

CHAPTER 2

The 1960s--Responding to the Public's New Interest in Natural Resources

Erosion Control

By the 1960s, problems with dust were largely under control, but erosion persisted as a concern for the Buildings and Grounds Branch. Tank training maneuvers tore up the ground cover and caused erosion. Land management personnel were responsible for ongoing cleanup and revegetation of training areas.¹

In 1961, staff visits uncovered extensive erosion damage of ammunition storage igloos. As a result of this discovery, Buildings and Grounds suggested the use of aggregate as an erosion control measure in arid zones where vegetation could not be established.²

Grounds Maintenance

During the 1960s, landscaping for its own sake grew in importance. Maintaining installations in a state of spartan simplicity, the guiding principle of the past, became unpopular with the public. The public began to pressure the military to beautify its bases. One common source of pressure came from local garden clubs that donated shrubs to the bases. At Buildings and Grounds, chief agronomist Burton Kiltz received calls from installation engineers asking what to do about the arrival of truckloads of shrubs, as such an influx was disruptive to the landscape development plans. "Plant them and hope they die," was his

answer.³ However unwilling, installations felt they had to accept such donations because it was good public relations.

Public pressure, coupled with the active interest of the First Lady, Lady Bird Johnson, eventually led to changes in DOD and Army policy. The 1966 version of Army Regulation 420-74 was the first to include among its objectives the requirement to "beautify the appearance of installations and facilities through appropriate landscaping."⁴ The regulation set forth responsibilities for mowing lawns and for maintaining playing fields, golf courses, parade grounds, and cemeteries. It also specified that grounds maintenance responsibilities on overseas installations should conform to the prevailing practices of the host country.⁵ Army policy further required that all new construction projects must preserve natural features of the site and include lawns and landscaping.⁶

Poorly planned landscaping in the early years of an installation led to problems later. Installations often chose shrubs solely for their low price and fast growth without regard to hardiness and planted them in excessive numbers too close to buildings. Expensive maintenance resulted, including removal of dead plantings, transplanting, and radical pruning.⁷ Another type of problem arose during a major drought in 1966. B&G land managers faced the unusual task of developing irrigation systems for the dying grass of cemeteries in the Northeast.⁸

Land Management

The 1960s saw the growing sophistication of the land management concept and continued efforts to expand and improve the professional land management staff throughout the Army. During the early part of this

decade, management for "multiple use," "sustained yield," and protection of natural resources became DOD and Army policy in response to the enactment of public laws. Although the Multiple Use, Sustained Yield Act of 1960 applied to national forest management, the Department of Defense also endorsed it.⁹

The multiple use concept as cited in Army Regulation 420-74 in 1961 involved "a coordinated program of land management and improvement . . . applied on a multiple use basis to provide maximum military use; control vegetation to prevent destructive fires; stabilize soil to control erosion; protect natural resources; sustain productivity of croplands, grasslands, and timberlands; and encourage fish and wildlife."¹⁰ Henceforth, land management had to support not only military training, but such additional uses as agriculture, timber production, and recreation. Buildings and Grounds staff put much effort into overhauling Army regulations and technical manuals to reflect these changes.¹¹

Planning requirements expanded to include a landscape, land management, and woodland management plan for each installation. Each army headquarters reviewed and revised these plans. The Buildings and Grounds Branch held ultimate authority for them. Buildings and Grounds reviewed approximately one land management plan per week during this period. It had to heavily revise some of them because they were written by unqualified people. With the chief agronomist occupied in reviewing plans, the assistant agronomist and the forester at Buildings and Grounds performed installation inspections. They each averaged one inspection per week.¹² Installations also submitted landscape development plans to Buildings and Grounds, but the chief agronomist rarely had time for them.¹³

As before, the need for more foresters and

agronomists remained pressing. Buildings and Grounds lacked sufficient time and personnel to carry out field visits to all the installations. A command consensus on this problem proved difficult to reach. The staffs at Buildings and Grounds and at the numbered army headquarters each thought the other should be making more field visits.¹⁴

