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Article Summary: When they were not involved in active military operations, soldier-farmers frequently made their posts more self-sufficient by keeping gardens, even undertaking extensive farming operations. Their success varied, however, and officials expressed conflicting opinions about the appropriateness of farming as a military activity.

#### Cataloging Information:

Names: George Croghan, Henry Atkinson, Henry Leavenworth, Daniel Ketchum, William F Foster, Nicholas J Cruger, Norman Badger

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Photographs / Images: Private Henry Beleke and friends with prize vegetables grown in the post gardens at Fort Assiniboine, Montana, about 1885; Fort Laramie gardens

# To Plow, To Sow, To Reap, To Mow: The US Army Agriculture Program

BY MILLER J. STEWART

Eighteen to twenty thousand bushels of corn, 8,000 bushels of oats, 500 bushels of buckwheat, 600 bushels of barley, 1,200 bushels of potatoes and 500 tons of hay. . . .

And you will see barnyards that would not disgrace a Pennsylvania farmer, herds of cattle that would do credit to a Potomac grazier.

Were these statements the boasts of an early 19th century farmer? Were they the remarks of a country banker of the 1800s? No. These were made by military personnel at some frontier military posts.

Why was it that so many soldiers at frontier military posts, for a time at least, relinquished the sword for the plowshare, the musket for the hoe, the parade ground for the planting ground, and work denims for uniforms? Why were they plowing and sowing and reaping and mowing? And why were they reading farm journals instead of training manuals?

They had been performing these unmilitary tasks ever since the War of 1812 because the military frontier was pushed ever westward and ever further from the military base of supply. This movement westward posed serious problems to commanders of the western military departments. It often required weeks or months to haul provisions overland or to cordelle them up river. Cattle which furnished fresh beef for the garrisons could be driven only a short distance each day. As a result, subsistence supplies became dangerously low at western garrisons.

A partial solution to this problem as well as a reason why soldiers became farmers is contained in the War Department order of September 11, 1818, which specifically ordered that "the commanding officer of every permanent post and gar-

risons where public lands will justify such measure, will annually cultivate a garden, by the troops under his command, equal to supplying hospital and garrisons with the necessary kitchen vegetables throughout the year, and he will be held accountable for any deficiency in the cultivation." A later paragraph of this order provided that "more extensive cultivation" was to be commenced at certain designated established posts and at any future posts "established in the vicinity of the upper lakes." Furthermore it was ordered that "this cultivation of any public lands not otherwise appropriated, in the vicinity of garrisons and posts, . . . will embrace the bread and other substantial vegetable parts of the nation."<sup>1</sup>

A few months later on December 11, 1818, Secretary of War James C. Calhoun decreed that posts would now cultivate corn and keep and care for cattle. All of this was undertaken to avoid the expense of transportation, to achieve economy and to assure the health of the troops.<sup>2</sup>

Agricultural pursuits now competed for the soldiers' time. The post commanders would have to balance military necessities against the demands of agricultural labor. How well they succeeded will be the gist of this narrative.

*Not Soldiering but Farming*— In the Northwest Territories Fort Snelling, Minnesota, was the shining star in the Army farm program. It was surrounded by rich, well-watered land, and lush meadows which could provide sufficient forage for beef cattle. Forage for cattle seemed to raise the hackles of Colonel George Croghan, inspector general of the Army, who, after one of his early inspections of Fort Snelling, caustically remarked that "45 days had just been consumed in processing 500 tons of hay and perhaps 90 more are now to be given toward gathering 1,200 cords of firewood."<sup>3</sup> Time away from strictly military duties was of deep concern to post commanders, and a continuing complaint of Army inspectors.

The post commanders tried to avoid the time-consuming task of haying by seeking permission from the War Department to purchase forage from farmers who were beginning to settle near the posts. But the War Department denied the request, stating that the posts must be self-sufficient. Later this refusal was somewhat eased after it received a strong protest from William Beaumont, surgeon at Ft. Howard, Wisconsin, who stated that the mud and water covering the hayfields con-

tained poisonous plants and reptiles which greatly affected the men exposed to them.<sup>4</sup>

In the meantime the soldier-farmers at Fort Snelling were toiling in the fields. Governor Lewis Cass, traveling through the region in 1820, remarked after seeing 90 acres under cultivation in corn, potatoes, and wheat, that "the garrison was busy at other than soldierly duties."<sup>5</sup> A few years later another visitor to the post, Major Stephen H. Long, observed that some 200 acres had been planted to wheat, corn, oats, and potatoes with a variety of vegetables growing in the 20-acre post garden. Sometime later another visitor to the post, seeing soldiers cultivating corn in a field attached to it, wryly remarked, "It was certainly not exactly soldierly employment, but it was more manly, to our mind, than shooting and stabbing at \$8.00 per month."<sup>6</sup> From the above observations, it can be concluded that farm activities at Fort Snelling were well under way and showing signs of success.

The post commander, Colonel Joshua Snelling, dedicated to the farm culture program, hoped that Fort Snelling could economize even more by milling its own flour. With this in mind he obtained milling and grinding equipment from the Commissary Department in St. Louis<sup>7</sup> However, the colonel soon discovered that it was easier to grind corn for cattle feed than to mill flour. The crude equipment used produced a black, unpalatable bread which the men refused to eat. This problem was solved by installation of wheat cleaning machinery and storage of the wheat in a dry place. No further reference to black bread was noted. Charles Kuhlman, writing about the flour milling industry in Minnesota, credits Fort Snelling with the beginning of flour milling in that state.<sup>8</sup>

Farm operations at a few of the other Northwest Territory posts were carried on with varying success. For example, at Fort Dearborn, Illinois, the troops cleared 30 acres of land and planted it with a variety of cereals and vegetables. The next year, 1820, these recently converted farmers expanded operations by sowing 50 acres in corn and 35 in wheat. The corn yielded 10 to 14 bushels per acre, while the wheat went 8 to 14, a fairly good showing considering a first-year crop on virgin land. Later a horse-operated flour mill, which turned out 70 to 80 barrels of flour and a like quantity of corn meal, was added to the garrison's farm equipment.<sup>9</sup>

