They shoveled manure in the morning, demonstrated soil sampling techniques after lunch, and organized Ton Litter clubs at night. They preached their scientific gospel with evangelical fervor and were rolling testaments to the sturdiness of Henry Ford’s Model T. As a group, they were simultaneously praised as the farmers’ salvation and scorned as soft-handed book learners. They were Pennsylvania’s first county agents, and their introduction in 1912 constituted a milestone in the Commonwealth’s agricultural history.

The duty of the county agents was to channel information about scientific discoveries and improved practices from the academic confines of the School of Agriculture and Experiment Station at The Pennsylvania State College (and to a lesser extent from experiment stations in other states and from the U.S. Department of Agriculture) to Pennsylvania’s working farms, estimated to number about 220,000 in 1910. Applying in field demonstrations throughout the state the lessons learned at the experiment station, agents proved far more effective than bulletins or lecturers—means that had been relied upon since the station’s founding in 1887—in convincing farmers of the merits of a scientific approach to agriculture. As John Hamilton, secretary of the state Department of Agriculture (1899–1903) and early advocate of the agent system, remarked in 1900, “A skillful operator with a spray pump in an orchard can give more practical illustration in thirty minutes than by a whole day’s talk on fungicides or spraying methods.”

Among the earliest predecessors of county agents anywhere were the U.S. Department of Agriculture’s farm demonstration agents, who were
first used in 1903 in Texas to help cotton farmers combat the dreaded boll weevil. Within a few years, about fifty federal agents were working with farmers in several Southern states, and Texas itself created a system of county agents to supplement the activities of the USDA's representatives. Demonstration agents who carried the information and techniques of scientific agriculture directly to the farmers won sufficient popular acceptance so that Northeastern and Midwestern states gradually adopted the concept. Ohio State University sent out demonstration agents in 1909, and county agents went to work in some New York state locations in 1911. The way in which agents were employed, and who employed them, varied from state to state. Agents might be representatives of state departments of agriculture, land-grant institutions, local chambers of commerce, or even railroad companies.2

In Pennsylvania, which at that time ranked sixth or seventh in the nation in the total value of its agricultural products, state-supported Farmers' Institutes had long enjoyed the confidence of those who worked the land; the idea of county agents was greeted with skepticism. The Institutes originated in 1877 as educational projects of various county agricultural societies with assistance from the state Board of Agriculture (predecessor of the state Department of Agriculture). They usually spanned one or two days during the winter months and were held in all parts of the Commonwealth, their most important feature being lectures by prominent local farmers and occasionally agricultural faculty from Penn State. Topics were determined by community interest. By the turn of the century, some 200 Farmers' Institutes were being staged annually and attracting more than 50,000 persons.

Therefore, when Penn State's School of Agriculture, under Dean Thomas F. Hunt, formed a Department of Extension in 1907, Institute backers were suspicious, although no county agents were contemplated. The new department, consisting of head Alva Agee and one or two assistants, was to concern itself mainly with responding to the 400 letters the School received each week from farmers wanting advice or asking for samples to be analyzed, overseeing the School's exhibits at county fairs, and publicizing its work through newspapers and farm journals. The department also had responsibility for administering agricultural correspondence courses, enrolling some 3,500 persons (mostly farmers) each year.

Likewise regarding the extension department as a potential rival were officials in charge of the state Department of Agriculture's Movable Schools of Agriculture, which had been launched in 1904. The Movable Schools represented a middle ground between the Institutes and the
demonstration agents. They consisted of a corps of specialists in such fields as dairying or fruit growing who traveled the Commonwealth continuously giving several days of instruction, laboratory practice, and demonstration work in each community they visited.\(^3\)

In 1910, the United States Department of Agriculture entered the extension picture in Pennsylvania when it conferred on A. B. Ross the status of traveling demonstration agent. Ross had been practicing law in Cleveland, Ohio, until ill-health had forced his return to his native Bedford county in 1907. Looking for a way to occupy himself during his recuperation, Ross became interested in scientific agriculture and was appalled to learn how often local farmers were guided by the ways of their forefathers or by superstition rather than by the laws of science. He began traveling the countryside on horseback, making friends with agriculturalists and distributing copies of USDA bulletins. He was soon proficient enough to make inoculation tests for legumes, advise farmers on corn varieties best suited to Bedford county conditions, and suggest better farm management techniques. The success of his activities came to the attention of authorities in Washington, and Ross was eventually making his rounds throughout Bedford and five adjacent counties in a USDA-supplied automobile rather than in the saddle.

