes on, the importance of your Instruction Book grows bigger and bigger. SAFEGUARD IT ... READ IT ... REFER TO IT FREQUENTLY! It is one of the best friends you have!"[242] To drive home the point, the cover informs farmers that "YOUR TRACTOR…[IS] THE MOST IMPORTANT MACHINE ON YOUR FARM."[243] The War-Time Care booklet has multiple references that the instruction book is equally important. An image of a farmer holding open the booklet with "instruction book" on the cover has the caption: "It's my tractor Bible."[244]

Figure 3 Ready for the Battle Again

In 1943, John Deere published an illustrated handbook titled *How to Keep Your Farm Equipment in the Fight*, which looks like a children's book. The book was provided to farmers compliments of their local John Deere dealership. The book begins by claiming that "[w]ith the biggest job of food production in history facing him, the farmer of today must keep his equipment in tip-top condition and operate it efficiently to meet his production goals. Labor and machinery shortages make it doubly imperative that better care be given the equipment now in

[241] Ibid, 19.

[242] *Facts from the Factory* (Kansas City, Missouri: John Deere Plow Company, 1945). Emphasis in original.
[243] Ibid. Emphasis in original.

[244] *War-Time Care*, 9.

use—that it be adjusted to do its work better, to save crops and to save time and money."[245] Like other wartime John Deere publications, the handbook provides farmers with tips on how to keep their tractors and other farm equipment running as smoothly as possible. Headlines such as "Good Lubrication No. 1 Weapon in Your War on Wear" are found throughout the book.[246] Another tells farmers that "[y]our CORN PICKER is a Big 'Gun' in the Battle of Food" and that "[y]our GRAIN DRILL is Vital to Victory."[247] The book also has numerous drawn images, one being a anthropromorphized tractor saluting in a military cap with a solemn expression on its face. The caption reads, "Full of vin and vigor for Victory."[248] [Figure 4] Another drawing depicts a farmer holding a gun while sitting inside of four stacked tires, which conjures up images of soldiers sitting in trenches. The caption tells farmers, "*Guard your tires as if they were the last you could get.*"[249] [Figure 5] The image of an American soldier is repeatedly used alongside urges for farmers to buy war bonds.

[245] *How to Keep Your Farm Equipment in the Fight: The John Deere Handbook on Care and Operation*. (John Deere Plow Company, 1943), 1.
[246] Ibid, 3.
[247] Ibid, 35; 22. Emphasis in original.
[248] Ibid, 8.
[249] Ibid, 12. Emphasis in original.

Figure 4 Full of vin and vigor for Victory

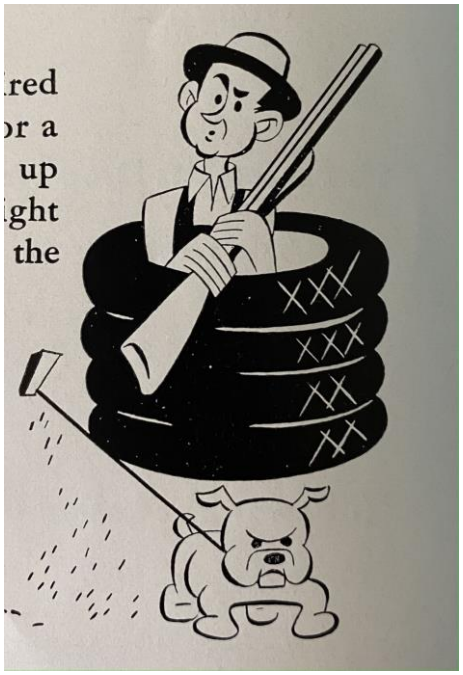

Figure 5 Guard Your Tires

Agricultural print was full of wartime propaganda. A farm machinery shop advertisement in *The Prairie State Tribune* on 27 October 1944 told farmers, "Our two main jobs are: keeping farm machinery running and keeping up the farmer's morale ... A farmer's morale is just as important as that of our fighting men ... We are happy that we have been able to offer the farmers of this community a repair service that has kept their equipment in working condition and has enabled them to turn out bumper crops for the war effort."[250] In the August/September 1944 volume of the news journal *The Furrow*, there is a drawing of a farmer in overalls who uses a shovel to pick up a pile of scrap. The scrap metal has planes flying out of it and they are sweeping away a German and a Japanese soldier. The words across the image read: 'PILE IT ON 'EM!" The caption informs viewers that "[o]ur Armies are advancing on an avalanche of metal.