Overall, developments in the field mirrored events at Buildings and Grounds: installations promptly reported successes or failures to Buildings and Grounds; Buildings and Grounds, in turn, reflected these experiences by making policy changes.¹⁵

During the late 1960s, forestry personnel apparently attempted to separate forest management from the supervision of the land management agronomists.¹⁶ However, the Land Management Section retained control of forestry, arguing, "The Army holds land for military purposes and not to raise trees. We are not trying to compete with the forest industry but are using the military land effectively on a multiple use basis. Forestry is just a part of land management."¹⁷

Agricultural Leasing

Buildings and Grounds continued to actively promote agricultural leasing during the 1960s. Installation commanders had to examine land "constantly" to determine its availability for leasing.¹⁸ In 1960, the Army leased more than a million acres of land for agricultural use, with grazing comprising close to three-quarters of the acreage. The U.S. Treasury collected approximately one million dollars from these leases.¹⁹ In 1964, the Office of the Chief of Engineers studied the possibility of installations keeping the rental income to use for base maintenance, but no sponsor volunteered to champion the cause and no

change resulted, nor would it for another two decades.²⁰

The Buildings and Grounds Branch recognized, however, that the Army derived benefits from agricultural leasing that went beyond the money collected for rent. The lessees provided mowing, weed and brush control, fence construction and repair, correction of drainage problems, construction of fire lanes, and control of field rodents at no cost to the installations. An additional benefit was fire prevention: land leased for grazing experienced a reduction in the underbrush and grasses that could fuel serious fires. Were the land not leased, an installation would have been required to deplete its limited maintenance budget for these purposes. An indication of the value of leasing comes from three installations that in 1960 reported annual maintenance cost savings per acre ranging from 53 cents to \$6.66.²¹

W.G. Ralph, an agronomist with the Buildings and Grounds Branch, worried about the future of agricultural leasing because, "if the trend of reduced funds available to installations for maintenance continues, it appears that lessee maintenance participation will become increasingly more important."²² He noted that unless an installation commander could justify agricultural leasing in terms of dollars, the leasing would cease and the installation would have to either pay for the land's upkeep or allow it to become an unsightly jungle. He suggested that the value of the post engineer's time should be included in calculations of the savings from agricultural leasing.²³ A 1967 calculation estimated that agricultural leasing netted, above and beyond rental payments, approximately two million dollars in services such as mowing, fence repair, and fire prevention.²⁴

The growing importance of both conservation and

recreation in Army land use planning began to influence leasing decisions. This is illustrated by provisions in the 1966 edition of Army Regulation 420-74 that required installation commanders to report on conservation measures to be taken by lessees. In addition, wherever possible, leases had to provide for safe public recreational use of the leased land.²⁵

Forest Management

Army regulations required forest management programs on Army installations that had a minimum of 100 acres of productive or potentially productive woodlands. The stated objectives of forest management included facilitation of the military mission, protecting woodlands from exploitation and depletion, maximum production of forest products, development of live reserves for mobilization, contribution of forest products to the economy, watershed protection, and erosion control. However, the military mission of troop training remained the primary concern of woodland management. The public relations benefits of selling timber on a regular schedule made such sales an important secondary goal.²⁶ Each dollar realized from Army timber sales in fiscal year 1967 generated \$25 of economic activity for local logging, transport, and manufacturing industries.²⁷

The concept of multiple use as applied to forest management required that each acre of woodland support as many other uses as could coexist with military use, including timber production and sale or improvement of wildlife habitat. Forests were also to be managed for a "sustained yield" of trees over time. Wendell Becton, Third Army forester throughout the 1950s and 1960s, recalls that Army foresters practiced multiple use management from the beginning of the forestry

program, long before it was known by that name.²⁸

As was true of leased agricultural land, the benefits of management activities outweighed the costs. Woodland was much cheaper to maintain than any other type of cover. Unmanaged forests would have grown too thick, tangled, and fire-prone to be useful for military training.²⁹ Although military use of woodlands held priority over all other uses, most forest management activities would still have been necessary in the absence of military use. Fires, tree-attacking insects and diseases, and soil erosion required control regardless of the land's use.³⁰

