

Improving Socialist Animals: American Farming Experts on the Soviet Collectivization

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Using the first-hand accounts of two American experts on collective pig farms in 1930 and 1931 as evidence, this paper explores the disconnect between the ambitions for new collective farms set out in the First Five Year Plan and the reality of these farms as it was experienced by these two foreign specialists. These accounts give historians insight into the failures and frustrations of early collectivization as well as the ways in which unexpected, biotic factors such as disease and nutrition had a tremendous influence on industrial farming in the Soviet Union, limiting its progress and stifling growth in the agricultural sector.

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In November of 1929 the Central Committee modified the first Five Year Plan of the Soviet Union to include reforms for farms and rural areas. This addendum reorganized and collectivized the majority of Soviet farms. Historians have focused on the problems collectivization created for grain production and distribution across the country, but almost ten percent of newly collectivized farms were earmarked by the Commissariat of Agriculture to specialize in raising livestock to help increase national supplies of meat and milk, and these animal farms have been overlooked. The centrality of these farms increased dramatically in 1930 after mass protests against collectivization slaughtered significant numbers of the country's cows, sheep, pigs and horses (Viola, 1999). Soviet animal farms received extra money and attention and were intended to be models for future collective farms. Because of the extra support they received, historians and economists have long assumed these model farms experienced inevitable success and because of this, they have largely ignored their fate (Davies, 1980). In fact, many of these farms became expensive, embarrassing failures for the state. This article examines the earliest downward trajectories of two of these farms through the eyes of two American scientific experts; agricultural specialists who had been hired by Amtorg, the Soviet trade representation in the United States to help improve the Soviet Union's first generation of animal farms.

Before collectivization few farming operations had specialized in livestock, and there were few agricultural professionals who were trained in the feeding, breeding or veterinary care of farm animals. The People's Commissariat for Agriculture struggled to fill these gaps of expertise, hiring outside experts from the United States, Britain and Germany to lend their assistance to the task of building successful animal farms (Dalrymple, 1964, p. 192). Ultimately, the inability of the state to manage these new animal farms effectively was a significant failure in early Soviet agricultural modernization that would haunt the country for decades.

The famine in Ukraine and Southern Russia during 1932 and 1933 overshadowed the initial struggles of collective farms, but the organizational problems that these farms in particular encountered in their first two years of operation portended years of chaos and disorganization. Moshe Lewin has noted that "the first plan...produced a kind of self-perpetuating mechanism in which uncoordinated and quite arbitrary economic targets served to enlarge the scope of 'planning' without necessarily improving order or efficiency on the ground" (Lewin, 1973, p. 287). Mismanagement, cronyism and a revolving door of local leadership hurt agricultural productivity in the years after collectivization. In addition to human failures, Soviet authorities were in denial

about just how hard it would be to turn small family farms in marginal parts of the country into robust communal surplus producers. Natural limits of climate and disease were initially assumed to be surmountable, but these factors were a steeper obstacle for early Soviet agricultural industrialization than initially imagined.

The two American livestock specialists both came from the state of Iowa. George Heikens and Guy Bush worked in the Soviet Union from the early summer of 1930 until the end of the summer of 1931. Their letters home and to Soviet officials offer early candid critiques of the new post-collectivization animal farms of the Soviet Union and these observations contain thick descriptions of two remote collective farms that had been earmarked to specialize in swine breeding during these years. As a source base, these letters have limitations. Nevertheless, their observations give rich and detailed accounts of the everyday workings (and dysfunctions) of village life in the immediate aftermath of collectivization. Both Bush and Heikens were naïve observers: neither of them spoke Russian, neither had ever travelled outside of the United States before this trip, and both of them, while curious about the Soviet Union's experiments with Communism, remained patriotically American, and regarded Soviet policies most often with bemusement and occasionally with contempt. The histories set out in their letters reveals as much about their own shortcomings as experts and emissaries as they do about the everyday activities of the villages where Heikens and Bush lived.

However, because of their training and their elevated status as foreign specialists, Guy Bush and George Heikens were also authority figures on the farms where they worked. They had daily interactions with the managers, veterinarians and other officials that administered these new institutions. Both sets of letters are full of observations about how the farms were run and opinions (however biased) about what kinds of mistakes the managers and animal caretakers were making. Of the greatest interest to this paper, both Heikens and Bush list actions and improvements on the farms that managers and authorities in Moscow planned to make that, for one reason or another, never came to pass. Because failure and shortfalls were anathema to the Soviet trope of progress and modernization in this period, the distance between the plan and the reality is almost never made explicit in internal official reports produced by these kolkhozes. Bush and Heikens may have been naïve and limited in their observations of the farms where they worked, but their critical perspective and their ability to identify the distance between the plan and the reality on the ground of their respective kolkhozes make these letters, problematic as they are, valuable sources for understanding some aspects of the daily administration of collective farms during this era.

Indeed, the failures and shortcomings Heikens and Bush perceived in the post-collectivization, pre-famine Soviet countryside were issues that would become the primary stumbling blocks for Soviet agricultural organization on collective farms until after World War II. In particular, Heikens and Bush consistently found three problems in their collective farm placements: incompetent managers, a chaotic and completely unpredictable schedule of performance review and project evaluation, and an unacceptably high death rate among the animals. It is important to note that while two of these are clearly management problems that were common across industries during the First Five Year Plan, the last issue, that of livestock mortality, was particular to the sector of animal agriculture. While much has been made of the slow recovery of animal stocks during the 1930s, it is important to note that much of this lag was due to biotic factors such as disease or exposure. While poor management and poor work organization served to exacerbate these biological realities, they often were not the root cause of such hardships. The inability of collective farm managers and Swine Trust bureaucrats to improve the material conditions of either pigs or humans on the animal farms where Heikens and Bush were stationed



Swineherds in Rodomonovo, 1930

was the failure that became the stumbling block of industrial agriculture for the Soviet Union. While definitions of industrialization typically focus on labor organization, mechanization and the scale of production, the experience of the first generation of animal farms in the Soviet Union exposed a category of industrialization that was initially ignored by Soviet managers: anthropogenic control over nature. Gaining control over the nature of pigs proved more elusive and more expensive on the two farms that Bush and Heikens observed than their employers, the Swine Trust, had initially anticipated. These stumbling blocks, identical in the experiences of both Heikens and Bush, point to a larger and more systemic problem of realizing ambitious plans on disorderly, poorly run collective farms during the first Five Year Plan.