[250] *The Prairie State Tribune* (Assumption, Illinois), October 27, 1944.

That is why factories manufacturing war equipment need scrap ... HEAVY FARM SCRAP! GATHER IT UP! GIVE IT TO 'EM!"[251]

Many agricultural companies included war references and cited USDA research. The Carey Salt Company sent out a digest to farmers with USDA research to back up their advertising claims. They harped on the importance of adding salt to the diets of animals since "[m]any diseases of domestic animals, once blamed on unknown 'bacteria' or 'poisonous' feeds, are now known to be caused by *deficiencies of essential nutrients in the animal's diet*."[252] Likewise, Min-A-Lack, a feed supplement company, distributed an ad flyer informing farmers to "Just Add A Bit To Your Present Ration and Note the Difference…" their feed supplement would make to farm animals.[253] The cover of the Min-A-Lak flyer had a drawing of a feed bag dressed as a soldier with boots, a gun, and a helmet [Figure 6]. Riney's Cities Service produced a booklet with many useful tips for the farm, the home, and the care of animals and machinery to make material last longer during wartime. The book also contained quotes from women across the country with helpful hints. For example, Mrs. Mabel Surber from Lynchburg told sewers, "If sewing machine needles become blunt, sew them through fine sandpaper a few times."[254]

[251] "Pile It On 'Em!," *The Furrow*, volume XLIX (August/September 1944), 13. Emphasis in original.

[252] *Minerals and Your Livestock* (Hutchinson, Kansas: The Carey Salt Company), 4.

[253] *Min-A-Lak Keeps in Step* (Des Moines, Iowa: Puritan Laboratories, Inc., ca. 1941).

[254] *Farm Facts Book: 1945* (Junction City, Kansas: Riney's Cities Service, 1945), 29.