The major costs associated with Army forest management included planning, purchase of seedlings and preparation of land for reforestation, purchase of equipment and supplies, construction and maintenance of roads and trails, timber marking, and fire prevention and control.³¹ Among the benefits were opening access to wooded areas for troop training, firefighting, timber harvesting, and base security patrolling; providing cover for training; fire prevention; insect control; watershed protection; habitat improvement; economic activity for timber-related industries; and beautification.³²

The Army woodland management program also included the development of scenic corridors along highways and around cantonments, shorelines, and public recreation areas. Pines planted along roads provided both snow fences and winter cover for wildlife.³³

Timber Sales Proceeds Won

The year 1961 saw the resolution of an important conflict affecting the Army forestry program. Funds for forestry operations had come from regular grounds maintenance budgets. Revenues derived from timber

harvesting were exceeding costs. The question arose, "Why not carry all forest management costs from proceeds?"³⁴ The question became more urgent in the late 1950s, when all types of military funding declined.

In 1959, the commanders at Forts Benning and Stewart, two of the Army's most productive timber harvesting installations, forced the issue by withholding forestry funds. The commanders publicized the consequences of this act, informing both the Army and the private sector that timber harvesting on their bases would cease.³⁵ Their superior officer, General Clark L. Ruffner, went to the Secretary of the Army to propose special legislation to authorize using timber harvesting revenues to cover costs. Ruffner's intercession failed.

Meanwhile, commercial loggers who depended upon supplies from Forts Benning and Stewart suffered. They complained to their congressmen, the most important of whom was Senator Richard Russell of Georgia, the powerful chairman of the Armed Forces Committee. Russell "worked out a revolving fund so that part of the money from sale of timber from military land went back into management of the forests."³⁶ Russell's plan became Section 511, Public Law 601, 86th Congress, in 1961. It stated that "appropriations of the Department of Defense available for operation and maintenance may be reimbursed during the current fiscal year . . . for all expenses of production of lumber or timber products . . . from amounts received as proceeds from the sale" of the timber.³⁷

Hailed by the timber industry as "one of the most important steps ever taken for conservation in this country," the law had dramatic impact upon Army forestry practices.³⁸ Much of the progress made in forest management and timber production dates from the

resolution of the funding uncertainty that existed prior to 1961. In comparison to the seven years preceding the change, the next seven years saw the number of woodland acres on Army installations increase slightly from 1.1 to 1.5 million. Yet concurrently, the gross income derived from these lands soared from 10.5 million to 26.7 million.³⁹ From the time of the passage of Public Law 86-601, forestry operations on military installations required no appropriated funds during the 1960s.⁴⁰

Of a total of 70 Army installations with active forest management programs, 12 operated at a profit in 1964, 18 were profitable by 1965, and 50 were expected to turn a profit by 1975. However, the Army forestry program as a whole made a profit throughout the 1960s.⁴¹

As a result, the scope of Army forest management expanded greatly. In fiscal year 1967 Army installations planted a total of 9,742 acres of trees, completed 20,672 acres of stand improvement, built 1,108 miles of fire lanes and access roads, maintained another 6,753 miles of road, harvested trees from 129,000 acres, and conducted controlled burns on 197,000 acres. In addition, 89 million board feet and 205,000 cords of wood were sold.⁴² Eighty percent of the woodlands managed by the Army at this time had been acquired as open or sparsely wooded land during World War II.⁴³

Organization, Planning, and Staffing

By its nature forest management responsibility tended to be decentralized. The basic responsibility resided at the installation level because of the unique soil and climate conditions at each location.⁴⁴ Foresters at the installations usually worked from the

post engineer's office. Each army headquarters within the Continental Army Command (CONARC) and the Army Materiel Command also employed a forester.⁴⁵ The role of the chief forester at the Buildings and Grounds Branch remained that of providing technical assistance and reviewing management plans for the installations.