It is not clear how closely Alva Agee and Thomas Hunt observed Ross's work, or to what extent the encroachment of the federal Department of Agriculture may have prompted their subsequent actions. They did know that the concept of demonstration agents seemed to be working successfully in other states, and they shared the view held by most land-grant educators nationwide that the agricultural college was the logical sponsor and coordinator of these agents. They concluded that the time had come for The Pennsylvania State College to take the initiative in the extension field.

Agee and Hunt could not have had a more enthusiastic or articulate champion of extension education to encourage them than the College’s president, Edwin E. Sparks. Sparks’s experience as a member of the University of Chicago’s wide-ranging liberal arts extension faculty helped shape his strong belief that Pennsylvania’s land-grant school had an obligation to expand the scope of instruction in all its subjects to reach those citizens who would not ordinarily attend formal classes. His oft-repeated slogan, “Let Us Carry the College to the People,” became the keynote of his administration (1908–1920).

In 1911, Sparks asked the General Assembly for $60,000 to begin a system of county agricultural agents. These agents would constitute the missing link between the School of Agriculture and practicing farmers
and would work full-time in the counties to which they were assigned. The House acted favorably on the request, but the Senate deleted it from the College's general appropriation.

After giving the matter further consideration, Sparks and the board of trustees permitted Agee to organize a network of county agents in spite of the lack of cooperation from Harrisburg. A number of counties had already applied for agents; and in the fall of 1912, five—Blair, Butler, Mercer, Montgomery, and Washington—were selected to receive them. Salaries and administrative costs were underwritten by a grant from the USDA's Bureau of Farm Management, money from the College's own general fund, and a $1,000 gift from Sears, Roebuck and Company. (Sears depended heavily on farmers for its mail-order business).4

Before a county was assigned an agent, Agee required it to organize a farm bureau, composed of local farmers and agricultural business leaders, as evidence of its willingness to cooperate with that agent. The bureau's board was to advise the agent on local problems and help win his acceptance among more conservative elements of the farm population.

Agee borrowed the concept of farm bureaus from the experience of other states, but resigned in 1913 to take a higher paying post as director of extension for the state of New Jersey. The task of implementing the system in Pennsylvania fell to his successor, Milton S. McDowell. "Mickey" McDowell had served as Agee's assistant since 1910. Prior to that, he had worked as an assistant at the experiment station and had been one of the most sought-after lecturers for Farmers' Institutes. Ironically, McDowell, a native of Milroy, Mifflin county, had not initially intended on a career in agriculture and had graduated from the chemistry course at Penn State in 1892. Not until he had returned from working in private industry to earn a master's degree from his alma mater (again in chemistry) in 1897 did he turn his interest toward agriculture.5

County agents in Pennsylvania from the very first were appointed by the College's extension director and were responsible only to him. Their job originally consisted mostly of passing along to farmers technical information from the experiment station and the USDA, supervising experimental plantings on cooperating farms, judging agricultural products at local fairs, and organizing corn, potato, and similar clubs among youths taking vocational agriculture in the public schools. Agents were also expected to prepare newspaper articles on their activities and the latest agricultural happenings at Penn State, and to recruit students for the College.
The big question facing all five new agents was, as one of them put it, "Will the farmers take and appreciate extension?" Farmers were by no means sold on the idea of county agents and took a distinctly passive attitude toward them, although little outright hostility was in evidence. "We were pretty much offered under the same terms as the farmer offered his cow," recalled Washington county's first agent, John M. McKee. "She was a good, honest cow, and if she had any milk she would give it. We were honest young men with college educations, and if we knew anything we would help the farmer." Charles D. McBride of Mercer county reported that most farmers initially treated him as something of a novelty and mistook him "at various times, for a vaudeville trouper, a horse doctor, a fertilizer salesman, and even for the son of the county agent."6

But the agents soon proved their worth and became welcome sights to farmers as they motored to and fro over the dirt roads in their counties. McBride discovered before long that he "could not keep up with their interest except by working 16 hours a day and enlisting the help of a lot of other people. It was fortunate that all 4000 farmers did not want help at once."

In 1913, the General Assembly allocated $18,000 for agricultural extension. That was enough money to set up agents in Bradford, Chester, and Lancaster counties and begin publication of the Extension Bulletin, sent free to 35,000 farmers monthly. The legislature also permitted county commissioners to spend money on support services—office space, secretarial assistance, an automobile—for agents. Most boards of commissioners were quick to seize this opportunity to aid their rural constituents, thus establishing a close relationship between county government and extension that has persisted to this day.