Farther west on the Illinois-Iowa border, the post commander at Fort Armstrong reported that a modest acreage had been planted to corn, peas, beans, and potatoes, enough to supply the garrison and hospital. Because the post lacked a grist mill, the livestock enjoyed more than their usual ration of corn.<sup>10</sup>

Farm operations at a few other forts did not fare so well. Troop strength at Fort Ripley in northern Minnesota was so low that farming operations could not be commenced at all, while the commanding officer at Fort Ridgely, Minnesota, reported that his troops had to construct buildings and could not, therefore, be detailed to farm operations. The Fort Howard, Wisconsin, surgeon who had earlier complained about the deleterious effects of haying, reported in 1822 that the cattle were doing so poorly they yielded little tallow for candles.<sup>11</sup>

Regarded as exceptional during the first year of farming Mother Nature's tantrums came to be taken for granted in following years by soldier farmers. For instance, Fort Snelling in 1822 experienced a wet spring which saw many flooded fields. A few years later disaster again struck when flocks of blackbirds "so thick they blocked out the sky," descended upon the corn fields and devoured every kernel in sight.<sup>12</sup>

Onslaughts of nature's deadly slings and arrows were not confined to Fort Snelling. In 1826 insects and blackbirds ravished gardens at Fort Dearborn, while Fort Edwards, in northeast Missouri, experienced a devastating drought in 1820 which completely wiped out the few turnip patches the soldiers did plant.<sup>13</sup>

Unhappily these frustrations and blighted hopes, however temporary they may have been, furnished ammunition to foes of the Army farm program. Expected economies did not materialize and erratic yields persisted, which prevented the Commissary Department from making accurate estimates in contracting for supplies.

Farming operations, too, had replaced drill and other strictly military duties needed by new recruits, upsetting many military purists. Many enlisted men complained that they were neither farmers nor laborers, but soldiers.<sup>14</sup> But if they didn't fancy themselves as farmers, they certainly were

laborers as all hands at newly established frontier military posts had to, of necessity, fell trees, construct buildings, chop firewood, and mow hay.

Colonel George Croghan, who for 20 years inspected these western posts, was convinced that the soldier should be allowed to return to his military duties and not boast of "his prowess as a tiller of the soil." Although he did not insist that soldiers never perform nonmilitary duties, he did consider such work secondary. "I would have the soldier point at his garden in proof of the good provision he has made during the short intervals from military exercise," he wrote, "rather than boastingly talk of his proficiency as a farmer; of the advantages of the broadcast over the drill, or of the five bushels of corn per acre made by Company C more than Company B."<sup>15</sup>

While the farming venture was taken in stride at most frontier forts, it was not so at Fort Atkinson, Nebraska, on the Missouri River; there it was an obsession. It was truly "not soldiering, but farming."

This fort, the gateway to westward migration, was located at Council Bluffs on the right bank of the Missouri River 9 miles north of what later became Omaha, Nebraska. An early post was established in September, 1819, down in the Missouri River flood plains by Colonel Henry Atkinson with units of the 6th Infantry and Rifle Regiment in June, 1819. It was named Camp Missouri and Cantonment Missouri. In June, 1820, Cantonment Council Bluffs was established on the bluffs nearby. This site was designated Fort Atkinson in 1821 on explicit orders of Secretary of War John C. Calhoun. This large military post remained active for only a short time—seven years; it was abandoned in 1827 on the recommendation of Colonel George Croghan, who held that the post had outlived its purpose, was unhealthy, and far from the starting point of the Santa Fe Trail, which was closer to Fort Leavenworth, Kansas, some 130 miles to the south.<sup>16</sup>

Garrisoned with an unusually large number of troops for that day, the average yearly strength being 692, it can readily be seen that subsistence and forage problems loomed large in the minds of post commanders. And Fort Atkinson was fortunate in having two commanding officers, Colonel Henry Atkinson and Colonel Henry Leavenworth, both of whom had



*Private Henry Beleke (left) and two friends with prize vegetables grown in the post gardens at Fort Assiniboine, Montana, about 1885. Courtesy Custer National Battlefield Monument, Crow Agency, Montana.*

practical knowledge of farming and who enthusiastically supported the Army farming program. They were assisted by Majors Daniel Ketchum and William S. Foster, who by their practical knowledge and managerial abilities kept the farm program a successful enterprise.<sup>17</sup>

Through the efforts of these men, Fort Atkinson became the Army agricultural showplace, where husbandry reigned supreme. Organization was the key word for the success of such a program and to insure that success, Major Ketchum was assigned additional duties as superintendent of agriculture and livestock; Lieutenant Nicholas J. Cruger was placed in charge of wheat.<sup>18</sup> Their duties were to see that the soldier-farmers performed their duties in an acceptable manner and that the crops and livestock showed substantial progress.

The bacon, sausage, and ham that graced the tables of the mess halls attested to the fact that Major Ketchum and aides had the situation well in hand. Some 230-300 hogs amply supplied the breakfast tastes of hungry soldiers, many of whom were pulling arduous farm duty. But the possibility of more such breakfasts dimmed when it was reported "an extraordinary increase of wolves" also relished ham and bacon.<sup>19</sup>

Because of its extensive farm operations, drill call for the soldier-farmers was not sounded; in its place fatigue call summoned these men to their farming tasks. Infantrymen dressed in fatigues formed up in front of their company supply rooms to draw rakes, shovels, hoes, and scythes, and marched off to their assigned farming areas, while men assigned to driving teams reported to the artillery park where horses and oxen were corralled.