Travel to the USSR for private American citizens was not common before or after the first Five Year plan, however, between 1928 and 1932 a window of international exchange opened between the two countries. Of the 5000 or so Americans who traveled to the US between 1928 and 1932, perhaps only two hundred each year travelled there as employees of the Soviet state, and most of these workers held jobs in factories rather than on farms (Engerman, 2003; Fitzgerald, 2003). However, in 1930 and 1931, *Amtorg*, the Soviet business representative in the United States, signed several dozen college-educated agricultural engineers into the working ranks of the Soviet Union. Once in the country, were assigned to report to either the swine or cattle trusts (*Svinvod*, *Skotovod*) that managed the livestock industry for the Commissariat of Agriculture.

In the late spring of 1930 twenty men, including Iowans George Heikens and Guy Bush were hired by the Soviet Swine Trust as specialists “working out and applying of all manner of work in the sphere of pig-husbandry, that is the mechanization of hog houses equipment, the application of more perfect means of feeding, breeding, growing and fattening of pigs.”¹ Heikens and Bush had similar backgrounds. The two men had grown up on mixed-use farms in Iowa, and both delayed attending college in order to help out on their family’s farms. In college, both had focused on hog breeding, which was a skill that caught the interest of Soviet

¹ “*Spetsialistu po Svinovodstvu Kheikinsu: Instruksii*” (Hog Production Specialist Heikens: Instructions) 1930. George Andrew Heikens Papers (1902–1976), Iowa State University Special Collections R/S 21/7/15 Box 1, Folder 2.

employers. When they signed their contracts Heikens was just about to graduate from Iowa State College at age 30, and Bush, at 39, had spent two years in town pursuing a job as a writer for *Wallace's Farmer*, the Midwest's most popular agricultural periodical. By the summer of 1930, the Great Depression had dimmed career prospects for both men and Heikens and Bush considered themselves lucky to be among the animal specialists hired to work abroad. The Soviet Swine Trust would pay them over one thousand dollars for their year abroad, a far more generous annual salary than they were likely to earn in Iowa that year, and would cover travel and living expenses. And so, in the blistering heat of late July, Heikens and Bush packed trunks full of the warmest clothes they owned and set off separately, first by train, then by Atlantic steamer, for a place they both called "Red Russia." They had very little notion of what awaited them across the ocean.

Heikens and Bush were hardly alone in their ignorance. In 1930 most Americans had little idea how farm collectivization or other aspects of socialist rule had changed the everyday lives of rural citizens in the Soviet Union. During their terms of service Bush and Heikens would experience the disorganization and antipathy of a typical Soviet collective farm firsthand. However, in the late summer of 1930, as Americans who had previously learned about events in the Soviet Union only through newspapers and radio programs, Joseph Stalin's five-year plan to industrialize the country appeared to be an unusual but admirable experiment in modernization that had many elements in common with changes in agriculture that Heikens, Bush and countless other rural Americans had lived through over the past generation.

In part, the collectivization drive of 1929 and the state's interference in farm organization upended Soviet rural society because the previous decade had been one of benign neglect of the countryside by the Soviet government. Farmers had been left to their own devices for most of the 1920s, as the state focused first on establishing a socialist order in the cities. Indeed, farmers paid fewer taxes and received more cash for their crops in the late 1920s than in any other decade of the 20th Century, and because of this, it was an era that was remembered by many with nostalgia. One Siberian farmer who later defected recalled the farms of the 1920s as having "everything a man wanted. Good horses and cows...there was nothing I did not like"². In response to the relative stability and wealth of the decade, farmers built up their stocks of animals, invested in new tools and seeds, and improved their barns and houses. This era of relative prosperity ended with the collectivization drives that began in the winter of 1929.

Collectivization began as an orderly, if ambitious campaign of property mergers, but it rapidly devolved into state-sponsored terrorism. During the first months of the campaign, the state offered small cash rewards to farmers who joined a *kolkhoz*, or collective farm but this was largely unsuccessful. When bribes and propaganda did not convince peasants to join the *kolkhoz*, the state turned to violence, forcing rather than enticing farmers into collectives. Authorities in Moscow initially underestimated the strong opposition collectivization projects faced, and for a few weeks in early 1930, peasant farmers actively protested enforced collectivization. At first the state did little, but this tolerance ended in late February, after farmers across the country took their collective objections one step too far and slaughtered their livestock rather than surrender them, as scheduled, to the *kolkhoz*. In response to this slaughter the state intensified its campaign of *dekulakization*, a push to identify and persecute the capitalist elements in agricultural communities. The spring campaigns killed some peasants, arrested others, and disenfranchised and banished entire families to distant provinces (Viola, 1999, p. 71).

² Harvard Project on the Soviet Social System. Schedule B. Vol. 24. Case 296 (interviewer K.G.). Widener Library, Harvard University. P. 6–7.