Allegheny, Berks, Lebanon, Luzerne, and Lycoming counties received agents early in 1914. Later in the year Congress finally made available assistance for extension through the Smith-Lever Act. It gave $10,000 to each state annually. An additional sum, based on a state's percentage of the nation's total rural population, was awarded to any state which provided an equal amount. The Smith-Lever Act was passed with the understanding that the sole basis of agricultural extension would be the county agent system, and that land-grant schools would play a major role. Farmers' Institutes, common to many states, were to be phased out.

Since Pennsylvania had a greater proportion (6.15 percent) of the national rural population than any other state, it stood to gain the most from Smith-Lever. The legislature quickly agreed to the matching
principle. In 1915, state and federal funds available for extension totaled $83,000, all of which was funneled through The Pennsylvania State College. By year’s end, eight more counties had agents.

McDowell chose these men with great care. He looked for candidates who, in addition to having a degree in agriculture, possessed superior communications skills and an ability to work harmoniously with a wide variety of personalities. McDowell further stipulated that his agents must have been born and raised on farms, so that they knew more about agriculture than what they had learned in the classroom. There could be no substitute for experience, for, as Lancaster county’s first agent, Floyd S. “Dutch” Bucher, noted, “I had to show our folks that I was not only a book farmer, as they accused me of being, but a regular dirt farmer.” When visiting farms, Bucher joined the family and the hired help in milking cows, shoveling manure, mending fences—any mundane chores, just to prove that he knew agriculture from its practical side.

McDowell wanted young men who were willing to make extension work a career, and who would become permanent residents of their communities, instead of using their jobs as stepping stones to better paying positions elsewhere. (The typical agent of that era received an annual salary of about $1600.)

To facilitate the work of the county agents, McDowell developed the post of extension specialist. Specialists were based at the College but were available for consultation with agents on subject matter and on planning educational programs. The first two specialists, one in farm management and one in dairying, were appointed in 1914. As in the case of the farm bureaus, extension specialists were hardly a novelty, already having been introduced in many other states. However, they were unique in Pennsylvania in that McDowell insisted that all specialists be attached to the extension department and not to the academic departments at the College or to the state or federal departments of agriculture. He wanted to avoid the possibility of having the specialists go directly to the farmers and thus compete with, rather than complement, the services of the agents.

There was already more than enough competitiveness in extension in the Commonwealth. The Farmers’ Institutes were too deeply imbedded in tradition to die out quickly. Agriculturalists who had long attended these gatherings and Institute workers themselves vociferously opposed the proliferation of county agents. Their feelings were shared by some officials in the state Department of Agriculture, who argued that the legislature should have divided Smith-Lever funds equally between the department and Penn State. Only a year before Smith-Lever was
enacted, the Pennsylvania Department of Agriculture had created a Bureau of Farm Advisers, whose ten-member staff made personal visits to farms across the state during the summer. These advisers (who were Institute lecturers during the winter) duplicated many of the services of county agents. They tested soils, mixed fertilizer formulas for specific crops, and made suggestions on what, where, and how much to plant. The Bureau was a good idea but its implementation was tardy. Nevertheless, because of political pressure, the General Assembly did not get around to abolishing it and the Farmers' Institutes until 1917 and 1921, respectively.9

Director McDowell, assistant director Edward K. Hibshman, and a secretary or stenographer comprised the entire state extension service staff. This group carried virtually the entire burden of organizing extension and coordinating the work of the agents and specialists with the needs of the farmers. Things did not always go according to plan. In Schuylkill county, McDowell had no sooner placed an agent than the local farm bureau board began quarreling with the county commissioners over where to buy a car for him. After unsuccessfully trying to mediate the dispute, an exasperated McDowell transferred the agent to adjoining Lehigh county, telling the Schuylkill "boys" that they were not yet ready for extension.10

McDowell was also worried about threats from Washington to the independence of his agents. Shortly after Congress passed the Smith-Lever law, he received a memorandum from the USDA outlining its powers versus those of the states with regard to extension. "One did not have to read this memorandum more than once," McDowell later wrote, "to discover that it practically turned over the whole conduct of the work to the federal government."11 He was outraged, as were many of his counterparts in other states. The resulting furor caused the agriculture department to issue a less grasping version of its rights, one more palatable to the state officials. It stipulated the extension director of a land-grant college would administer all extension work in the state, as a joint representative of the College and the USDA, and all funds for extension were to be channeled through the director's office. As in the original memorandum, the USDA retained the power to approve the appointment of the state extension directors and any county agent or specialist who participated in projects aided by Department of Agriculture funds.

The United States entered World War I in April 1917. For the next eighteen months, extension bore the brunt of defense-related activities in agriculture at most land-grant institutions. "Food Will Win the War!"
was the rallying cry, as Americans prepared to expand agricultural output to meet swollen foreign and domestic needs.