Frequently, the farm details ate their meals in the field, bringing their rations with them; when near the post they would be marched in for a hot lunch. Extra pay could not be awarded for farm work, but the ever-present whiskey ration of one gill (about one cup) per man was an incentive. During harvest, however, Major Foster increased this ration.<sup>20</sup>

Farming details that worked some distance from the post were required to carry their weapons with them. Muskets were stacked close at hand as the soldier-farmers bent to their tiresome tasks. As the McCormick reaper had not yet been invented, the harvesting of grain crops was done by scythe, sickle, and cradle.<sup>21</sup>

At the end of the first season in 1820, the superintendent of agriculture and livestock, happily reported that his soldier-farmers harvested some 8,839 bushels of potatoes, 496 bushels of turnips, and some 10,000 bushels of corn. But the next year's harvest would gladden the heart of any frontier farmer. The corn crop yielded 26,400 bushels, and the hay lands yielded 250 tons of hay, which tickled the palates of the post herds of horses, cattle, mules, and oxen. And a few years later an inventory of livestock showed two English bulls, two common bulls, 112 calves, 96 yearlings, 43 young cattle, and 6 steers—a total of 382 cattle. This was exclusive of oxen used as teams.<sup>22</sup>

Under the supervision of Major Ketchum in 1826, farming activities blossomed into full flower. That year 512 acres (slightly over three-fourths of a section) were put under cultivation. Post and regimental gardens were laid out, root cellars dug and a granary (30" x 120") was built to store the bumper crop expected. To accomplish all of this, some 60 to 80 soldiers daily exchanged Army blue for rustic denim, and military equipment for tillage implements.<sup>23</sup>

Colonel Leavenworth could well be proud of his soldier-farmers at Fort Atkinson, but when Lieutenant Joseph Pentland refused to supervise work in the cornfield because it might injure his health, the colonel's ire was aroused; he refused to excuse the lieutenant from cornfield duty, even though he was of the opinion a willing non-commissioned officer would be better than an unwilling lieutenant.<sup>24</sup>

Inspector General Croghan was disturbed when upon arriving at Fort Atkinson in 1826 he saw all the time and energy directed to tilling the soil and care of livestock at the expense of military training and routine garrison duties. He declared Fort Atkinson the weakest of the posts he had visited and pleaded for a return to a system that would not "sink the proud soldier to a menial and reduce him . . . into a base overseer of a troop of awkward ploughmen." "Look at Fort Atkinson," he exclaimed, "and you will see barnyards that would not disgrace a Pennsylvania farmer, herds of cattle that would do credit to a Potomac grazier, yet where is the gain in this, either to the soldier or to the government?"<sup>25</sup> The colonel had a point. Fort Atkinson commanders went beyond the original intention of the War Department and by their efforts to excel in farming, almost forgot the primary purpose of a military establishment.

But in all fairness to military personnel at Fort Atkinson, the following facts should be considered before these soldier-farmers are too harshly condemned. (1) The garrison was not engaged in active military operations. (2) Daily routine of fatigue and drill left troops with plenty of free time, which if not properly used resulted in disciplinary problems. (3) Scurvy epidemic during the first year of the post taught the need for fresh vegetables. (4) The enlistment rolls of the 6th Infantry Regiment since 1819 showed 198 farmers had enlisted.<sup>26</sup> And many of the officers, including colonels Atkinson and Leavenworth, possessed farming backgrounds. It was small wonder that Fort Atkinson became so deeply involved in soldier farming.

Falling victim to floods, insects, and drouths could be compensated for by a good harvest the following year, but the Fort Atkinson soldier-farmers could not stand up to unsympathetic officials. The sharp criticisms of Colonel Croghan prompted Colonel Abraham Woolley, the post commander to issue orders in 1826 that "Farming hereafter is to be subordinate to military instructions and habits and is not to be made an excuse for neglect of duties strictly military."<sup>27</sup>

One most interesting aspect of Fort Atkinson farm activities must be told. It was the experimentation with various seeds (corn) secured from the Indians and from seeds purchased down river or grown on site. General Atkinson frequently conferred with the Indian tribes on agricultural matters. The corn seed he obtained developed into a sturdy strain, which has been improved over the decades into the highly bred varieties growing in Nebraska and Iowa today.<sup>28</sup>

Nevertheless, the end was near. The last crop was harvested in the fall of 1826, and some six months later, in January, 1827, the post flag was lowered for the last time as the remaining troops marched out of the main gate and left for Jefferson Barracks.

The Army agricultural showplace had harvested its last crops, but the Army farm program begun so hopefully in 1818, and maintained with varying success, continued for another five years until the acute need for better trained soldiers outweighed the necessity of self-sufficient military posts. Taking heed of the shortcomings of the farm policies, the Adjutant General in 1833 released post commanders from the obligation

to engage in any field cultivation beyond kitchen gardens. But did large field cultivation cease completely? A look westward answers that question.

*The Great Plains and the Southwest*—After the Mexican War (1848), the military frontiers pushed farther westward into the vast expanse of desert and plains, into the very heartland of the Western Indian's domain. It was in this land of interminable distances, few supply points, and sparse white inhabitants that the frontier Army established military posts to guard the trails of westward-bound immigrants, keep the peace, and protect settlers who chose to carve for themselves a home in this new land.

Faced with these new circumstances and the logistical problems of supplying newly erected forts, the source of supply months away and transportation costs astronomical, the War Department revived its once discredited farm program. And so when General Order No. 1, issued January 1, 1851, was received at frontier military posts, it may have touched off anger and triggered unhappy memories of military duty lost to an unpopular farm program.

But this was not so at Fort Leavenworth, Kansas, where large scale farming had continued after the order of 1833. Fort Leavenworth was established May 8, 1827, by Colonel Henry Leavenworth, the Fort Atkinson farmer-general. Originally intended to protect the Santa Fe Trail, it also served as an important supply depot for all military posts west of the Rocky Mountains.<sup>29</sup>

Tillage of the soil at this venerable old post had sputtered along for several years until, coincidentally with the order of 1851, it burst into full bloom.