The Army first required woodland management plans for installations in 1954.⁴⁶ By 1962, most installations with 100 acres or more of forest lands had put a plan into effect, although a few bases had not yet activated their plans or made the required revisions as of late 1963.⁴⁷ By late 1964, 65 installations had put their woodland management plans into effect. These plans were considerably more sophisticated than the plans of the mid-1950s.⁴⁸

Each Army installation submitted woodland management plans, which were essentially a series of annual work plans, to the appropriate army headquarters. The headquarters, in turn, provided copies of these plans and their revisions to CONARC and Buildings and Grounds.⁴⁹ The plans had to be revised at approximately five-year intervals, although some required annual revision.⁵⁰

Throughout the 1960s, inadequate staffing continued to be a widely recognized problem. A 1964 U.S. Forest Service study of woodland management requested by the Second Army commander concluded that the current staffing level was "wholly inadequate."⁵¹ In 1965, Buildings and Grounds studied Army-wide forestry staffing in response to complaints about its adequacy. The study identified staffing as a primary obstacle to the forestry program reaching its full potential. Less than 60 percent of the needed professional forestry manpower had been hired. In 1968, Buildings and Grounds again stated that forestry staffing remained "at an austere level."⁵²

Army foresters saw only limited value in the use of consultants or contractors to alleviate the shortage of professional forestry personnel. The B&G forester in 1963 asserted that experts borrowed from other agencies were effective only when working on very specific problems and that consultants had to work closely with Army foresters to be satisfactory.⁵³ The Third Army, which encompassed two-thirds of all managed Army woodlands and had the longest experience in Army woodland management, used contractors for tree planting, spraying, and timber inventories, but considered such tasks as firefighting, fire lane construction, and timber marking to be unsuitable for contracting.⁵⁴

However, funds were frequently available for staff training even when personnel funding was scarce. The command level provided the training. For example, the Sixth Army agronomist conducted training sessions for installation land management personnel, and the Army Ordnance Corps agronomist also offered natural resources management workshops in cooperation with several universities.⁵⁵

Fire Prevention and Control

The prevention and control of fires caused by training exercises remained a persistent concern of forest management. Forest management programs spent 50 to 60 percent of their budgets on fire protection.⁵⁶ The Third Army, which had woodlands over 80 percent of its area, reported an average of 900 fires a year by the mid-1960s.⁵⁷

Weed and brush removal was an important fire prevention activity. Technicians employed controlled burning or herbicides to clear brush from woodlands. Buildings and Grounds' former chief agronomist recalls

that the Army used herbicides liberally through the mid-1960s.⁵⁸ The Third Army forester during that period reports that although chemicals did not play a big role, herbicides were sometimes a necessary alternative when conditions were too dangerous for prescribed burning.⁵⁹

Timber Production, Harvesting, and Sale

The Third Army conducted a profitable forest management program, yielding a 3 to 1 profit/cost ratio.⁶⁰ Buildings and Grounds disseminated information on their experience and methods to the other armies. Third Army expertise in both controlled burning and reforestation benefited other Army programs. By planting reforested areas with sufficient space between the rows of trees, troops and vehicles could maneuver during training. The open strips between the rows could occasionally be leased for agriculture, thus accomplishing weed control while making money.⁶¹

The harvesting and sale of timber, although secondary to the use of woodlands for military training, paid for all other forest management activities. Army regulations authorized timber harvesting for three reasons: to create training areas, to ensure maximum sustained productivity, and to maintain the health of woodlands by removing sources of disease or insect infestation.⁶²