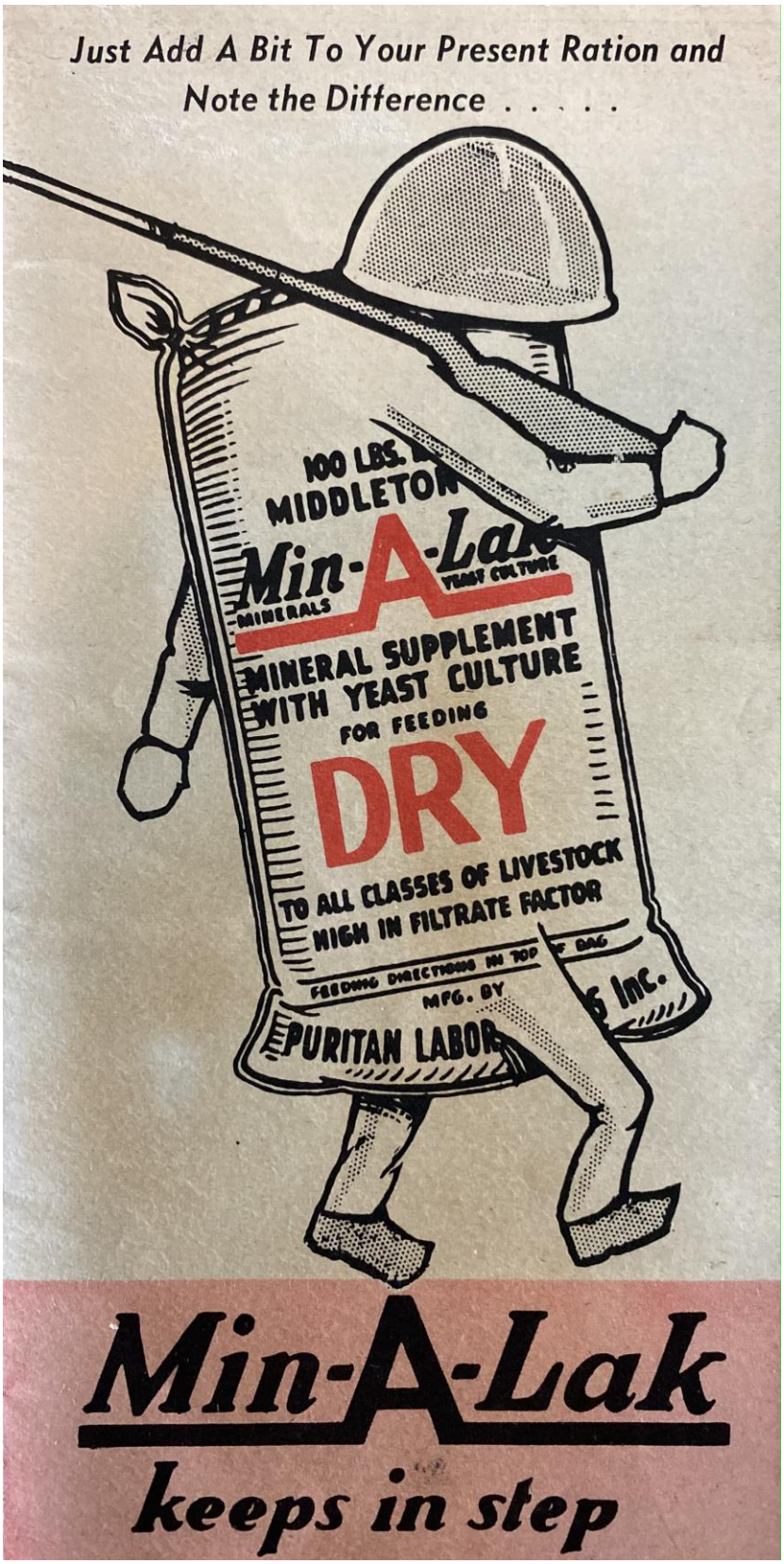

Figure 6 Min-A-Lack Keeps in Step

Collection of milkweed for lifejackets was another national campaign, which was monetarily supported by the United States government. Java, in current day Indonesia, was the only major source of kapok trees for the United States. Kapok floss was used to make lifejackets, floats, and aviation suits. When Japan overran Java, the United States was deprived of this essential wartime material.[255] Doctor Boris Beckman, a Russian-born doctor, convinced the Navy of the usefulness of milkweed to replace kapok. With $165,000 from the government, Beckman opened a pilot factory in Petoskey, Michigan to produce lifejackets.[256] Since domestic milkweed production was small, the United States relied on the milkweed plants growing wild across the United States and lower Canada. The entire milkweed pod was useful since the shells were used as fuel for the factory and oil was extracted from the seeds. The government paid 20¢ per bushel of dried pods. Milkweed collection was one of the few war efforts that directly and immediately paid participants for their work.[257] The government set a goal of 1,500,000 pounds of milkweed floss as sufficient for servicemen's lifejackets.[258] *The Perry County Times* proclaimed in 1944 that 15 and 16 September were "Milkweed D Day," when pickers were encouraged to collect milkweed pods. However, they were also encouraged to leave pods that were not yet ripe and observe Milkweed D Day on another day when the pods had ripened. The pickers of Pennsylvania joined twenty-eight other states in collecting milkweed.[259] Already in the summer harvest of 1944, harvesters in Kansas, Missouri, Arkansas, and Oklahoma had

[255] "Milkweed Replaces Kapok," *Beatrice Daily Sun* (Beatrice, Nebraska), August 13, 1944.

[256] "Milkweed Now a Crop," *The Ithaca Journal* (Ithaca, New York), November 1, 1944.

[257] *Beatrice Daily Sun.*

[258] "Milkweed War Crop," *Fort Worth Star-Telegram* (Fort Worth, Texas), August 24, 1944.

[259] "Boys and Girls To Pick Milkweed Pods," *The Perry County Times* (New Bloomfield, Pennsylvania), September 14, 1944.

collected 20,000 bags of milkweed floss, enough to create 10,000 lifejackets.[260] 4-Hers joined youths across the nation in collecting milkweed pods. Counties across the nation, such as Allen County in Kansas and DuPage County in Illinois, gathered milkweed fluff for lifejackets.

State and county 4-H programs developed their own individualized programs to contribute to the war effort alongside the national 4-H campaigns. 4-Hers participated in local county campaigns that were best suited to them, which made the most of their wartime efforts. In Texas, 4-Hers worked on increasing awareness of how improper care and disease could heighten livestock losses.[261] 4-H boys in the Cerro Gordo County, Iowa livestock program focused on livestock health by eliminating cattle grubs. Not only did the boys work to eradicate grubs from their own livestock, they hosted demonstrations alongside local Extension Service agents on how to control grubs. Demonstrations were held in various parts of the county to reach a larger farming audience, and circulars were available at the local county extension office. Their county extension director noted that this was one of their major projects for the year.[262]

Multiple counties collected scrap metal, and counties across the country participated in the Name a Ship Campaign.[263] Notably, Louisiana 4-Hers participated in a state-wide Name a Ship Campaign in 1944. Across the state, 46,706 4-Hers were galvanized to raise $2,275,800 to purchase a Liberty Ship.[264] Ship naming was a common occurrence during the war. Max Houchins, a Kansas native, served on Destroyer Escort 797 as an electrician. DE 797 was named for Ensign Carl A. Weeden, who was killed during the attack on Pearl Harbor. The ship was

[260] "Tips on How to Harvest Milkweed," *The Columbus News* (Columbus, Nebraska), August 23, 1944.