Previous to this, controversy had arisen as to whether civilians or soldiers should do the farming. Colonel George Croghan of the Inspector General's Department, visiting the post in 1838 and noting the 1,000 acres under cultivation, conceded farm operations were mildly successful, but thought the employment of civilian farm laborers would be more profitable.<sup>30</sup> Major James MacRae, the post quartermaster, entertained the same thoughts. He queried Quartermaster General Thomas Jesup about the idea. Jesup replied that it was no longer necessary for the military at Fort Leavenworth to carry on farm operations, and they should lease the farm to "a

careful person" acceptable to the post commander and one who would "probably give no trouble at the fort."<sup>31</sup>

But the post commander, Colonel Stephen W. Kearny, did not agree with General Jesup, and the soldiers continued to farm at a loss. Inspector General Croghan attributed this loss to military officers "ignorant of even the first principles of farming,"<sup>32</sup> a situation which occurred at many posts.

In spite of these problems, farm operations improved. The assistant post quartermaster proudly reported that the 1851 wheat crop showed a profit of \$6,000 and he anticipated an increase in profits from the 1852 harvest.

Large farm operations needed a number and variety of implements and the Fort Leavenworth implement yard gave evidence of this. One could see plows from the manufacturing centers of nearby St. Louis, Missouri, and Peoria, Illinois, with a few from as far away as Worcester, Massachusetts. Horsepower reaping and mowing machines, cultivators, harrows, horse rakes, one and six horsepower threshers, corn shellers, and seed drills were all in line, with hand implements of all kinds stored in nearby sheds.<sup>33</sup>

Because of the extensive acreage under cultivation at Fort Leavenworth, Inspector General James F. Rusling in 1866 recommended that the government reduce its acreage of 6,840 acres to 1,200, and that the two government farms and other outlying lands be sold at public auction and opened to nearby settlers for the sake of economy.<sup>34</sup> Apparently this recommendation was never favorably acted upon as records show that shortly after the end of the Civil War, the government leased the land to "responsible parties" who farmed it successfully.<sup>35</sup>

With large-scale military farming operations approaching a standstill at Fort Leavenworth, it is time to discourse upon farming farther west in the newly acquired territory of New Mexico, where military posts were among the most difficult and expensive to supply. The garrisons at these remote posts were dependent upon sources outside the department for almost everything they needed.

Soon after the almost bloodless occupation of New Mexico in 1848, the task of providing military defense and control began. Fort Union, New Mexico, some 50 miles east of Santa Fe, was established by Colonel Edwin V. Summer in the autumn of 1851 to protect the Santa Fe Trail and to serve as main supply

depot for garrisons farther west.<sup>36</sup> Farm operations at this post proved only moderately successful.

Colonel James Mansfield, Inspector General's Office, reporting on the condition of military posts in New Mexico, gives this picture of farming and gardening. He reported from Las Lunas that the kitchen garden was doing well and that the small farm under the direction of Captain Richard S. Ewell, later a famed Confederate general, was quite successful. At Fort Conrad, some 200 miles southwest of Fort Union, the garden looked good, but the farm was a losing proposition due to the expense of renting land, repairs to the well, payments to hired hands, and loss of one mule. Reporting from Fort Webster, New Mexico, some 90 miles southwest of Fort Conrad, Colonel Mansfield noted that the farm showed only fair results, while the post garden did very well. The farm at Fort Defiance in far northeastern Arizona was a failure.

Colonel Mansfield, like his earlier counterpart, Colonel Croghan, came to the same conclusion—that farming carried on by troops was unsuccessful and unprofitable. A loss of \$14,000 was reported from New Mexico alone.<sup>37</sup>

Losses such as this coupled with high operating expenses and time lost by soldiers from essential military duties, were factors which militated against a continuance of the farm program. These doubts assailed the inspectors and post commanders, and caused military authorities in Washington, DC, to view with alarm the entire farm culture program. The adjutant general added up accounts and in light of the dismal facts, recommended the discontinuance of the program and that Congress be asked to make a deficit appropriation to cover Army losses. So the secretary of war, with the Army general-in-chief concurring, issued General Order No. 3 on February 9, 1857, ending the extensive farm culture program.<sup>38</sup>

While extensive farm operations came to a halt, cultivation of kitchen gardens, a concomitant of the extensive farm program inaugurated in 1818, did not. These vegetable gardens continued to be cultivated well into the 1890s, when fresh vegetables from the commissary were added to the soldier's daily ration.<sup>39</sup> Kitchen gardens, whether post, regimental, or company, ranged in size from less than one acre at some eastern military posts to 20 acres or more at western frontier garrisons.

If there was no available land on the post itself, post commanders could arrange to cultivate off-post land. For instance, a roster of soldiers—two daily—at Fort Barrancas, Florida, kept a post garden of 10 acres, 1 mile north of the post hospital. Though the soil was poor and the garden dried up because of a shortage of water, it did produce a fair crop of cucumbers, butter beans, watermelons, tomatoes, and potatoes.<sup>40</sup> The soldiers at Fort Johnson, North Carolina, Plattsburg Barracks, New York, cultivated plots close to their posts.<sup>41</sup> The longest distance to a garden was apparently at Fort McRae, New Mexico, where soldier gardeners shouldered their hoes, shovels, picks, and other implements and marched off some 6 miles to battle weeds and hard crusted soil. Despite their arduous labors, a critical shortage of water caused Fort McRae's garden to be only partially successful. The problem of how to get enough water during the growing season was a constant challenge to Army gardens.<sup>42</sup>

Nevertheless, despite the shortage of water and poor soil, harvest from kitchen gardens was often so abundant that extra produce could be sold or given away. One traveler left Fort Snelling with his canoe so laden with garden produce that it almost capsized.<sup>43</sup>