County agents had appeared just in time to play a crucial role in the federal government's emergency efforts to boost food production. Extension representatives took pleas for increased production and conservation directly to the farmer with an effectiveness that no bureaucrat could match. At the same time, they acted as statisticians, monitoring acreage in production for thousands of localities throughout the nation and giving Washington the total picture of the agricultural campaign.

Thirty-eight of Pennsylvania's sixty-seven counties had agents at the outbreak of hostilities. More were quickly added. Their activities were representative of extension activities nationwide. Farmers were being exhorted to plant more of everything, yet the federal War Production Board maintained a tight-fisted control over the sale of lime and fertilizers. Agents cut through the red tape to see that farmers received as much lime and fertilizer as they needed, and in time to be of value. In some counties, farmers were willing to plant more but needed money for extra seed, fertilizer, or equipment. Agents intervened, working with banks to make federally backed loans on six-month interest-free terms. Agents also encouraged the raising of more hogs and wheat and gave advice to farmers who had little experience raising these commodities.

Even town and city dwellers had direct contact with county agents, who promoted the planting of “victory gardens” in every available space and saw to it that seeds and other appropriate materials were made accessible to the general public.

Extension personnel were considered so vital to the war effort that local draft boards in the Commonwealth invariably granted them deferments. At least one board member noted that the loss of the county agent through military induction would be as detrimental to the production of foodstuffs as the removal of fifty farmers. Milton McDowell served as a member of the state Food Commission. Although the commission was chaired by Pittsburgh food magnate H. Howard Heinz, it was McDowell who—almost literally—had his finger on the pulse of Pennsylvania agriculture and who directly supervised the commission's efforts to meet federal food production quotas.

Agents continued to be placed in counties after the war's end in 1918; by 1921, 62 of 67 counties had them. In most places, after some initial suspicion, the agents were well received. The Pennsylvania Farmer commented editorially in February 1921 that “the personal contact and suggestions of a live county agent have done more to induce farmers to
practice improved methods of farming in the few years of their service than was one by bulletins alone in the previous twenty-five years.”

A tale often repeated in agricultural circles at that time illustrated how farmers themselves recognized the value of extension. In a barber-shop one Saturday afternoon, so the story went, two farmers were assessing the worth of the new county agent. “That fellow doesn’t even know how to harness a team of mules!” exclaimed one. “Do you know how to harness a team of mules?” his friend asked, rising to the agent’s defense. “Why certainly I do!” declared the critic. Came the reply: “Then why do you need an agent to show you how?”

Gone were the days when an agent, in an attempt to win over a diffident agricultural community, would motor intently but without real destination up and down country lanes, giving the impression that his services were in constant demand. In no county had there ever been an attempt to have an agent recalled.

Extension director Milton McDowell was careful to implement the agent system in a manner that would not seem threatening to farmers. In addition to choosing men who were likely to earn the farmers’ trust and make their careers in the communities to which they were assigned, he cautioned agents against adopting a condescending manner that would be detrimental to their work. When an agent was first placed in Forest county in 1919, McDowell invited the county’s agriculturalists to assemble to meet the new man—W. I. “Prexy” Galt—at the courthouse in Tionesta. Instead of Galt lecturing the farmers on what his plans were, the twenty-eight farmers in attendance were asked what they believed should be done and in what ways they thought their agent could be useful. McDowell also sent along assistant director Ed Hibshman to convey their sentiments back to him personally. It was a minor episode, but one that was repeated in county after county.

Farmers’ loyalty to and faith in extension was put to the test early in the post-war years as “co-op fever” swept the rural parts of the Commonwealth. Cooperatives, wherein farmers banded together for various buying and selling ventures, were not novel arrangements. However, the depressed conditions of post-war agriculture gave them more widespread appeal. The shrinkage of foreign markets after the conflict combined with a continued surge in production to create huge surpluses of many commodities and drive prices down to their lowest levels since the Civil War. A simultaneous upward spurt in the cost of non-agricultural goods aggravated the farmers’ plight. In a cooperative, whether a small county-wide group or a large commercial organization
such as the Eastern States Farmers' Exchange, agriculturalists saw an opportunity to imitate the functioning of a large industrial corporation. Just as, say, U.S. Steel might cut back production in a time of sluggish demand, so, too, could farmers working collectively reduce their output. History had shown that left to themselves, individual farmers produced more in times of low prices in a vain attempt to forestall a drop in income.¹⁵

In many states, the county farm bureaus, which had been organized at the same time as the county agents had been installed, were acting as small-scale cooperatives. They bought seed, fertilizer, and other goods and marketed their crops as one seller. In 1919, the American Farm Bureau Federation was formed to give national leverage to the local bureaus.