By September of 1930, the dust had settled and the violence had (temporarily) abated. The state was now decisively in charge of most farms across the Soviet Union and the vast majority of these farms were now collectivized. Even so, state power had been distributed unevenly across the land. For example, in the village where George Heikens was sent, Rodomanovo, a few hours outside of Leningrad, collectivization had taken place without much struggle and few households had been disenfranchised through *dekulakization*. In contrast, the village near Rostov where Guy Bush lived had been a central area of peasant resistance and subsequent *dekulakization* and the punitive effects of terror lingered long after his stay. In the years after Bush a quarter of this administrative department would starve in a man-made famine, conceived by Stalin as a follow-up exercise of violence targeted at regions perceived to be antagonistic to collectivization (Danilov, Manning, Viola, 1999).

Above all, while the Soviet state presented collectivization as an orderly and rational way to better utilize land and animal resources, the vast majority of Soviet farmers experienced collectivization as a loss. Few people comprehended the bureaucracy the state put in place, understanding only that a few insiders had attained choice positions in the new government and had a new authority that upset tried and true traditions in rural areas. Insular and isolated villages now hosted a stream of outside officials and experts who passed through to enforce new rules, survey the land, record population statistics and establish non-parochial schools. The same nostalgic Siberian farmer quoted earlier summed up his new life after collectivization in this way: "All the people agree that (collective farmers) work harder than before, and now they don't know who they're working for."³

Collective farmers may not have known for whom they worked, but they certainly recognized the allure of outsiders. Bush and Heikens both noted that they were often treated as celebrities as they went about their daily lives in the rural Soviet Union. Strangers sacrificed their seats in theaters to make sure the men had a view of the stage and gave up their sleeping bunks in railway cars to so that the Americans could sleep in beds on overnight train trips. In rural areas the Americans were not just a spectacle but also a marvel; Heikens noted on his first day in the village of Rodomanovo "I'm like a God around here."⁴ Bush, visiting the town of Kashary in late fall, wrote that "the crowd made it almost unbearable, for they crowded around me until there was hardly breathing room... I have penetrated a community where foreigners are scarce so I am still a novelty."⁵

The knowledge, education and experience with American style farming were skills that experts like Heikens and Bush planned to transfer to Soviet farm workers over the course of their year abroad, but this expectation proved to be naive. American experts who appeared on collective farms across the Soviet Union in 1930 were there to build modern agricultural enterprises, but their audience for these plans made up of collective farmers and collective farm managers, was not necessarily receptive to yet another change in procedure, even if it did come from exotic American outsiders. At the end of their year on the job, both Heikens and Bush left Russia discouraged by their failure to effect change where they had been posted. The experiences of both men show that while they both began their positions with great optimism in their ability to improve the animal farms to which they have been assigned, over the course of just a few months they become disillusioned with this task.

³ Harvard Project on the Soviet Social System. Schedule B. Vol. 24. Case 296 (interviewer K.G.). Widener Library, Harvard University. P. 13.

⁴ Letter. George Heikens to Heikens family, August 8, 1930. George Andrew Heikens Papers (1902–1976), Iowa State University Special Collections R/S 21/7/15 Box 1, Folder 5.

⁵ Letter. Guy Bush to Louise Bush, October 20, 1930. Private Collection of Guy Bush Jr.

George Heikens had never left Iowa, much less the United States before he set out in August of 1930. After a journey that took him through New York City and Germany before arriving in Leningrad, Heikens was ultimately, and seemingly randomly assigned to live and work in the village of Rodomanovo, a day's travel from Leningrad. Rodomanovo needed a swine expert, and Heikens fit the bill. Rodomanovo's farmland had been collectivized just a few months earlier, and one of the collective farms worked by the residents of Rodomanovo had been earmarked by the Commissariat of Agriculture to become one of the new model animal farms. Where imported animals would be bred and shipped out to other farms across the country. Heikens wrote proudly to his parents in September of 1930 that "our farm is to be a model one and we are to have anything we want to make it so."⁶ The specialty of the new Rodomanovo model farm, the Commissariat of Agriculture in Moscow had already decided, would be pigs. Never mind that when Heikens arrived neither the private nor the collective farms surrounding Rodomanovo kept many pigs, and those that were available were feral, sickly specimens. The swine trust had already ordered new and better purebred sows from Germany, and these were due to give birth in October. For his first few weeks on Rodomanovo, Heikens' main concern was preparing for the new pigs, and, once they arrived, keeping his new charges alive. His letters home rarely mention the Russian workers he supervised, except to remark upon their astounding inability to perform even the simplest task around the pig barns correctly. Heikens communicated with almost everyone on the farm with the sporadic help of a full time translator. During his time on the farm, he went through four translators; the first three assigned to him disliked living in the village so much that they left after just a few weeks of work.

Compared to George Heikens, Guy Bush was a more experienced traveler and swine expert, but he still found himself at sea once he arrived at his assigned posting, Farm 22, forty miles outside the town of Millerovo in the Rostov region of southern Russia. Bush's hard experience over the winter of 1931 presaged the grim future of famine that the region would experience between 1932–1934, although, as with Heikens, his posting started out optimistically enough. Guy Bush left his infant son and wife in Iowa and took a train East, where he sailed from New York in mid-August. Like Heikens, he stopped briefly in Moscow to meet his new bosses at the Svinovod, or swine trust, and he left again almost immediately for Millerovo. Millerovo was still a sleepy, old-fashioned southern village when Bush arrived. While Collective Farm 22 was planned out as a cutting-edge, 100,000-acre enterprise, its workers still lived in villages reminiscent of the 19th Century. Bush noted that church bells still rang out every morning, that the peasants were skilled craftsmen who sewed their own clothing and thatched their tiny two room cottages with hand harvested straw. Bush noted that the peasants in Millerovo gathered together on nice evenings to sing folk songs and dance together, and every peasant seemed to have the nervous (and to Bush, strange and exotic) habit of nibbling on toasted sunflower seeds at all times of the day.⁷

Guy Bush and George Heikens had known each other slightly before they left Iowa, and they met several times at conferences sponsored by the Svinovod held for the American specialists scattered across the Soviet Union during their year in Russia. They had very similar responses to the work situations they encountered in the Soviet Union, although their material living conditions were quite different from one another. Heikens' farm was relatively prosperous with plenty of good housing available for workers and families, and it had functioned as a

⁶Letter. George Heikens to Heikens family, August 8, 1930. George Andrew Heikens Papers (1902–1976), Iowa State University Special Collections R/S 21/7/15 Box 1, Folder 5.