Army surgeons, close observers of the health of the troops, were in a good position to remark upon the success or failure of post gardens. At Fort Ontario, New York, the surgeon reported that gardeners kept the garrison constantly supplied with peas, beans, radishes, potatoes, and beets.<sup>44</sup> The ingenious gardeners at Fort Stockton, Texas, whipped the water shortage by devising an excellent irrigation system which allowed them to furnish the garrison with an ample supply of okra, onions, cucumbers, potatoes, and beets.<sup>45</sup> Almost every variety of vegetable known, except sweet potatoes and tomatoes, were grown at Fort Stanton, New Mexico.<sup>46</sup> The 10 acres at Fort Gibson, Indian Territory, easily supplied that post with a wide variety of vegetables. Fort Sanders, Wyoming, during the summer of 1870, produced on its 25 acres 840 bushels of potatoes, 300 bushels of beets and turnips, 200 heads of cabbage, and peas, beans, lettuce, and radishes in abundance.<sup>47</sup>

At Fort Bayard, New Mexico, in 1890, vegetables in excess of post needs were not sold but were distributed to the units.

The 13-acre garden was cultivated by one chief gardener and his assistants. In terms of cash this garden was valued just short of \$2,000. The variety of vegetables grown was amazing: radishes, spinach, onions, lettuce, peas, turnips, beets, cabbage, beans, corn, melons, cucumbers, tomatoes, okra, pumpkins, cauliflower, peppers, carrots, and parsnips—a vegetarian's delight which greatly contributed to the health and diet of the troops.<sup>48</sup>

Whenever nature and the insects behaved, produce could be grown in ample quantities and of such a variety that all troops could have plenty of nutritious food. But not all soldier gardeners were equally successful. The garden at Fort Brown, Texas, in 1870 was all but wiped out by a prolonged drouth. In Kansas drouth and ravenous insects took many post gardens, and one post suffered a crop failure because of inexperienced soldiers. Grasshoppers at Fort Garland, Colorado, literally ate up the military garden.<sup>49</sup>

The Dakota species of grasshopper awaited the appearance of the 7th US Cavalry to attack the vegetable garden at Fort Abraham Lincoln, North Dakota. As the first flight of grasshoppers swooped low over the garden, a contingent of soldiers and soldiers' wives grabbed pots, pans, and other noisemakers from the kitchens and with pounding and shouting attempted to drive the insects away, but the impudent hoppers were unaffected by the noise and continued to eat their fill before flying away, carrying with them the garrison's "dreams of radishes and young beets."<sup>50</sup>

But it was left to an officer at Fort Rice, North Dakota, to handle the grasshopper invasion in a unique manner. Left at the fort when the regiment moved out on the Yellowstone Expedition this officer planted a garden. The vegetables grew nicely with the promise of a big harvest, when it happened—gluttonous grasshoppers zeroed in on the post garden and devoured every green vegetable in sight. Following the grasshoppers, though, came their enemies—blackbirds, who in turn consumed the satiated hoppers. Watching this scenario, an idea came to the colonel. He got a shotgun and gathered in as many birds as he wanted, which he made into a pot pie. Afterwards, he humorously remarked to inquisitive questioners, "The \_\_ hoppers came along by \_\_ and ate my garden, by \_\_ then the birds ate the hoppers, by \_\_ and we

killed and ate the birds, by \_\_\_; so that we were even in the long run, by \_\_\_." The reader may put in the proper expletives.<sup>51</sup>

Aside from losses by natural disasters, the soldier gardeners at Fort Atkinson, Nebraska, experienced losses through oversight and theft. For example, they noticed that the beans did not produce well the first year. They had planted pole beans but failed to provide poles for the climbing beans.<sup>52</sup>

Thefts of fine roasting ears of corn and the delicious taste of raw vegetables proved too great a temptation to some of the Fort Atkinson garrison. Even the "non-coms" were unable to resist small thefts. For instance, Sergeant William Harrow of the 6th US Infantry was court-martialed for "advising, aiding, and conniving at a robbery of the garden." In consequence of his repeated improper conduct, Sergeant Harrow was reduced to the ranks.<sup>53</sup>

As we read earlier, Fort Atkinson was king of military agriculture, and this led to the practice of giving monetary awards to companies which raised the largest quantity of vegetables. As a result it was not uncommon for company gardens to be plundered by soldiers from other units. A Private Green of Company D was sentenced to 10 days confinement and his whiskey ration stopped for 60 days for stealing cucumbers from Company H's garden. The sentence was remitted in consideration of Private Green's good conduct and general good character. Private Sanders of Company K was not so fortunate. Caught stealing potatoes from Company A's garden he was confined to the guard house for 15 days at hard labor and his whiskey ration stopped for one month.<sup>54</sup>

Others just didn't like gardening. One of these, Private Archibald McCullough, who complained of lameness and refused to leave the post hospital, received a sentence of 15 days' solitary confinement on bread and water, a \$5.00 fine and stoppage of his whiskey allowance for 15 days.<sup>55</sup> It was hoped this punishment might give the private a more favorable attitude toward gardening.