[261] Reck, 272.

[262] "Plan Efforts to Fight Grubs," *Globe-Gazette* (Mason City, Iowa), Feb. 2, 1943.

[263] Rasmussen, 114; Betty Lou Denton and Merle L. Eyestone. 1993. *Kansas 4-H: The History of Head, Heart, Hands and Health, 1906-1993*, ed. Manhattan, Kans.: Kansas 4-H Foundation, 35; Reck, 272.

[264] "Mobilize To Purchase New Liberty Ship," *The Daily Advertiser* (Lafayette, Louisiana), March 4, 1944.

sponsored by Weeden's grandmother, Alice N. Weeden.[265] Some parts of the United States held naming contests for Liberty Ships, as was the case in Casper, Wyoming. The *Casper-Star Tribune* reported that "[t]hree Wyoming children will be selected to christen a new ship on the basis of scrap collections made by their respective schools. Names for the ships will also be submitted by school children."[266]

In addition to those programs, the war saw the emergence of nutrition programs through 4-H. 4-H worked to teach members not only to conserve and preserve food and household goods, but also how to maintain strong nutrition. An article from the *Manhattan Mercury* in February of 1942 claimed that there was a need for food that was high in energy and nutrition for soldiers and civilians alike.[267] Girls in Oklahoma strived to live up to the slogan "Produce and Conserve."[268] Rhetoric such as "Live Healthfully" and "Live Frugally" prevailed in both 4-H programming and in newspapers [Figure 7]. Similarly, an article from an Iowan newspaper cited six ways 4-H girls were able to help the war effort. Girls were encouraged to garden, preserve and conserve food and household items, and be conscious of preventing fires. They were also tasked with morale-building by being happy as well as buying war bonds and stamps.[269]

[265] Jim Houchins, phone call to author, January 22, 2021; "Ralph Hagenmaier." *Peace Memorial 101*. [cited 2/28/2021]. http://peacememorial101.org/those_who_served/101/Ralph_Hagenmaier.html.

[266] "School Scrap Campaign Extended to October 24," *Casper Star-Tribune* (Casper, Wyoming), October 15, 1942.

[267] "They Pledge to Grow More During 1942," *The Manhattan Mercury* (Manhattan, Kansas), Feb. 18, 1942.

[268] Extension Circular 420, 12.

[269] "4-H Girls Have Important Role in All-Out War Effort," *Globe-Gazette* (Mason City, Iowa), Feb. 11, 1943.

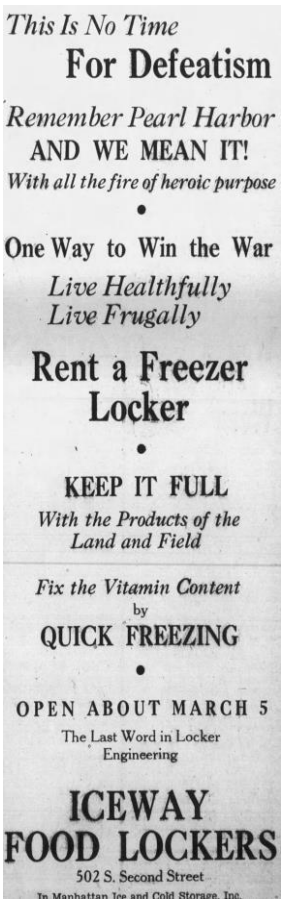

Figure 7 Live Healthfully

Food production and preservation staff became highly valuable, and states such as Vermont saw expansions to their Extension Service staff to assist the regular agents.[270] In 1945, Marvin Jones, the War Food Administrator, noted, "Food is just as necessary as guns, tanks and planes" to win the war.[271] The National 4-H Program sponsored the Feed a Fighter and Food for Freedom or Food for Victory campaigns. The goal was for each individual 4-Her to feed a man in the armed service for a year with one of their projects. The 4-Hers worked to create meat and field crops that were most needed in the war. In Arkansas, 85% of 4-H members joined in the

[270] "Extension Service Expands Emergency Food Production, Preservation Staff," *The Burlington Free Press* (Burlington, VT), Feb. 22, 1944.