In Pennsylvania, county farm bureaus were relatively weak and their power limited. Milton McDowell steadfastly opposed any commercial activities on the part of the bureaus, arguing that they had been established for the sole purpose of helping the agents plan an annual program of educational activities. If bureaus engaged in buying and selling, experience in other states had shown (according to McDowell) that agents would become little more than their "hired men." Agents would then be in violation of the Smith-Lever Act, which stated that their functions were to be strictly educational. The Grange, in Pennsylvania and nationwide, bitterly opposed farm bureaus on the grounds that farmers who chose not to pay dues to the local bureau were not apt to receive their fair share of assistance from the county agent.¹⁶

McDowell had foreseen as early as 1915 the problems that might arise if a farm bureau became a quasi-employer of the agent. Therefore, in setting up all but the earliest bureaus, he decreed that membership must be free to anyone. Elsewhere, particularly in the Midwest, an agent derived some or all of his salary from membership dues, an arrangement that left the door open for bureaus to exert undue influence upon him. In other states, county governments provided all or part of an agent's salary, permitting the opportunity for political considerations to affect extension work. In Pennsylvania, salaries came directly from the College, an arrangement that gave the Commonwealth one of the most highly centralized extension systems of any state.¹⁷ Agents were answerable only to Director McDowell, not to any farm bureau or local governmental body and enjoyed essentially the same benefits and academic status as members of Penn State's resident instructional staff.

McDowell was worried that the desire of some bureaus to engage in commercial enterprises could compromise the educational nature of
extension. The matter came to a head in 1922-23. The Pennsylvania Farm Bureau Federation, consisting of seven county bureaus with 3,000 members, was organized in 1922. In July of that year, McDowell sent a letter to members of the bureaus’ executive committees. "The county farm bureaus were organized by the College for the specified sole purpose of representing the local unit or organization for extension purposes," the letter read in part. "The organization of a state federation means changing the character of the farm bureau from what is now an extension agency to a general farmers' organization." However, warned the director, "the extension service is a public agency . . . Its service must be free to all." Consequently, he was giving notice that all farm bureaus were being replaced by extension associations. Those bureaus which refrained from joining the state federation and participating in commercial transactions could automatically become the extension associations in their counties. Otherwise, new associations would be organized. A farmer might belong to a farm bureau and an extension association, but he must respect the educational nature of the latter. McDowell’s plan carried the blessing of the College’s board of trustees.

The transition from farm bureau to extension association went smoothly in nearly all counties—a tribute to the practicality of McDowell’s plan, which in essence wished farmers well in their cooperative efforts but forbade them to use his agents for their own proprietary gain. In about forty counties, farm bureaus went into the federation and their place was taken by the new associations (usually comprised of the same members as the bureaus). In all but two of the remaining counties, the bureaus simply became the associations. In Northampton county, the agent publicly stated that extension should work hand in hand with the farm bureau, as in the Midwest. McDowell promptly fired him. In Lancaster county, where the state federation movement began, sentiment was strong that extension ought to help at least in marketing. McDowell was unyielding, and eventually enough farmers pledged their support so that an association could be formed.19

More than once at national gatherings of agricultural educators, Milton McDowell was introduced as “the only man who has solved the farm bureau problem.” That was a gratifying accolade, for in almost all leading agricultural states, the increasing commercialization of the farm bureaus had created a serious problem for extension officials from the land-grant colleges and the U.S. Department of Agriculture. Both the USDA and the American Association of Agricultural Colleges and Experiment Stations went on record in opposition to allowing county
agents to engage in cooperative business ventures. Representatives from the USDA and the American Farm Bureau Federation even signed a memorandum of understanding to that effect in 1921. Yet in most states, as a matter of practical necessity, the memorandum was ignored. In Illinois, for instance, agents were beholden to farm bureaus for their salaries and openly participated in product grading, advertising, supervising grain elevators and creameries, purchasing, and similar activities on behalf of the bureaus. This kind of alliance angered non-bureau members and often crippled extension’s effectiveness.20

A national survey revealed that in the late 1920s, agents in at least 29 states were answerable chiefly to their local farm bureaus. In almost every one of these states, evidence indicated that agents gave bureau members preferred treatment. Members received special bulletin mailings from the experiment stations, had first call on the agent’s time, and were given priority whenever land was chosen for a field test. In six more states, agents owed primary allegiance to county government officials, meaning they risked losing their positions if they failed to recognize which way the political winds were blowing. Pennsylvania, Minnesota, Wisconsin, New Jersey, Massachusetts, and Tennessee were characterized as having centralized extension organizations independent of local control and thus presumably the most purely educational.21

Had not McDowell been so careful to cultivate good relations with farmers and been so attentive to their needs, the kind of system over which he presided could have put him out of touch with the realities of Pennsylvania farming. McDowell was in fact criticized from time to time for having opposed the farm bureaus as much to defend his own administrative fiefdom as for any other reason. That kind of talk was rarely heard among the Commonwealth’s dirt farmers, however. In separating extension from farm bureau work (and not speaking out against farm bureaus per se), McDowell was able to avoid the bitter reaction against extension that occurred in a number of other states. He preserved, perhaps even sanctified, the educational character of extension work in Pennsylvania and subsequently enjoyed immense popularity among the Commonwealth’s farmers.