⁷Letter. Guy Bush to Louise Bush, September 16, 1930. Private collection of Guy Bush, Jr.

collective farm for some years prior to the formal collectivization drive of 1929. In addition, the manager of Heikens' farm was an agricultural professional who had come from the local community. In contrast, material conditions on Guy Bush's farm were bleak, and of all the American specialists living in the Soviet Union that year, he was the most isolated, being 40 miles (by horse) from the nearest rail station.

Given these differences, it is surprising to note that both men arrived with optimistic expectations of what they could accomplish in their year abroad. However, they rapidly became disillusioned with the work they were doing. While regional differences mattered, and Heikens' village was much calmer and more prosperous than the remote village in which Guy Bush lived, both men experienced some of the hardships and adjustment pains of collectivization first hand. They both endured harsh living conditions over the winter of 1931, although the lack of food, heating and housing at Bush's Farm 22 in Millerovo was more striking. When Bush was asked by his employer if he would stay on Farm 22 for another year, he wrote "I could only answer that I could not continue under the present living and working conditions. Engineers are treated quite nicely but the agricultural force is looked upon as — (I hardly know what)."⁸ The food situation in 1930 was also difficult. Although both men had access to the best local foodstuffs available — in the fall, Bush was allowed to purchase a sheep carcass which hung outside his bedroom window for the several weeks as he ate it — both complained bitterly at its monotony, especially the lack of fruit and garden produce.⁹ Heikens' mentioned in August of 1930 that "the food here is good, but not as good as it was on the boat (over). Have had rice with milk several times lately."¹⁰ Bush noted that many could hardly be expected to do much hard manual labor over the winter because, "black bread and thin soup is a poor cold-weather diet...the families all in a two-room house (with) little to cook and with conditions as they are, apparently some have lost hope."¹¹ The food and housing shortages around Rostov would only intensify over the next two years.

Both Heikens and Bush were aware of the purges at least tangentially: in fact, they both participated in condemning various managers who they felt were doing poor work, even though they knew that the price of being convicted of wrecking or spoiling a work project was often death or a long term in a labor camp. Bush wrote at the end of November that "I sit here like a little tin god, removing those from office who fail to produce. Often a life is at stake. I can't say that I like it—but there is no pleasure as an American in being connected with a failure so I've started to wade ruthlessly through them to make a showing while I'm here."¹² Bush was not unique in his indifference to the fate of those around him; this pattern holds true for British and American educators touring Leningrad and Moscow, foreign industrialists working in factories, and other agrarian specialists on farms throughout the country.¹³ Heikens and many of his peers were not particularly sympathetic to the Soviet socialism, but they were firm believers in modernization. Their ability to ignore the trauma of affected citizens was the result their own hubris and a strong belief that agricultural industrialization was a form of progress, as well as the state's ability to mask what was going on.

⁸ Letter. Guy Bush to Louise Bush, March 4, 1931. This is quite similar to reports of "Amerikanka" the enclave originally constructed for American engineers at Magnitogorsk. See: (Kotkin, 1995, p. 125–126).

⁹ Letter. Guy Bush to Louise Bush, October 24, 1930.

¹⁰ Letter from George Heikens to Heikens family, August 20, 1930. George Heikens papers, Iowa State University, Box 1, Folder 5.

¹¹ Personal Letter from Guy Bush to Louise Bush, December 21, 1930.

¹² Letter. Guy Bush to Louise Bush, November 24, 1930.

¹³ Cf. the experience of Samuel Harper in the Soviet Union in 1926 in: (Engerman, 2003, p. 129–132).

Rodomanovo remained a terror-free archipelago during Heikens' year on the farm, and because he was ignorant to the violence unfolding in other parts of the country, Heikens settled in to life on Rodomanovo quickly, but eventually grew frustrated with the managers with whom he worked. Like Bush, Heikens experience a brief honeymoon period where he was cautiously optimistic that he would be able to make positive changes and to work with the managers of the farm. Heikens approached the job with an air of competency and confidence, often noting, with probably accuracy if not humility that he knew quite a bit more about pigs than anyone on site. "there is an unlimited opportunity for me to help here They need our experience very much and certainly need more livestock, he wrote, from his orientation site in Moscow in early August of 1930."¹⁴ In his first day at Rodomanovo he wrote home "the managers do not know much about hogs if you ask me."¹⁵

After one month on the job, Heikens was asked to make recommendations for site improvements to the director of the farm. His suggestions were based on his previous experiences as well as the knowledge he had acquired from his time at Iowa State and as a member of professional farming organizations. They were wide ranging but essentially called for a complete overhaul of operations in order to bring them in line with what he knew would work on an Iowa farm. Food, housing, farrowing and general animal management were lacking on Rodomanovo. Pigs needed to receive dry rations with less fiber Heikens noted, not wet food—and certainly not steamed potatoes, which the pigs were being given daily at that point. Adult pigs should have rings threaded through their noses to curb rooting, and they should be let out onto fenced pastures, which would allow the farm to dismiss the 24 swineherds employed by the farm. New piglets should not have their milk teeth cut out, which led to infections, but they should be castrated earlier, weaned earlier and their ears should either be notched or tattooed with a unique identifying number at five days of age. Every building at Rodomanovo needed a new wooden, sloped floor to replace the earth floors of the barns and outbuildings, the roofs leaked and needed repairs and the new ventilation system was not effective.¹⁶ It is easy to see why these suggestions for expensive and wide-ranging improvements could be resented by managers on the farm, as they called into question almost every policy and routine that had previously been established. They were also delivered by "experts" who had more theoretical knowledge than experience, and who did not have much of an appreciation for the costs or other hardships that might be associated with the improvements they recommended (Fitzgerald, 1996). Nevertheless, at this early stage managers and Swine Trust officials agreed that Heikens suggestions were necessary and tentatively approved every single one of them.