[271] "Essential Food Will Come From Home Gardens," *The Frankfort Index* (Frankfort, KS), Mar. 1, 1945.

Feed a Fighter program.[272] The need for food products was large. A 1942 Extension circular reported that 69.6% of Extension agents' work was devoted to securing food supplies and other critical war materials while the remainder was spent on solving other problems, working on civilian defense, and other war work activities.[273]

Home canning provided an important diet supplement, especially when commercial canning was scarce. Companies produced booklets with recipes and information about the importance of canning. The Carey Salt Company produced a book in 1939 that outlined the importance of salt in human diets. In addition to adding a variety of food to meals and taking the place of salads when fresh vegetables were not available, canned goods with salt "play an important part in the diet, stimulating the flow of saliva and gastric juices, thus aiding digestion."[274] The Ball canning company produced *The Ball Blue Book*, which contained recipes for home canning in addition to recipes for soap and other goods people were able to make at home. On the back inside cover, the company printed a statement:

> TO SAVE IS TO SERVE
>
> Until now, homemakers have canned food in BALL Jars because it is pleasant, convenient, economical, and healthful to have a well-stocked pantry. Now, more home canning should be, *must be*, done for the sake of personal economy and national welfare.
>
> The transgressions of overseas dictators leave to us no choice but to prepare to defend our liberty against possible aggressors. The debts for defense will be great. Each of us must play a part. Some, perhaps all, must forego certain comforts and luxuries, but, unlike the people of the warring nations, we need not be deprived of necessities. If we waste not, we shall want not.
>
> All surplus fruits, and vegetables, and meats can and should be saved by canning. Every extra jar of home canned food will be needed—by you, your children, your neighbor, or Your Nation.
>
> Today, the Stars and Stripes fly over a land of freedom and plenty. We can keep it so if we but remember that the wages of waste are high—and that to Save is to Serve.[275]

[272] Wessel, 60.

[273] H.W. Porter, and United States Extension Service. *Extension Activities and Accomplishments: Cooperative Extension Work in Agriculture and Home Economics*. Extension Service Circular; 410. Washington, D.C.: Extension Service, U.S. Dept. of Agriculture, August 1943, 1.

[274] *Home Pickling* (Hutchinson, Kansas: The Carey Salt Company, 1939), 3.

[275] *The Ball Blue Book of Canning and Preserving Recipes* (Muncie, Indiana: Ball Brothers Company, 1941), 57.

Another canning book from 1942 informed readers that "[y]east may need to be made at home in areas where transportation is devoted for long periods to munitions and munitions alone. So too may soap, altho [sic] this is wasteful of the released glycerin and should be attempted only when there is none to be had. Better sell the excess fat to Uncle Sam for the making of munitions."[276] The book was published for the Culinary Arts Institute and emphasized letting nothing go to waste. The index lists preservation instructions for fruits, vegetables, and meats.

Due to the need for food, the Extension Service placed special emphasis on gardening projects. Victory Gardens were another way that 4-Hers became involved in the war effort. Victory Gardens were not restricted to rural areas, as they also appealed to the emerging contingent of intercity 4-Hers who did not have room for large-scale crop growing. Rooftop Victory Gardens allowed city 4-Hers to still be a part of the war effort.[277] World War II was important inbringing 4-H clubs into urban settings, largely through Victory Gardens. However, Victory Gardens were known by this name largely in only urban settings. In rural settings where farmers already planted a yearly garden, the name "Victory Garden" had minimal impact. Alyce Springer was eight when Pearl Harbor was bombed. When asked if her family planted a Victory Garden, she replied that she "[doesn't] know what it is. Everyone had a garden." She recalled that her "family grew their own food & butchered for meat. They still had to buy a few items from the store."[278] Ruby Sharp, seven years old in 1941, recalled that their family had a garden where they grew the bulk of their food and that they butchered animals that they raised. Their

[276] Ruth Berolzheimer. *The A-B-C of Canning* (Chicago, Illinois: Consolidated Book Publishers, Inc, 1942), 2.

[277] "Victory Gardens at a Glance." The National WWII Museum New Orleans. [cited 11/15/2016]. http://www.nationalww2museum.org/learn/education/for-students/ww2-history/at-a-glance/victory-gardens.html?referrer=https://www.google.com/?referrer=http://www.nationalww2museum.org/learn/education/for-students/ww2-history/at-a-glance/victory-gardens.html.