An installation would make a declaration of availability and send it to the B&G forester for review. If he approved it, the Department of Defense and other departments reviewed their need for the timber. Only if they did not require the timber would it be made available for disposal to the public sector. District Engineers awarded and administered timber

sales contracts under the supervision of the Real Estate Division.⁶³

The monies earned by installations' timber harvests periodically caused problems at the installation level. Post engineers and installation commanders occasionally coveted these revenues to finance nonforest projects. The Third Army forester recalled some examples, including an attempted diversion of funds to build access roads to fishing lakes at Fort Gordon. Other bases sometimes tried to use forestry funds to build roads needed for troop training. The lesson learned from the experience was that it was "important to ride herd" on forestry monies to ensure they were correctly spent.⁶⁴

Two different studies also found fault with the administration of timber harvesting and sales. The U.S. Forest Service believed that the Real Estate Division, which administered sales, was too far removed from the activity. They suggested that Real Estate establish a close liaison with post foresters because the foresters would be better able to develop local timber markets.⁶⁵ A 1966 DOD audit found that installations were not effectively controlling and monitoring the amount of timber removed during harvests. A lack of security measures during cutting facilitated the theft of timber from the installations.⁶⁶

Foresters recognized the link between sound forestry practices and the growth of wildlife populations. The diverse cover created by forest management activities was known to be attractive to a wide variety of birds and animals. According to Eugene Oren, the B&G forester during most of the 1960s, "It is not by accident that the best hunting occurs on the installations with the most active timber harvest programs."⁶⁷

Wildlife Management

The 1960s saw continuing public pressure on the Army to open its lands to public recreation, especially hunting and fishing. Public interest in wildlife conservation also gained momentum during the decade. In response to public demand, the passage of the Sikes Act (Public Law 86-797) in September 1960 provided the legal basis for wildlife conservation and public access to recreation on military land. The Sikes Act, along with its subsequent amendments, has remained a major influence on Army natural resources management policy until the present day.⁶⁸

The act intended "to promote effectual planning, development, maintenance, and coordination of wildlife, fish, and game conservation and rehabilitation in military reservations."⁶⁹ It authorized public recreational access to military land and the collection of fees for this privilege. It also authorized the formation of cooperative plans among the Department of Defense, the Department of the Interior Fish and Wildlife Service, and state fish and wildlife agencies. The cooperative plans, in turn, specified how to develop and manage fish and wildlife resources on military installations. The cooperative plan required an installation to provide a general inventory of fish and wildlife resources. The plan also established a research and development program and described the extent of public participation in the harvest of fish and game.⁷⁰

The 1962 Army Regulation 210-221, "Natural Resources--Management and Harvesting of Fish and Wildlife," reflected contemporary concerns in its statement of policies and procedures. The regulation decreed that all Army personnel "must support national

conservation policies and programs." Henceforth, an important function of command management should be an "intelligent and sympathetic understanding of natural resources and recreation problems."⁷¹

In accordance with the provisions of the Sikes Act, Army Regulation 210-221 required installations to provide as much public recreational access as possible without impairing the military mission. Any limitations or denials of such access had to be justified in writing. In addition, the 1962 regulation stated that, where possible, outleased land on military installations was to be made available for public recreation. The regulation further required annual reports to the Office of the Chief of Engineers on the extent of public access provided at each installation.

The planning tool to accomplish the regulation's intent was the cooperative plan. The Departments of Defense and the Interior had developed a model cooperative plan for use by installations. Those with suitable wildlife areas used the model to develop their own plans. Finally, installation commanders were to appoint conservation committees to coordinate conservation efforts. The suggested composition of these committees included land management and engineer personnel.⁷²