Naïve and occasionally condescending in his communications to officials of the Swine Trust, Heikens' letters also reveal an adaptable and even-tempered man intent on doing the job he was hired for as efficiently as possible. Heikens noted that he was disappointed to learn that Rodomanovo had forty pigs due to give birth in the frigid months of December and January, a dangerous proposition on even a well-established farm, but Rodomanovo did not have a single heated barn. However, Heikens did not waste time complaining about the poor planning that created such a situation but instead pushed to prepare at least one heated building for their arrival. Over half these winter-born piglets ultimately died die from diarrhea and skin diseases brought on by malnutrition, a terrible return on a major investment.

¹⁴ Letter. George Heikens to Heikens family August 4, 1930. George Heikens Papers Iowa State University Special Collections. Box 1, Folder 5.

¹⁵ Letter. George Heikens to Heikens Family, September/October, 1930.

¹⁶ "Protocol of the Deliberation at Rodomanovo State Commercial Hog's Breeding Farm" August 23, 1930, George Heikens Papers, Box 1, Folder 16, Iowa State University Special Collections.

The early demands Heikens made strained the budget and the abilities of Rodomanovo's staff. Although the central office of the Swine Trust was essentially on board with Heikens' proposed overhaul of the farm in order to tailor it to the full time large-scale production of pigs, one of their problems was trying to decide where to start this work. At first, there was an ambitious attempt to honor Heikens' many requests. In his words, "they are building (sty separating) gates to my drawings. Make them exactly like the drawings and even noticed where I had not drawn in the nails on several boards. I believe gates will be lots better than their bars they have now."¹⁷ The manure pile in front of the main pig barn Heikens had objected to for sanitary reasons was relocated to a far corner lot, the windows of the birthing sheds were glazed to insulate them and allow light in. After careful consideration, the managers above Heikens decided they could not change the feed for all the pigs, but pregnant sows and piglets received a revised feeding plan that included more dry food and less wet food. Lastly, the farm director wrote to Moscow, asking if the pigs should have their ears notched or tattooed, and received the reply that "we cannot give you any stable instructions, this subject being worked up by the Board, the results will be immediately communicated to you."¹⁸

Heikens did not come into direct conflict with management until December, when the fodder and bedding supply deteriorated due in part to pilfering by workers who had little access to these necessities for their privately owned livestock. The collective farm's animal population grew due to both births and new arrivals, and the new pigs added stress to operations. By late November, a population of 300 pigs had grown to 1,200 and Rodomanovo was clearly overwhelmed. And this time it was not the management, but the unruly nature of the pigs that stymied progress. The health of the herd was of particular concern. Skin diseases and gastrointestinal disorders weakened the pigs, killing off many of the new piglets. In early January, against Heikens' orders, workers fed a group of pregnant sows alcoholic malt which caused nine of them to abort their litters and another five to farrow a week early, resulting in the deaths of almost all of their offspring.¹⁹ During this early winter scene of death, Heikens was frustrated by the incompetence of his workers as well as the isolation of his post. Heikens wrote home to his parents "I have to do lots of little things which cheap help could just as well do if they knew how" and "the workmen here know absolutely nothing about hogs, they can't drive one 10 feet." "If I wasn't so busy, this would be a lonely place. There are no movies, nothing to read and no one to talk to."²⁰

Guy Bush on Farm 22 in Rostov experienced many of these same frustrations, often from the same causes that so upset Heikens. Bush complained to his wife and family about the poor and incompetent management on his farm, but it was the health of the pigs and their untimely deaths that delivered the most crushing defeats to his work. Diseases were varied, acute and seemingly insurmountable. At his arrival, Bush had noted that cholera was endemic to the herd.²¹ During the cold winter, the smallest pigs succumbed to pneumonia and "scours" or serious diarrhea. In the early spring the poor feed regime that included little in the way of vitamins meant that growing pigs became severely malnourished and got rickets, a disease caused by a lack of Vitamin D.

¹⁷ Letter. George Heikens to Heikens Family, October 20, 1930. George Andrew Heikens Papers (1902–1976), Iowa State University Special Collections R/S 21/7/15 Box 1, Folder 5.

¹⁸ Letter. Swine Trust to George Heikens. A final decision was not handed down on ear notching until the mid 1950s.

¹⁹ George Heikens to swine Trust, January 15, 1930. George Andrew Heikens Papers (1902–1976), Iowa State University Special Collections R/S 21/7/15 Box 1, Folder 3.

²⁰ George Heikens to Heikens Family, personal correspondence. January, 1931. George Heikens Papers, Iowa State University Special Collections, Box 1, Folder 5.

²¹ Guy Bush to Louise Bush, September 20, 1930.