[278] Alyce Springer, letter to author, January 12, 2021.

garden crops were shared with others who did not have their own garden.[279] For those who already had gardens, Extension and 4-H encouraged increased production and promoted ways for gardeners to take better care of their crops.

A newspaper article from the *Frankfort Index* in Kansas noted several practical benefits of having a Victory Garden: they provided families with more vegetables when the family wanted them, their food value was better, and home gardening saved money. A newspaper out of Vermont noted that Victory Gardens reduced the labor farmers had to do and reduced costs for transportation and food containers.[280]

Newspapers all around the country similarly stressed the importance of individuals cultivating Victory Gardens. However, not any garden made a proper Victory Garden. According to L.C. Williams, the assistant dean and director of the Kansas Extension Service, "Planned, planted, and tended gardens spell Victory Gardens."[281] Important to the success of Victory Gardens was planting the correct vegetables. A Nevada newspaper stressed the importance of planting vegetables with high adaptability to Nevada growing conditions and a high nutritional value.[282] Pamphlets, circulars, and newspaper articles detailed ways to maintain a more productive garden. Due to the potential shortage of insecticide, the importance of clearing away litter after harvest was stressed. Any unattended litter, weeds, crop residue, ditches, or storage spaces was a potential home for insects. Entomologists encouraged people to plow over, burn, or

[279] Ruby Sharp, phone call to author, January 12, 2021.
[280] Frankfort Index. "The Green Mountain Gardener," *The Burlington Free Press* (Burlington, VT), Mar. 30, 1944.
[281] "Plan Victory Garden Program," *The Journal for Progressive Stockmen, Farming and Businessmen* (St. Joseph, Missouri), Feb. 5, 1942.

[282] "Victory Garden Held Important," *Reno Gazette-Journal,* (Reno, NV), Mar. 3, 1944.

destroy plant residue immediately after harvest instead of waiting to clear it away at the start of the next growing period.[283]

Meat production increased annually, and it peaked in 1944 at 24.6 billion pounds, compared to the average of 16.2 billion pounds from 1935 to 1939. Milk production also skyrocketed to 15.1 billion pounds above the pre-war average.[284] 4-H worked to raise both animal and grain products along with fruits and vegetables in Victory Gardens. The North Carolina Agricultural Extension Service sent out a pamphlet to 4-Hers and farmers stating that they needed to work towards raising the goods for fresh vegetables, canned food, potatoes, poultry, bread, meat, milk, and eggs.[285] Likewise, national newspapers articles and ads emphasized the need for production. In 1942, an ad from the Manhattan Production Credit Association in Kansas declared that "Food will win the war … And Dictate the Peace." [Figure 6] In 1943, another Extension circular pointed out that one man in the armed forces for one year needed to have 274 pounds of cereals, 447 pounds of dairy products, 422 pounds of meat, 30 dozen eggs, 521 pounds of vegetables, 213 pounds of fruits, and 90 pounds of sugars.[286] Charles H. Blasberg, an Extension Service agent at the University of Vermont and State Agricultural College, wrote an article emphasizing the importance of maintaining food reserves for the armed forces, saying it was important to have a 270-day reserve for every man fighting overseas and a 90-day reserve for every man on the home front.[287] 4-Hers were ultimately working towards

[283] "A Pre-Season Victory Garden Clean-Up Helps," *The Manhattan Mercury* (Manhattan, KS), Feb. 18, 1942.

[284] Rasmussen, 112.

[285] North Carolina, Food for Freedom.

[286] Z.L. Galloway, and United States Extension Service. *Feed a Fighter in 1943: Amount of Food Production Required to Supply a Man in the Armed Forces for One Year.* Extension Service Circular; 401. Washington, D.C.: Extension Service, U.S. Dept. of Agriculture, January 1943, 3.

[287] "The Green Mountain Gardener," *The Burlington Free Press* (Burlington, VT), Mar. 30, 1944.

raising food and crops to provide the soldiers with as much fresh food as possible so that their diet did not solely consist of hardtack and salted meats.