Other Nebraska garrisons west of Fort Atkinson apparently had few exciting agricultural incidents to report. Although established a few years before the extended farm program ended, Fort Kearny, II (1848) in central-Nebraska never had an agricultural program that amounted to much. Major Osborne Cross, passing that way in the spring of 1849, observed that

cultivation of the soil had been most unproductive. Years later vegetable gardens were still sorry affairs, which prompted the post surgeon in 1870 to simply say, "no gardens."<sup>56</sup>

It is not known whether gardens were planted and tended during the early years at Fort McPherson, Nebraska, near North Platte, but Surgeon Philip C. Davis in 1870 reported that in March one sergeant and six enlisted men were detailed to enclose land for a post garden near the Platte River northeast of the post. Rude shelters were built for the gardeners, who put 11½ acres of land under cultivation. Irrigation water was pumped from the river. The garden yielded lettuce, radishes, cucumbers, and beets in profusion, but the ever-shifting sands of the Platte eventually rendered the pumps next to useless, thus depriving the garrison of their essential vitamin supplement.<sup>57</sup>

A long-time civilian employee at Fort McPherson, Moses Sydenham, further elaborates upon Surgeon Davis' remarks. In a letter to the *Omaha (Nebraska) Republican* on July 25, 1870, Sydenham states that private garden plots graced the frontage of many officers' quarters. Also feeling that more attention should be given to the unique irrigation system at their post, Sydenham a few months later on August 17, 1870, informed readers of that journal that the unusual irrigation system consisted of a series of pumps worked by horse power and a waterwheel so placed that an abundant supply of water could easily be conveyed to the post gardens.<sup>58</sup>

While still in the immediate vicinity of Fort McPherson, mention should be made of the small Army garrison at North Platte Station, an outpost of Fort McPherson. This post, established January 30, 1867, was situated just west of the confluence of the North and South Platte Rivers, a few miles west of Fort McPherson. Here the ¾-acre plot of rich alluvial soil, with proper irrigation during periods of periodic drouth, could be expected to grow abundant crops of vegetables.<sup>59</sup>

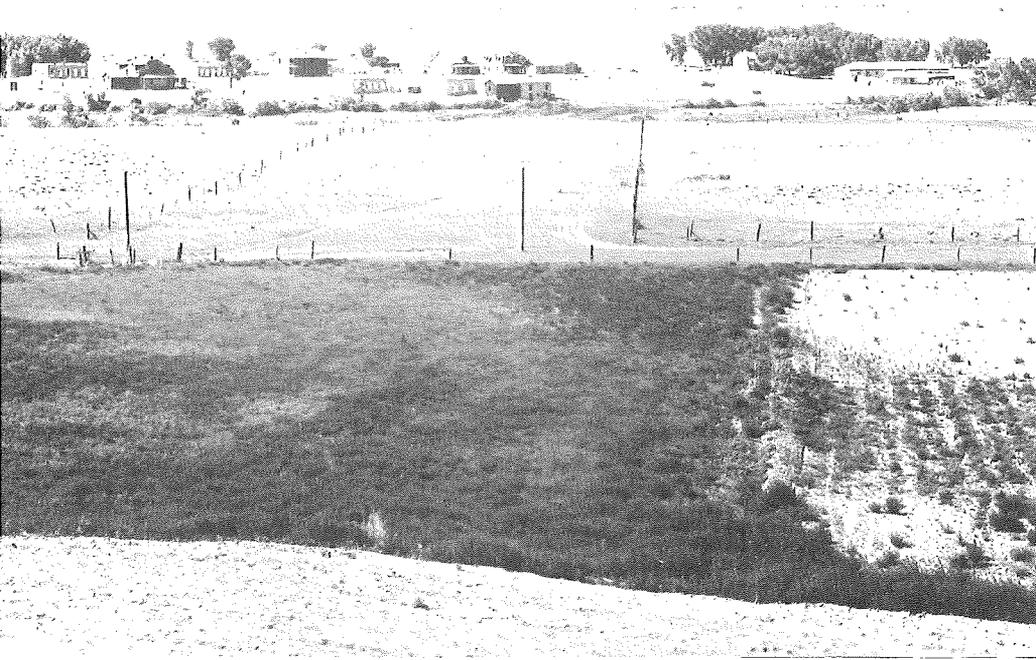
Moving farther west to the prairies of western Nebraska, in what is now Cheyenne County, the military established Sidney Barracks (later named Fort Sidney) in the fall of 1867. Soldiers of the garrison soon began the cultivation of private and post gardens which greatly supplemented the bland unimaginative Army ration. General Nathan A. M. Dudley, commenting on his first years at Fort Sidney, recollected that

he "made all of Sidney Barracks" and constructed the *acequia* (irrigation canal) from Lodgepole Creek, a tributary of the Platte River, which furnished the garrison with water. In addition to cultivating the general's private garden, soldiers of the garrison boasted of a 3½ acre post garden which provided the troops with a wide variety of vegetables.

During his gardening pursuits the perceptive general took credit for being "the first party to make the discovery that alkali was a good fertilizing agent when a large amount of water was applied to the soil."<sup>60</sup>

A short, stormy season drew comment from Post Surgeon Charles V. Pettey of Camp Sheridan, Nebraska, in his report for 1875. Soldiers at this storm-buffed outpost 43 miles northeast of Fort Robinson, Nebraska, managed to coax from the soil a short crop of peas, corn, potatoes, onions, cabbages, and few tomatoes. However, Mrs. Corbusier, wife of the assistant surgeon, Colonel William H. Corbusier, in her diary mentions that she grew a profusion of flowers and wide variety of vegetables, "more than we could eat." The surplus was given to grateful friends at Fort Robinson and Pine Ridge Agency a short distance from that fort.<sup>61</sup> Mrs. Corbusier must have had a greener thumb than the boys in blue. The enlisted men of these posts most often cultivated gardens under supervision of officers whose work did not appear to be burdensome—the treasurer, chaplain, or surgeon. The 3½-acre garden at Omaha Barracks (Nebraska), was under the supervision of that post treasurer.