Complaints about Soviet ignorance in feeding practices for modern farms was a constant refrain in Bush's letters: he was initially promised one hundred tons of soybeans for his new hogs, but when he went to pick up the feed, what was offered was actually only 4 ½ tons of woody stems from soybean plants that had been processed for human food. "It is an illustration of how little they know about their own organization." Bush wrote home, clearly frustrated by this change in plans.²² "I am doing considerable manual labor, not that it is necessary, but I find it is the only way to train the workers. They do not know anything about the minor details in caring for swine. There is a terrible waste of labor, which must be eliminated."²³ Especially noteworthy in these lines is how closely Bush's words echo the stereotypical criticisms of Soviet leaders at this time as they railed against ignorance, apathy and inefficiency on the collective farm.

Although by April the pigs at Rodomanovo had stopped dying, Heikens' faith in his ability to improve the farm never returned. In spring, his letters home noted that there was no attitude of cooperation or compliance with his orders. The workers were still incompetent, but by April they were surly toward both Heikens and the work. Heikens complained that "I have to watch the workmen pretty closely, they sometimes forget to feed a whole group of hogs and never put enough straw in the pews if no one is watching" and "every fourth day" he must completely explain their jobs again, as they seemed to forget the routines. Once Heikens had become familiar with the organization of the farm, he also echoed the Soviet bureaucrat's refrain that Bush picked up, noting that "the place is in a state of disorganization all the time." The spring brought increased death to the herds of pigs Heikens managed, which also meant increased surveillance by outside engineers and officials. Heikens was less circumspect in his communications with his superiors about such visits, he wrote "I feel that regular inspection is necessary, but...I do not like to have people tell me that ours is the worst farm in Russia and that the imported sows are doing fine on other places when I know of several farms where not all is smooth sailing."²⁴ Although none of the many visitors to Heikens' farm in the spring of 1931 blamed him directly for Rodomanovo's failure to meet the high expectations of production that had been set by Moscow, criticism was implicit in the sheer volume of outside evaluations the farm received, something Heikens perceived when he wrote to his supervisors that "we had visits from very many engineers, journalists, veterinarians and general inspectors, all of whom criticized freely"²⁵.

Heikens also had an increasingly difficult relationship with the head manager of the swine department, an Alexander Kotoff, who had originally supported Heikens' work. While this was the director Heikens judged to "not know anything about hog farming" the two seemingly had a good rapport in the fall, with Heikens arranging for Kotoff to order a hunting rifle he had seen in the Sears Roebuck catalog Heikens had with him, and the two walking together on nice Sunday afternoons throughout the autumn. By early April, however, Heikens was driven to formally complain about Kotoff as a bad manager. To quote from one letter he wrote to the Swine trust. "I explained to Mr Kotoff many times...that I am very particular about the system of feeding sows at farrowing... and he saw it in use at (another collective farm) but disregarded it and did not tell the workmen to feed differently... Results: a greater chance of having scoured pigs..."²⁶

²² Guy Bush to Louise Bush, December 14, 1930.

²³ Guy Bush to Louise Bush, November 24, 1930.

²⁴ George Heikens to the Swine Trust, April 4, 1931 George Andrew Heikens Papers (1902–1976), Iowa State University Special Collections R/S 21/7/15 Box 1, Folder 8.

²⁵ Ibid.

²⁶ Letter. George Heikens to the Swine Trust, April 4, 1930. George Andrew Heikens Papers (1902–1976), Iowa State University Special Collections R/S 21/7/15 Box 1, Folder 1.

Heikens' willingness to point fingers at others echoes Bush's opinion that poor management was central to the failures the farm was experiencing.

George Heikens was also recruited to formally educate the workers on the farm by giving evening lectures two or three evenings a week during the winter months. He had done this work before in Iowa. By this point in his work in Russia, Heikens was less than optimistic about his ability to make a positive difference in the work environment of the farm. He wrote to his parents in February, "Don't know if (the lectures) help much or not. Sometimes I think the workmen will never understand hogs. They throw in some feed and walk off."²⁷ His frustrations were directed both at the low level of education the workers had and at their unwillingness to learn new skills or to put out much labor to help modernize a farm that, in Heikens' opinion, desperately needed many kinds of updates. In March Heikens was reassigned to a purebred stock farm closer to Moscow, a change he welcomed, in part because it entailed less responsibility and contact with untrained workers, and in part because the spring mud of Rodomanovo was becoming oppressive.²⁸

Heikens noted when he arrived at his new farm that "there are about half as many hogs here...so it is lots easier. I do not have enough to do in fact."²⁹ He enjoyed being closer to Moscow, which was accessible by a commuter train, and he was excited to be just down the river from a cement factory where four Americans and a German engineer were also employed as foreign experts. This meant he had people with whom he could talk without needing an interpreter. Although the Soviet government offered to double his salary, Heikens did not wish to stay, deciding instead to go home in August when his contract expired, and by October of 1931, he was back to farming his family's farm in Spencer, Iowa.

Bush and Heikens made little impact as foreign experts on the improvement of the Soviet Union's swine population during the 1930–1931 seasons. There were not significantly more pigs by 1932 than there had been in 1931 or 1930. Heikens, Bush and presumably their American colleagues and skilled Soviet counterparts all arrived in the countryside and set about their work with great optimism and a good set of qualifications, but their experiences soured quickly. The high salary and the privileges that were granted to foreign workers by the state, such as better food, access to train tickets and better housing were not enough to outweigh the frustrations of working in these early animal farms. Heikens and Bush both expressed great relief at leaving the country when their contracts were up. Although their postings were thousands of miles apart, Bush and Heikens encountered similar sticking points in the animal farms where they worked. These included continuous frustration with the management and uncertainty about how and when their work or the work of those they supervised would be evaluated. Finally, the persistence of a high mortality rate among the animals they cared for eroded morale and ruined the growth and progress of the farm that the Soviet Union was so keen to chart.