The 1960 passage of the Sikes Act led to the widespread opening of military areas to public recreation by 1962.⁷³ Although outdoor recreation included camping, picnicking, boating, swimming, and a host of other outdoor activities, hunting and fishing were in the greatest demand by both the public and military personnel. Military personnel and their families received the first priority on recreational use of military land.⁷⁴ Public access could also be restricted by the lack of funds and personnel needed to police an installation and ensure public safety. Some

bases required elaborate military security precautions.⁷⁵

The fees collected for hunting and fishing licenses supported installation wildlife management activities. These fees were frequently insufficient, so the 1968 amendment to the Sikes Act authorized the use of appropriated funds commencing in fiscal year 1969. However, installation commanders were reluctant to use appropriated funds for wildlife management because they had higher operational priorities. As a result, Buildings and Grounds proposed increasing license fees to provide a steadier source of funding.⁷⁶

In the opinion of one critic, who had served as conservation and wildlife management officer at Fort Riley, Kansas, from 1960 to 1962, "Of the three military services, the Army has placed the least command emphasis on wildlife management programs."⁷⁷ Although some good programs existed (including those at Camp A.P. Hill, Virginia, and Fort Gordon, Georgia) and a 1962 Army regulation prescribed general policies and procedures for wildlife management, "coordinated, centralized direction from the Department of the Army . . . did not follow, and successful implementation of this regulation will no doubt be hindered."⁷⁸ Lack of regulatory emphasis on staffing and lack of sufficient funding were additional hindrances to the development of good wildlife management programs.⁷⁹

In addition to requiring annual management plans and consultation with state and federal fish and game experts, Army regulations specified which wildlife management techniques should be used. The 1966 version of Army Regulation 420-74 identified habitat improvement as the primary means of wildlife management. Stocking of fish and wildlife or introduction of nonnative species was to be avoided with few exceptions, as was the wholesale destruction of

predator species. The regulation also called for preservation of wetlands and endangered species, although public law did not address endangered species until 1973.⁸⁰

Wildlife population control, planting feed crops, and opening clearings for wildlife became land management responsibilities of the post engineers. They employed such forest management practices as controlled burns and firebreak construction to provide additional food and habitat for wildlife. They also had to protect wildlife from fires, poachers, and predators.⁸¹ During the 1960s, forest management personnel often doubled as wildlife managers or game wardens. Only rarely did bases place sufficient priority on wildlife to justify employing full-time civilian wildlife managers.⁸²

State wildlife agencies provided installations with plants, animals, and advice, while the installations, in turn, furnished excess animals for the states to stock in other areas.⁸³ Excessive deer populations were an ongoing problem on many bases, especially those that could not allow public hunting for security reasons. Collisions between deer and vehicles occurred frequently.⁸⁴

In fiscal year 1966, 100 major Army installations in the United States had programs for developing recreational resources. Of these, 51 granted liberal public use, 28 restricted public access because large resident military populations used all available resources to capacity, and 21 restricted all recreational use because of conflict with military use.⁸⁵ By 1969, 110 installations operated fish and wildlife management programs.⁸⁶

The passage of the National Environmental Policy Act in 1969 marked the beginning of a new era of environmental consciousness. The act established

federal agency goals for enhancing and preserving natural resources, created the Council on Environmental Quality, and introduced the environmental impact statement process.⁸⁷ The act's provisions and the increased public awareness of environmental issues influenced all future Army natural resources management. In fact, some of the basic policies mandated by the act had already taken effect in the Army prior to its passage.⁸⁸

Pest Control

The Buildings and Grounds Branch's Insect and Rodent Control Services became the Engineer Entomology Services in 1961 in response to advice from the Armed Forces Pest Control Board.⁸⁹ Army Regulation 420-76 formalized the change and described the duties of the Engineer Entomology Services. They were "the supervision, execution, and evaluation of pest control operations."⁹⁰ This involved conducting inspections both to determine the need for control measures and to assess the effectiveness of applied control measures. The new regulation charged the entomology services with establishing procedures in connection with 11 activities: controlling termites, wood borers, and wood rots; ratproofing and screening structures; disinfesting stored supplies, generally by fumigation; using wood preservatives; applying pesticides as soil poisons; draining, ditching, and clearing and controlling vegetation to prevent mosquito and fly breeding; controlling lawn pests; controlling rodents and predatory animals; participating in the pest control phases of woodland and wildlife management programs; supervising aerial spraying; and applying pesticides.