Chaplain Norman Badger of Fort Concho, Texas, not only saved souls, he saved gardens as well. With six soldiers Badger started a 10-acre post garden on leased land from the nearby Bismarck farm.<sup>62</sup> Chaplain Badger, who received high commendation from the post surgeon, managed the garden so efficiently that it provided an ample daily supply of fresh vegetables, including cantaloupes and watermelons, to the garrison and post hospital.<sup>63</sup> Then, as it did to so many post gardens, disaster struck. The owner of the Bismarck farm caught onto the "unfair" competition posed by the military gardeners and canceled their lease. Undaunted, Chaplain Badger cast about for another plot of ground, but was forced to settle upon a quarter acre of dry land on the post. This entailed hauling 10 barrels of water daily to the parched soil,



*Fort Laramie gardens. Courtesy Denver Public Library.*

back-breaking labor which dimmed the ardor of the soldier gardeners so much that gardening at Fort Concho came to a temporary halt.<sup>64</sup>

Farther north Chaplain Alpha Wright, for six years (1866-1872) gave unstintingly of his agricultural knowledge and experience to the gardening efforts at Forts Laramie and D. A. Russell, Wyoming. While troops of these garrisons were busy fighting Indians, Alpha Wright was fighting weeds, drought, and insects on 20 acres of virgin land in order to supply the garrisons and post hospital with a daily supply of vegetables.<sup>65</sup>

Soldiers performing nonmilitary duties were a common sight at most western military posts during the latter half of the 19th century, but daily routine varied from post to post in accordance with local conditions and official temperament. A story is told of a Fort Union officer who had a soldier court-martialed after he observed the disgruntled private pick some cucumbers in "an insubordinate manner."<sup>66</sup>

Where large acreages were under cultivation, much of the hard labor was done by fatigue parties who dug irrigation ditches, hoed weeds, and generally assisted in planting and

harvesting. Work assignments varied from post to post: some were for only one day or one week, others for several weeks. Some post and company funds were handsomely augmented by the sale of garden products. Mrs. Ellen Biddle, a soldier's wife at Fort Harker, Kansas, reported that the post fund there was increased by some \$1,200,<sup>67</sup> a goodly sum in those days.

The disposition of a company garden was an intriguing problem whenever companies changed posts and especially when the transfer took place between planting and harvest. Usually these problems were amicably worked out, the incoming company paying a fair price for the garden. But occasionally the transaction reached an impasse, and the post commander had to appoint a board of survey to settle the matter.

This happened at Fort Bayard, New Mexico, in August, 1888, when Company D, 10th US Cavalry, relieved Company A, 13th US Infantry. Company A's garden consisted of 10 rows of cauliflower, a patch of turnips (26 x 11 paces), a patch of beans (80 x 12 paces), and six rows of lettuce 80 feet long. The onions, cabbages, and cauliflower were in good condition, the beans in fair condition, but the turnips had been destroyed. The board of survey estimated that about three-quarters of an acre had been planted, and taking into account the present condition of the garden and the area involved, they appraised it at \$60. As Company D had only half that amount, the board recommended that it send \$30 to Company A immediately and cover the balance before September 30. But not all transfers went as smoothly as this one.<sup>68</sup>

Other problems that tended to cause controversy between transferring companies came about when it was unclear whether payment was expected or not, or when a garden was left in promising condition, but allowed to become overgrown with weeds and dry up before payments were decided upon. In some cases companies left without making provision for sale of their gardens. This last problem confronted the Fort Bayard authorities. A veritable blizzard of paperwork flew back and forth between company and post headquarters, reaching as far as department headquarters before the dispute between two companies could be resolved.<sup>69</sup> Meantime the vegetable garden succumbed to weeds and neglect, and the new owner had no harvest.

While most of the enlisted men toiled at farm chores, one

Sergeant Bennett, when stationed at a number of New Mexico posts, spent much of his time rounding up stray government cattle or traveling from ranch to ranch buying as many cattle as possible for the winter months.<sup>70</sup> Raising livestock by post order, though occasionally as a sideline by individual officers, was found in some areas. Officers arriving at Fort Fetterman, Wyoming, in 1875 brought cows and chickens. Most laundresses kept chickens and a cow or two. It wasn't unusual for the post hospital to keep milk cows for the benefit of patients. If an officer wished, he could purchase cows in Cheyenne for \$45-\$125 each and chickens at 75c to \$1.00.<sup>71</sup>

Some officers arrived for duty at Fort Phil Kearny in north-central Wyoming with cattle, poultry, hogs, and dairy cattle. The wolves got the turkeys, the chickens died, and the Indians ran off the livestock. Cattle could not be driven to pasture because soldiers could not be spared for herdsmen. By mid-October, the livestock was eating hay intended for winter use. Texas cattle driven to Fort Reno, Wyoming, did poorly on the grade of corn fed them and during the winter of 1860 were butchered. Beef steak, hamburger, and ribs were added to the menu.<sup>72</sup>

The soldier-farmers and gardeners "fought" in denims, with hoes, rakes, shovels, scythes, and other agricultural implements as their weapons. Theirs was an unmilitary duty often performed amid conflicting official opinions, less than enthusiastic commanders, natural disasters, and man-made obstacles. Yet, they contributed to the self-sufficiency of western frontier posts and provided their garrisons and hospitals with a goodly supply of vitamin-rich vegetables.

## NOTES

1. *American State Papers*, Class V, Military Affairs, Gales and Seeton, Washington, DC, 1832, Vol. II, 265.

2. *Ibid.*, Vol. 1, 781.

3. Colonel George C. Croghan, a native of Kentucky, spent 20 years inspecting western forts. His reports are frank, incisive, sometimes laudatory, often critical. He spent more time on tours of inspection than in the office. A Mexican War veteran, Colonel Croghan died of fever in New Orleans, January 8, 1849. See George Croghan, *Army Life on the Western Frontier: Selections from the Official Reports Made between 1826 and 1845 by Colonel George Croghan*, edited by Frances Prucha (Norman: University of Oklahoma Press, 1958).