With the farm bureau question resolved, county agents turned their attention to topics related to crop storage, marketing, farm management and accounts, land utilization—the kinds of problems whose solution would result in greater operating efficiencies (and thus more income) but not necessarily more production. The state had a promising poultry industry, for example, whose egg production alone was valued at $50
It was also an industry plagued by high mortality rates among flocks, ignorance about proper feeding, and an average annual egg production per hen of only 60.9. As part of a campaign to promote better practices among poultry farmers in the northeastern and northwestern counties, agents typically selected two or three demonstration flocks, usually on the poorest farms where the improvements would be most dramatic. These flocks were then used to prove the worth of new methods of feeding, culling, sanitation, and bookkeeping and marketing. By the decade's end, average annual egg production per hen had climbed beyond the national average to about 120. It was an achievement that enabled farmers to maintain output using smaller flocks and at less cost.

A parallel situation existed in dairying, the state's single most important agricultural enterprise. County agents helped to form cow testing associations, through which farmers working collectively could increase production per cow at minimal cost. The association hired a technician to visit members' herds on a weekly rotation and keep records on the milk output and cost of feed for each animal. At the end of the year, records were examined and the least productive cows removed. Cow testing associations were the most important factor in enhancing the productivity of the Pennsylvania dairy farm. In 1929, 65 associations existed, nearly all of them started with the assistance of the extension service. Average annual production of an association cow totaled 7,700 lb. of milk and 300 lb. of butterfat. Non-association cows were then averaging 4,000 lb. of milk and 160 lb. of butterfat.

Similarly, agents helped establish bull associations in order to permit member farmers to secure better sires for their herds than would have been possible for any one farmer to afford. In the northwestern counties, agents lent their expertise to the task of reviving the wool industry, long an inconsequential factor in the Commonwealth's agricultural economy. Through demonstrations of improved feeding and housing practices for sheep, culling out the least productive ewes, and encouraging better grading techniques, agents helped farmers reduce Pennsylvania's off-grade or inferior wool from 13 percent of the total production in 1919 to 3 percent in 1929. That improvement in itself helped open new markets for Pennsylvania wools. Market positions were further fortified as agents gave farmers advice on creating "wool pools" to sell their good cooperatively.

One of the most important services rendered by agents in practically every county was enlisting the participation of cattle owners in a program of testing for bovine tuberculosis. This disease had long been a
problem, although a tuberculin test had been available since the 1890s. The state Livestock Sanitary Board had instituted voluntary testing in 1896, paying all expenses, including a modest reimbursement for animals which reacted to the test and had to be destroyed. Not all herd owners approved of testing, however, calling it unwarranted government interference with private enterprise and questioning its reliability. On the eve of the World War, 10 percent of the Commonwealth’s 1.5 million cattle were estimated to be still infected with tuberculosis.

In the 1920s, state Department of Agriculture officials began an area testing program. As soon as 90 percent of the herd owners in an area—which might be a county or group of counties—requested inspection, all cows would be tested and re-tested until that area could be certified as disease-free. Although a majority of farmers favored testing, especially after municipalities started banning the sale of untested milk, almost every area had enough hard-core resisters to place the whole testing program in jeopardy. It was the job of the agents to see that nine out of ten farmers went along. Having already gained the confidence of agriculturalists in other matters, agents were far more suited to the task than were “outsiders.” By 1935, virtually all of Pennsylvania’s cattle were being tested regularly; a year later, the USDA officially certified the state free of bovine tuberculosis.

Agents themselves frequently turned for help to the extension specialists based at the College. By 1930, the extension service employed some 65 agents, 9 assistant agents, and 45 full- or part-time subject-matter specialists. Experts on topics ranging from economics to pesticides to soils, these specialists spent much of their time in the field and knew some aspects of practical farming as well as the agents did.