The 1960s saw the continued development of

numerous and diverse new pesticides. The Engineer Entomology Services struggled to keep abreast of these advances. B&G entomologists responded to what they perceived as an urgent need for guidance on the use of improved but more dangerous pesticides. The result was Army Circular 420-3 issued in 1964. It noted that new pesticides and dispersal equipment "provide for selection from a wider range of items for spraying, dusting, application of fumigants, and use of poison baits. This has necessitated the development of improved methods and techniques for use by pest controllers at installations."⁹¹ More powerful poisons meant increased risk. Accordingly, the circular stressed the need for greater vigilance and noted that "the improper or careless use of these pesticides and equipment by untrained personnel may result in contamination of areas treated and the introduction of health hazards."⁹²

Throughout the decade, the basic mission of pest control remained "combatting disease, maintaining morale and efficiency, and preventing property losses." As knowledge and technology expanded, Army pest control expanded its scope to include protection of stored food, forested areas, shade trees, and grassed areas from loss or damage. At this time the Army could boast that preventive measures had reduced the incidence of pest-borne diseases to the "lowest point in military history."⁹³

In fiscal year 1967, the unit cost of pest control was \$5.43 per 1,000 square feet of building area. This represented a savings of 84 cents over the 1943 cost, attributable to improved supplies, methods, and training. At this time, the Army employed 15 engineer entomologists nationwide.⁹⁴ Also by the late 1960s, the Army engineer entomology program conducted pest control in 924,127,000 square feet of building area and

11,335,906 acres, excluding Southeast Asia, an area the size of Massachusetts and New Hampshire combined.⁹⁵

A new concern in the late 1960s involved preventive treatment of cargoes returning from Southeast Asia, which posed the threat of introduced infestations. The U.S. Department of Agriculture advised the Army on treatment of the receiving areas that had high potential for infestation.⁹⁶ Other new concerns involved controlling pests in stored food and responding to the growing public and official interest in the Army's use of pesticides.

The available technology for control of insects in food storage depots and in transit stood on the threshold of a major expansion in 1969. Until then, the only insecticide considered safe for fogging was a pyrethrum solution, but it lacked effectiveness. However, the U.S. Department of Agriculture had just introduced "a safe insecticide, dichlorovos, that will provide excellent control." Training in its use would be required before it could be adopted by the Army. Also at this time, fumigation of infested stored food employed methyl bromide in vacuum fumigation chambers. The food had to be hauled to the chambers for treatment, and if an item required more than one application, the residual bromide would exceed Food and Drug Administration standards. The Department of Agriculture then began recommending phostoxin, which could be used right in the warehouse and was cheaper and safer than the bromide. The use of phostoxin had to be delayed several months as well, until "proper instructions can be written and pest control operators and depot storage personnel trained."⁹⁷

The Armed Forces Pest Control Board, formed in 1957 to provide DOD-wide cooperation and coordination, continued to operate through the 1960s. In addition, the Federal Committee on Pest Control mandated

cooperation with outside agencies during this period. This committee performed annual reviews of all federal programs using pesticides. Proposed programs had to specify in detail the pest to be controlled, pesticide to be used, rate of application, strength of finished spray, total acres or square feet to be treated, method of application, storage, and safety precautions.⁹⁸ However, many GIs who worked in pest control resented this outside supervision because they had grown up on farms and used pesticides all their lives.⁹⁹

The introduction of new and better insecticides would be an ongoing concern for Corps of Engineers entomologists as they attempted to keep up with the resulting training needs. Simultaneously, a major new consideration entered the picture. Public awareness about and concern for the environment were increasing: "The current public and official increased interest in pesticides is resulting in congressional and other government agencies inquiry into Army use of pesticides."¹⁰⁰ Henceforth, pest management decisions had to take public concerns into account.

Notes

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13. Kiltz interview.
14. Becton interview.
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