Figure 8 Food will win the war

Production was important, but John R. Fleming, from the Bureau of Agricultural Economics, U.S. Department of Agriculture, noted in February 1942, "We began this war with many farm surpluses, rather than shortages … We have begun to learn, the record shows, how to use them, and how to keep prices from collapsing while we use them."[288] In 1942, a *Manhattan Mercury* article informed farmers that commodity crops such as wheat, corn, cotton, and tobacco

[288] "Plan Victory Garden Program," *The Journal for Progressive Stockmen, Farming and Businessmen* (St. Joseph, Missouri), Feb. 5, 1942.

were in ready supply, so there was no need to expand production. Farmers were encouraged to focus on growing other essential crops instead, such as eggs, hogs, soybeans, flax, corn, and others.[289]

4-H went a long way towards providing food for the war. Animal and grain products were produced in great quantities across the nation. Through their determination, 4-H contributed a great amount to the war effort, while also learning valuable life skills such as controlling weeds and insects, preventative measures against drought, reducing soil erosion, preserving soil fertility, and increasing yields of crops using rotation. These are the same skills that in the previous decades 4-Hers had learned and went on to employ during the war.[290]

When challenged, hundreds of 4-Hers across the nation met and surpassed the goal for feeding a soldier for a year. Thomas E. Wilson, National 4-H Committee chairman from 1924 to 1958, noted in March of 1945 that "Our fighting men know, as do the workers who made our weapons of war, that without the food you 4-H farm boys and girls helped produce, we would not be as far along in the war as we are today."[291] In 1943, the contributions of one North Carolinian 4-Her were enough to feed thirty-four soldiers for a year.[292] While most 4-Hers did not produce to that extent individually, many counties raised a significant amount of product. In 1943, *The Daily Herald* announced Paul Diamond (aged 13) and Irene Warnick (aged 15) as winners of Utah's county 4-H club Victory Garden contest. Diamond won the production

[289] "They Pledge to Grow More During 1942," *The Manhattan Mercury* (Manhattan, Kansas), Feb. 18, 1942.

[290] Extension Circular 433, 3.

[291] "National Director Praises 4-H Clubs," *The San Juan Record* (Monticello, Utah), Mar. 15, 1945; National 4-H News. "Folks who Helped Make 4-H Great: Thomas E. Wilson." *National 4-H History Preservation Program*. 23 January 2017. (accessed December 14, 2018). http://news.4-hhistorypreservation.com/tag/thomas-e-wilson/.

[292] Amy Manor. "4-H and Home Demonstration Work during World War II." *North Carolina Digital History in UNC School of Education*. (accessed October 10, 2016). http://www.learnnc.org/lp/editions/nchist-worldwar/5881.

division, while Warnick took the award for most preserved. The article noted that the teenagers earned a combined $208 in profits from their gardens.[293] In California, the *Lodi News-Sentinel* reported on July 31, 1943, that through the state's effort, each 4-Her (numbering about 13,000 in California) was almost able to feed one soldier for one year.[294] In Kansas, information gathered from twenty-three southwestern counties showed that their efforts fed a total of 2,700 soldiers.[295] Highlights from Haywood, Camden, and Durham Counties in North Carolina in 1943 include 31 acres of Victory Gardens, 10,000 pounds of beef, 13,680 eggs collected, 6,769 poultry birds raised, and over 20,024 quarts of food canned.[296] Similar results were shown throughout the nation.

In 1942, nationally 4-Hers were responsible for over 77,000 head of dairy cattle, 246,000 swine, 210,000 other head of livestock, 40,000 tons of forage crops, and 109,000 bushels of root crops.[297] The local newspaper in Lodi, California reported that the 1943 food production estimates included 20,000,000 pounds of meat, milk, eggs, and vegetables. An additional 20,000 pounds of wool and 8,000 rabbit skins were collected.[298] The *Frankfort Index* in Kansas reported that 40% of vegetables in 1944 were produced in an estimated 19 million Victory Gardens. The 40% equals about 8 million tons of vegetable produce.[299] An Extension circular from 1944 noted

[293] "Paul Diamond, Irene Warnick Declared Victors in 4-H Victory Garden Contest," *The Daily Herald* (Provo, Utah), Nov. 7, 1942.

[294] "Many Soldiers Are Fed by 4-H Club Projects," *Lodi News-Sentinel* (Lodi, CA), July 31, 1943.

[295] Denton, 35.

[296] North Carolina Agricultural Extension Service, "4-H Contributions to the War Effort", 1945. Special Collections Research Center, North Carolina State University Libraries.

[297] Rasmussen, 114.

[298] *Lodi News-Sentinel*.

[299] "Essential Food Will Come From Home Gardens," *The Frankfort Index* (Frankfort, KS), Mar. 1, 1945.

the 4-H program raised 141,261 acres of gardens and vegetables.[300] The same circular estimated that since Pearl Harbor 4-Hers contributed products from 800,000 acres to the "world's nutritional security."[301] 4-H, never one to back down from a challenge, produced food in great quantities because of their own determination, loyalty, and eagerness to serve their country.