During the year Bush and Heikens were in the Soviet Union, the focus of Soviet national agricultural policy was twofold: first, to produce as much grain as possible. This was not in order to increase the amount of food available to Soviet citizens, but instead was intended to fulfill sales obligations the Soviet Union had already made over the summer of 1930. As the price of wheat collapsed on the world market after the stock market crash, the Soviet Union had sold advance contracts on wheat, promising parts of the 1930 and 1931 fall harvests to fulfill these sales. The state had to produce a bumper crop of grain, as these amounts were essentially owed to the world market. In most cases the revenue generated from advanced sales had already been

²⁷ Letter. George Heikens to Heikens family. February 16, 1930. *Ibid.* Folder 5.

²⁸ Letter. George Heikens to Heikens family, March 16 1930. *Ibid.*

²⁹ Letter. George Heikens to Heikens family, April 14, 1931. *Ibid.*

spent in order to obtain gold, with which the Soviet government could then purchase heavy industrial supplies such as tractors and steel.³⁰

The second focus of Soviet agriculture was animals, and it was this priority that Bush and Heikens experienced firsthand and ultimately judged to be a failure. In order to thrive and multiply, animal farms needed to be managed in a way that could accurately measure and control their productivity, but also the animals themselves needed to be controlled. The well-managed sheep, pig, cow or horse circa 1930 in the Soviet Union required an abundant and well-planned diet, access to competent veterinary care and relative freedom from the harsher elements of the environment. To Bush and Heikens' growing frustration, animal farms in the Soviet Union were not able to offer any of these necessities to their charges. And as a result, Soviet animals remained pre-industrial, continually under-performing their state planned progress.

In some ways, pigs make excellent industrial animals because they respond so well to relatively minor changes in their diet, housing and hygiene. Increasing the protein in a pig's diet by just a few percentage points corresponds with an improved feed-to weight ratio, for example. And while pigs are naturally sickly, prone to cholera, scours, pneumonia and bacterial infections, they are relatively easy to keep alive if they can be kept indoors and away from cold air for the first few weeks of their lives. However, while these modifications sound straightforward and low-cost, they proved nearly impossible for first-generation Soviet collective pig farmers to implement, even with the help of over-confident American experts.

For example, the ten villages that made up Bush's model collective farm, one of the largest in the whole Soviet Union, supported only a few thousand workers in 1930 but was intended to host 20,000 hogs as well as a thousand head of cattle. It is unclear whether anyone running either Bush's farm or Heikens's farm understood enough about raising animals to recognize that industrial farm operations could not rely on grass and hay to feed these new animals. At one point, Bush's manager suggested that new animals be fed straw (which was inedible) to make up for shortcomings in the diet. Bush noted early in his stay "farm feeds vary a great deal...and they have not as yet appreciated the value of some of the necessary feeds to properly produce swine." Later he complained "I have no proteins like milk, meat meal or fish meal to work with. There is no alfalfa either."³¹ Bush himself, as the most privileged eater on the farm had only sporadic access to milk and meat, the Soviet Union had none of these products to spare to feed the animals it planned to raise.

Farm managers struggled with an appropriate response to such failures, often overreacting or responding in ineffective ways. Guy Bush recognized before pigs ever arrived on his farm that the sheds that would house them were placed too close together and disease would spread quickly among infected populations. As Bush predicted, this happened in the early winter, but when it did happen, Soviet authorities were intent to single out scapegoats to blame the incident on. On Bush's farm, the blame fell on "a poor old veterinarian who I had esteemed up to now, has been one of the few honest people with whom I work...he is accused of hindering the development of a government project. If the accusations are true, he will pay with his life...the present system here has developed some crafty 'blamers'. The better they can blame or transfer responsibility to the other fellow when things go wrong the better job they hold."³²

Housing for animals became another point of contention on both farms, and again, these struggles point toward a rigid set of requirements built into the nature of pigs that the Soviet

³⁰ For the initial decision, taken by the politburo in 1925, see: (Woodruff, 2008, p. 201, 204).

³¹ Personal Letter from Guy Bush to Louise Bush, October 12, 1930.

³² Letter. Guy Bush to Louise Bush, November 17, 1930.

material reality in 1930 simply could not meet. On both farms, planners assumed that by building entirely new outbuildings for animals, these buildings would be modern, hygienic, and would be able to house the huge influx of new animals. In all instances they were mistaken. On Bush's farm, animals were supposed to be kept indoors all winter. This had originally been the plan on Heikens's farm as well, but after his protest, this plan was changed. In part, exercising pigs during the long winter kept their strength up. It also exposed them to sunlight, which helped them manufacture Vitamin D, the lack of which damaged their immune system. The houses were also too drafty on Heikens's farm, with no glass in the windows to shelter younger pigs from the brutal northern winter, and on Bush's farm, the houses were placed too close together.³³ In both cases, regional authorities provided materials and supplies for constructing new buildings while overlooking important details that would later make the difference between the success and failure of the project overall. Fences were not common at this time, and the Soviet Union saw no need for enclosed pens, since there were plenty of workers who could work as herders.³⁴ However, the lack of fences meant that male and female animals were hard to keep separate from one another, and it was also hard to keep young, vulnerable pigs apart from the adults. In a pre-industrial system, fences are not necessary features; since different populations of swine rarely need to be isolated from one another. However, generally speaking, industrial hog production is centered on the notion of isolation, not simply to limit procreation but also to prevent the spread of disease. Heikens' main complaint about the farm at Rodomanovo was "they are putting too many hogs together in large herds to suit me. I believe they are heading for trouble in their hog farms...They won't take our advice at all when it is against a plan of the government, they just figure the government is always right".³⁵

In some ways, the Soviet Union's experiences creating animal farms were less anomalous than those of the United States, a country that had industrialized both its fields and its barns in less than a generation. Guy Bush and George Heikens were both, at times, appalled by the primitive conditions of the farms on which they worked, but both men were the products of an economic system and an environmental milieu that made industrializing easy.