4. Frances P. Prucha, *Broadaxe and Bayonet* (Lincoln: University of Nebraska Press, 1967), 130.

5. Marcus L. Hansen, *Old Fort Snelling, 1819-1858* (Minneapolis: Ross and Haines, 1958), 28.
6. *Ibid.*, 95-96.
7. Prucha, 122.
8. Charles B. Kuhlman, *The Development of the Flour Milling Industry in the United States* (Boston: Houghton-Mifflin, 1929), 104.
9. Prucha, 124.
10. "Letters Received," Commissary General of Subsistence, Entry 11, Vol. 2, RG 192, NARS.
11. *Ibid.*, Entry 11, 12.
12. H. H. Sibley, "Reminiscences: Historical and Personal," Minnesota Historical Society Collections, I (1907), 387-388.
13. Prucha, 124.
14. *Ibid.*, 126.
15. Croghan, 6-7.
16. Robert W. Frazer, *Forts of the West* (Norman: University of Oklahoma Press, 1965), 85.
17. Colonel Virgil Ney, *Fort on the Prairie* (Washington, DC: Command Publications, 1978), 146-147.
18. Order No. 2, 208, 6th US Infantry Order Book, March 6, 1822-October 24, 1824, RG 393, NARS.
19. "General Atkinson to Commissary General of Subsistence, November 3, 1821," Entry 11, Vol. 2, RG 192, NARS.
20. Order No. 12, 6th US Infantry Order Book, March 6, 1822-October 6, 1823, RG 393, NARS.
21. Ney, 143.
22. *Ibid.*, 142.
23. Sally A. Johnson, "The Sixth's Elysian Fields," *Nebraska History*, 40 (March, 1959), 11-12; *Military Life at Fort Atkinson, 1819, 1827* (Master's thesis, University of Nebraska, Lincoln, 1957), 143.
24. *Ibid.*
25. Croghan, 6-7.
26. Ney, 134.
27. Johnson, "The Sixth's Elysian Fields," 12.
28. Ney, 148.
29. Frazer, 56.
30. Croghan, 83-85.
31. *Letters Received*, OQMG, "General Jesup to Major MacRae, April 20, 1840," Entry 289, RG 92, NARS.
32. Croghan, 88.
33. *House Ex. Doc. No. 2*, 32nd Congress, 1st Session, 1851-52, "Colonel Ogden to OQMG," 292-293.
34. *House Ex. Doc. No. 45*, 39th Congress, 2d Session, 1866-1867, "Report General Rusling, Ft. Leavenworth, August 6, 1866," 8.
35. Elvid Hunt, *History of Fort Leavenworth, 1827-1927*, (Fort Leavenworth, Kansas: General Services School Press, 1926), 152.
36. Frazer, 105.
37. James King Fenno Mansfield was born in New Haven, Connecticut in 1803, and graduated from West Point in 1822. He was appointed a lieutenant in the Corps of Engineers and rose to a colonel commanding the Inspector General's Department in 1853. As a major general commanding the XII Corps at Antietam in 1862, he was fatally wounded. Mark M. Boatner, *Civil War Dictionary* (David McKay Co., 1959), 598.
38. *War Dept. AGO*, General Orders No. 3, dated February 3, 1857.

39. See Erna Risch, *Quartermaster Support of the Army: A History of the Corps, 1775-1939*, (Washington DC: Government Printing Office, 1963).
40. *War Dept. Surgeon General's Office, Circular No. 4*, "A Report on Barracks and Hygiene," 1870, 158.
41. *Ibid.*, 55, 243.
42. *Ibid.*
43. Prucha, 121.
44. SGO, Circular No. 4, *passim*, 108-336.
45. *Ibid.*
46. *Ibid.*
47. *Ibid.*
48. "Letters Sent, Ass't. Adj. Gen., Dept. of Arizona, Jan. 1, 1890," Microfilm T320, Roll 2, RG 393, NARS.
49. SGO, Circular No. 4, 322.
50. Elizabeth B. Custer, *Boots and Saddles* (Norman: University of Oklahoma Press, 1961), 139-140.
51. Charles Braden, "The Yellowstone Expedition of 1873," *Journal of the US Cavalry Association* (Armored Cavalry Association), XVI (July, 1905), 240-241.
52. Johnson, *Military Life at Fort Atkinson*, 140, 141, 147, 149.
53. *Ibid.*
54. *Ibid.*
55. *Ibid.*
56. Merrill Mattes, *The Great Platte River Road* (Lincoln: Nebraska State Historical Society, 1969), 344; SGO Circular No. 4, 183.
57. SGO Circular No. 4, 236; SGO Circular No. 8, 358.
58. Letters from Moses Sydenham, *Omaha Republican*, July 25, 1870; August 17, 1870.
59. SGO Circular No. 4, 337.
60. SGO Circular No. 8, 374. R. Eli Paul, editor, "Battle of Ash Hollow, The 1909-1910 Recollections of General N. A. M. Dudley," *Nebraska History*, 63 (Fall, 1981), 384.
61. SGO Circular No. 8, 374. Colonel William T. Corbusier, "Camp Sheridan, Nebraska," *Nebraska History*, 42 (March, 1961), 33.
62. See SGO Circular No. 8.
63. Everett J. Haley, *Fort Concho and the Texas Frontier* (San Angelo, Texas, 1952), 294.
64. Earl Stover, *Up From Handymen: The United States Army Chaplaincy, 1865-1920* (Washington, DC: Office of Chaplains, GPO, 1977), 45.
65. *Ibid.*
66. Story told to this writer by Fort Union official, summer, 1977 (unverified).
67. Ellen McG. Biddle, *Reminiscences of a Soldier's Wife* (Philadelphia: J. B. Lip-pincott, 1907), 99.
68. Letters sent, post commanders, Fort Bayard, New Mexico, 1888, *Micro T 320 Reel 1*, RG 393, NARS.
69. *Ibid.*
70. Richard C. Gamble, *Life at Frontier Military Posts, 1830-1860*, (Doctor's dissertation, University of Oklahoma, 1956 on microfilm, Ann Arbor, Michigan), 111.
71. Robert A. Murray, *Military Posts in the Powder River Country of Wyoming, 1865-1894* (Lincoln: University of Nebraska Press, 1968), 61-63.
72. *Ibid.*