The specialist’s potential for aiding the farmer was well illustrated by the work of Ernest L. Nixon, among the most widely known and prolific members of the extension service. Nixon came to Penn State from the Ohio State Experiment Station in 1917 as professor of plant pathology extension. His aim was to encourage the growing of more potatoes. Pennsylvania, he maintained, had plenty of cheap land unsuited for other agricultural purposes, and the climate was ideal. Nor had the depression undercut the demand for potatoes: Pennsylvania Department of Agriculture statistics indicated that in 1921, 15,500 rail cars of the tubers were unloaded in the Commonwealth’s fifteen largest cities. What Pennsylvania did not have were farmers who knew how to grow or market potatoes effectively. Fully 80 percent of 1921’s carloads came from other states.

Nixon combined laboratory research with field demonstrations to
point the way toward the use of disease-free seed, better spraying techniques, more efficient methods of cultivation, and innovative marketing practices. He approached his work with a passion, zealously delineating the virtues of increased potato production from one end of the state to the other. In 1920, about the time he was assisting in organizing the Pennsylvania Potato Growers' Association, the state's potato farmers' yields were substantially below the 120 lb. per acre national average. Within eight years, they had surpassed the national average, and a number of producers were harvesting 400 or more bushels per acre. To recognize their accomplishments, Nixon set up the 400 Bushel Potato Club, the first association of its kind in any state.23

In 1927, with potatoes well on their way to becoming one of Pennsylvania's most valuable agricultural assets (10,000 farmers would be growing potatoes as their main crop by 1940), Nixon became a full-time member of the experiment station. There he used his experience and scientific knowledge to battle fire blight and to develop higher quality and more disease resistant potato varieties, as typified by Pennigan and Nittany Cobbler. Nixon was the epitome of the extension specialist: he was enthusiastic, a talented speaker, and possessed a strong academic background; yet he never forgot his own humble origins or how to get along with ordinary farmers. His nephew, future U.S. President Richard M. Nixon, knew "Uncle Ernest" well and would later recount how the elder Nixon's life inspired his own efforts to work his way through college and launch a professional career.24

Perhaps the most vexing problem facing extension specialists was a logistical one. Because of the College's relative isolation, traveling to the more distant counties was a tedious and often complex chore. "You spent about a week traveling and a day working," recalled poultry husbandry specialist John Vandervort in describing a routine trip to Wayne county in northwestern Pennsylvania. The journey began as a bus trip from State College to Bellefonte. There one boarded a Pennsylvania Railroad train for Williamsport, where a change was made in order to reach Sunbury, at which point connections were made with yet another train for Wilkes-Barre. After spending the night in that city, it was necessary to take the interurban line to Scranton to board an Erie Railroad train for the Wayne county seat of Honesdale. There the specialist was met by the county agent, for a trip by auto to outlying farms. Twenty-four hours in the field was followed by the two-day return trip to State College.25

In addition to helping the farmers in the counties they visited, specialists also were a good means of keeping agents up to date on
advances in the agricultural sciences. Returning to the College for extended periods of graduate study was impractical for many agents; the specialists provided an acceptable substitute.

An important part of any county agent's job was organizing and advising youth clubs, mostly for boys and girls between the ages of 10 and 14. Youth activities had begun with the first agents, but not until the 1920s and the formation of 4-H clubs did they evolve into a statewide program. At that time, USDA officials cooperated with national 4-H club leaders to set standards for organization, operations, and competition among the various youth clubs. The objectives of club work were to nurture leadership and a sense of responsibility—attributes that would be valuable no matter what professional calling youth members eventually chose—together with enthusiasm for agricultural work and a knowledge of the best farm practices. In 1927, approximately 4,000 boys and girls were enrolled in Pennsylvania, with nearly 1,500 of them belonging to potato clubs, and another 600 each in dairy and pig clubs.  

Rounding out extension activities were the correspondence courses under the longtime (since 1907) direction of Thomas I. Mairs. By the close of the 1920s, 4,000 persons were taking instruction by mail in agricultural and home economics subjects from Penn State. The most popular of the forty or so courses available were “Poultry Keeping,” “Farm Bookkeeping,” “Vegetable Gardening,” and “Undergarment Making.” (This last was an offering of home economics extension, which in Pennsylvania as in most other states operated under the supervision of the agricultural extension service.)

Extension could not have been so successful without ample financial support, no matter how capable or dedicated the staff might be. McDowell and his assistants were overseeing annual expenditures amounting to more than a half-million dollars. By contrast, the 1920s were difficult years financially for The Pennsylvania State College as a whole. Its appropriation remained about the same ($2.3 million) through three legislative bienniums, while operating costs and enrollments climbed steadily. Resident instruction programs in the School of Agriculture suffered. Perhaps it was inevitable that some friction occurred between the extension service and the beleaguered academic departments.