American successes at raising hogs and cattle were built upon the relatively temperate climate, cheap land and free water that were available to farmers in the United States. Alfalfa, an ideal animal feed, grew abundantly, and once farm machines like tractors and combine harvesters helped overcome the chronic labor shortages that had plagued 19th Century agricultural expansion, the result had been an explosion in productivity. Many American farmers chose to increase the value of their grain and fallow fields by fattening up livestock and by the turn of the 20th Century, Americans ate more meat and drank more milk than citizens of any other nation. Exporting this model was not especially practical.

The Soviet Union's more marginal environment did not lend itself to surplus grain production. Although alfalfa later became an important crop for Soviet cows, in 1930 it was still a novelty. Guy Bush repeatedly requested alfalfa, but there was none to be had for Millerovo in the spring of 1931. Likewise, the Soviet Union had a very different labor situation from the

³³ Maurice Hindus notes the same cramped barn layout and lack of glass (due to cost) on farms in 1931: (Hindus, 1988, p. 20, 232).

³⁴ Guy Bush to Louise Bush, October 12, 1930. See also Heikens' photograph of two swineherds at work. George Andrew Heikens Papers (1902–1976), Iowa State University Special Collections R/S 21/7/15 Box 1, Folder 8.

³⁵ Letter. George Heikens to Heikens family, April 10, 1930. George Andrew Heikens Papers (1902–1976), Iowa State University Special Collections R/S 21/7/15 Box 1, Folder 5.

United States; a primary concern in the Soviet Union was ensuring that collective farms were able to offer employment to all *kolkhoz* members who wished to work. This resulted in preserving a work category like that of swineherd. Because of this labor surplus, well into mid-century, Soviet agriculture maintained a pre-modern feel. Twenty five years after Guy Bush and George Heikens arrived in the Soviet Union, an American official viewing a new mechanized industrial pig farm in 1955 remarked on how non-industrial the operation looked. "It did not appear to be a highly efficient organization. The mechanized or automated operations, such as the preparation of hog feed, were eclipsed by the amount of hand labor which both preceded and followed the mechanized portion."³⁶ From the time of collectivization until the end of the Soviet period, there was a tension between the Soviet Union's much-celebrated dream of total mechanization and automation, and the reality that, in agricultural settings, replacing human labor with machines was not always economically or politically the best option for agricultural policy.

The American experts recognized this disconnect between the dreams of the Soviet Union and the reality as it played out on the ground, although through their eyes these discrepancies most often looked like failures or proof that Soviet farms were enduringly backward locations, in spite of their attempts to modernize. In a letter home in August of 1931, Guy Bush described the frustration felt by Americans toward the increasingly impractical plans for animal farm expansions the Soviet Union had. At one swine specialist's conference in the spring Bush and others were presented with a description of the hog farms that would be built during the new second Five Year Plan. "The second five-year plan calls for massive buildings housing 5000 or more swine each. The one proposed was ½ mile long, two stories high and the pigs were to be fed from conveyor belts...The project was so different that one of the Americans in a satirical mood designed a four-story hog house. The roof was to be used as an exercise lot for sows. Each floor was to have a trap door that would automatically drop a hog to the lower floor when it reached a certain weight until eventually it came out as sausage. In the mechanism the exercising sows were furnishing power to operate the sausage mill. Needless to say the latter project was not presented but of course was widely discussed by the four of us in attendance — especially after a little liquid encouragement"³⁷. In these after-hours discussions, Americans joked privately about the Soviet plan's over-automation and massive scale.

These two naïve Americans were not the only experts to have noticed these kinds of impracticalities. These were the same flaws that Nikolai Bukharin, Alexei Rykov and other prominent members of the Politburo had originally identified in the first Five Year Plan. American criticisms of Soviet plans were often made privately, in letters home or, as Guy Bush notes, informally among friends. 1931 was not the year for vigorous public debate on the relative strengths and weaknesses of the Central Committee's Five Year Plans. Nevertheless, these critiques have endured and it is worth revisiting the candid, if flawed assessments of some of the only foreigners to witness the aftermath of collectivization and the surge of activity that surrounded the first Five Year Plan. These accounts give historians insight into the failures and frustrations of early collectivization as well as the ways in which unexpected, biotic factors such as disease and nutrition had a tremendous influence on industrial farming in the Soviet Union, completely limiting its progress and stifling the growth of the agricultural sector until well after the Second World War.

³⁶ NARA RG 166 Records of the Foreign Agricultural Service Narrative Reports 1955–1961. Doc: "visits to soviet agricultural installations: November 15, 1961 Folder: Agriculture.

³⁷ Letter. Guy Bush to his Louise Bush, August 9, 1931. Personal Collection, Guy Bush, Jr.

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Улучшая социалистических животных: американские эксперты о коллективизации

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На основании писем и воспоминаний двух американских экспертов по разведению свиней, приглашённых в советские колхозы в 1930–1931 гг., в статье рассматривается разрыв между амбициями политиков и экономистов первой пятилетки, создававших новые колхозы, и реальными сложностями. Эти свидетельства дают историкам представления о неудачах и разочарованиях ранней коллективизации, а также проблемах, с которыми неожиданно столкнулись создатели индустриального животноводства. Биотические факторы, такие как болезни и особенности питания при содержании на больших фермах, оказали огромное влияние на развитие промышленного сельского хозяйства в Советском Союзе, ограничивая его прогресс и рост.

Ключевые слова: коллективизация, индустриальное животноводство, американские специалисты.