Not only was producing crops essential, but they also had to be brought in on time, or they would not be as bountiful. Kansas Extension statistics showed that a three-week delay in harvest resulted in a 20% loss, meaning 26,000,000 bushels were not gathered. The USDA estimated that the lost bushels were enough to feed the entirety of the United States Army for a year.[302] Further delays would be even more detrimental to the harvest yields. In Kentucky, they saw from 1941 to 1943 an increase of 65,056 members. Even with this large increase in membership, the project completion rate in 1943 was still 83.4%.[303] Many other counties and states witnessed the same phenomenon. Through this determination, 4-Hers saw the first and foremost war goal of the 4-H program, "To help produce and conserve for the food arsenal," achieved.[304]

The increased interest in food and nutrition programming also extended to practicing proper hygiene. In addition to eating well, 4-H emphasized the importance of taking care of one's own body. 4-Hers were supposed to provide an example for the rest of their community. By building the health of their bodies, they were aiding the war effort by being able to work more efficiently and in turn, yielding more out of their harvests. This ideology held a long-

[300] Extension Circular 433, 3.

[301] Ibid.

[302] Earl H. Teagarden. 1964. *History of the Kansas Extension Service from 1868 to 1964, Kansas State University* vol. 3. Manhattan, KS: Kansas State University, 815.

[303] Welch.

[304] Extension Circular 433, 2.

lasting impact on how 4-Hers viewed their own health. Historian Gabriel Rosenberg has noted that "failure to maintain a healthy body implied serious failure of duty and patriotism" in a 4-Her.[305] Increased interest in the health of one's body was far from the only change experienced by 4-Hers over the course of the war.

[305] Rosenberg, 170.

Conclusion

From Victory Gardens to personal health initiatives, campaigns were an important part of the 4-H story during World War II. 4-Hers and farmers applied skills and knowledge gained through educational programs to wartime campaigns. While many of the wartime agents within the Extension Service were displaced by returning men, women displayed that they were able to fill more than just the role of a home economic agent. Many women took on the duties previously held by men, and, ultimately, the war opened up the opportunity for women to continue those roles. World War II, educational programs, and campaign drives created a change within the Extension Service and 4-H.

Extension agents and former 4-Hers returned to find that the programs had evolved. From the songs they sang to the projects they participated in, 4-Hers in the postwar period had been impacted by the war. Victory Gardens, other campaign drives, and increased postwar funding opened the way for 4-H to become a part of cities. 4-H was no longer a strictly rural organization. Today youths across the nation, whether in cities, small towns, suburbs, or agricultural communities, are able to join a 4-H club and participate in all sorts of projects. Many of the projects originally meant for rural children have been adapted for city youths; field corn and house plants are both welcome at county fairs. In addition to the urbanization of 4-H, the organization spread outside of the United States, and clubs can be found across the globe.

None of these changes happened overnight. In fact, many of the changes that occurred after World War II only had their roots in the wartime period. Wartime confidence in the Extension Service began during the Great Depression, allowing the organization to amplify their impact. However, trust in an organization can only be stretched so far, so funding from the Bankhead-Flannagan Act was a welcome addition. Increased funding allowed Extension to

further plant their roots in urban centers and increase their sphere of influence. Without this funding, Extension and 4-H very well may have remained mostly rural-oriented organizations. Increased funding and success in urban areas allowed 4-H to branch out across the globe. Projects and programs deemed important during the war, such as Citizenship, were further fostered in the postwar era, such as through the Citizenship Washington Focus (CWF) program. CWF is a program where 4-H youths from across the nation travel to Washington, D.C., during the summer to participate in leadership and citizenship workshops and activities.

Programs such as CWF and national 4-H conferences work to instill a particular set of values in 4-Hers. This is exactly like the use of songs at 4-H events and 4-H camp to promote a specific worldview among 4-Hers, one that centers on leadership, citizenship, healthfulness, and patriotism. Campaign drives and educational programs during World War II worked together to cement these values within 4-H. Youths were told that it was patriotic to hone their leadership and citizenship abilities and that keeping themselves healthy improved not only themselves but their entire community. Values begun in the early years of 4-H, fostered through the 1920s and 1930s, became some of the core ideas of the organization during World War II. These ideas and values became an intellectual and cultural tradition that has continued to impact, guide, and shape the Extension Service and 4-H into the 21st century.

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