“It early became the common idea,” Milton McDowell was to write in his memoirs years later, “that agricultural extension had more money than it needed. This, of course, was not true, but there was jealously in some quarters of the School of Agriculture.” A number of departments,
especially horticulture, agronomy, dairy husbandry, and poultry husbandry, attempted to get Smith-Lever money to pay for activities that were, to McDowell's way of thinking, not legitimate extension functions. Departments claimed that in answering farmers' inquiries, giving field lectures, running tests, and acting as consultants, their faculty performed work that was often within the province of extension and they should be reimbursed for it.

McDowell fiercely resisted these claims, suspecting that the departments wanted Smith-Lever funds to help stretch their own shoestring budgets. Ralph Watts, who had succeeded Thomas Hunt as dean of the School of Agriculture in 1912, usually sided with the academic departments. On one occasion, he asked McDowell to request supplemental funds from the USDA's Office of Cooperative Extension Work on the grounds that more part-time specialists were being used that year than originally planned. McDowell forwarded Watts' plea to Washington but refused to endorse it. The USDA subsequently turned down the request.

Another time, McDowell went so far as to defy the executive committee of the College's board of trustees. At Watts' urging, the committee had voted to transfer some funds in the institution's Smith-Lever account to the departmental budgets as payment for extension-type activities. Under federal regulations, no expenditures could be made without prior approval from the state extension director, and McDowell refused to sign the necessary papers. Watts, a gentle man who had no taste for conflict, did not force the issue. The transfer was never implemented.

McDowell affirmed that "the desire to spend some of extension's fund in ways outside of legitimate extension projects was not confined to the School of Agriculture. It was shared by the central College administration." He was referring specifically to John M. Thomas, who assumed the presidency of the College in 1921 following the retirement of Edwin Sparks. Thomas had no experience with land-grant education, having served as president of the private Middlebury College in Vermont and before that as a clergyman. His lack of experience may have led him to take a more liberal view than McDowell on how extension dollars could and should be spent.

In any case, he and McDowell sparred regularly over the subject. When the administration of the School of Agriculture was overhauled in 1923, Thomas considered removing McDowell from a position where he had jurisdiction over Smith-Lever allocations. The board of trustees was preparing to create vice deanships for research, instruction, and
extension in order to ease some of the administrative burden on Ralph Watts. As part of the reorganization, Thomas and others who wished to see a more flexible interpretation of Smith-Lever privately discussed making Watts the official director of extension, with legal authority over how monies were to be allocated. In recognition of his popularity with farmers and his effectiveness in working with county agents, McDowell would be retained as vice-dean and assistant director of extension, with responsibility for overseeing extension's day-to-day operations. The plan was never publicly proposed, however, possibly because Thomas knew McDowell had some powerful allies among the trustees. The director had long been on friendly terms, for instance, with Chester Tyson, prominent Adams county fruit grower, and with E. S. Bayard, Pittsburgh-based publisher of the widely read National Stockman and Farmer. Both Tyson and Bayard were members of the trustees' executive committee, as was McDowell's old chum from the class of 1892, J. Franklin Shields. A Philadelphia attorney, Shields wielded considerable influence on the board and in 1929 would begin a sixteen-year reign as its president.

The outcome of the reorganization plan was, then, not surprising. McDowell was indeed named a vice-dean but also retained the title (and full powers) of Director of Extension. He was as solidly in control as ever and would remain so until his retirement in 1941—concluding nearly three decades as head of one of the most constructive forces in Pennsylvania's agricultural history.

NOTES

5. Newspaper clippings, press releases, journal articles, and other materials written by or about McDowell are contained in M. S. McDowell Author and Biographical Vertical File (ABVF), Penn State Room. A biographical sketch is S. W. Fletcher, "Milton Speer McDowell," Pennsylvania Farmer, 24 August 1957.


20. True, Agricultural Extension, pp. 159–60.


22. A good summary of the agents’ achievements is Milton S. McDowell, “What the Agricultural Extension Service Has Done for Agriculture,” Annals of the American Academy of Political and Social Science, 142 (March 1929): 250–56. Also useful are the agricultural extension service’s annual reports (authored by McDowell) in Annual Reports, Cooperative Extension Service Records.


26. Penn State Farmer, April 1922; February 1928.
27. “School of Agriculture and Experiment Station,” in Annual Report of the Pennsylvania State College for 1925–26 (State College, Pa., 1926), pp. 31–32.


29. Ibid., p. 43.

30. Ibid., pp. 72–74; Minutes of a Special meeting of the Board of Trustees of The Pennsylvania State College, 3 August 1923, Vol. 3, Part 2, Board of Trustees Records (Record Group 7), Penn State Room, The Pennsylvania State University Libraries.