Chapter 17

State and Extension Forestry

Contents

The information that follows focuses on some of the educational activities and programs in Extension Forestry. It should not be viewed as a totally comprehensive summary.

Early Forestry Development

Early settlers in the Plains States experienced a shortage of wood supplies for fuel, fences, and building purposes. The supply of native timber was inadequate to meet the demand and trans-

portation facilities had not been developed sufficiently to serve the Plains region.

Timber Culture Act—1873

In 1873, Congress enacted the Timber Culture Act. Its purpose was to develop a program to alleviate the shortage of wood and improve living conditions.

The Act permitted a settler to acquire a quarter section of land, in addition to his homestead, by planting 40 acres of land to forest trees.

The Timber Culture Act was later revised to reduce the size of the tree plantation required to 10 acres. A large number of plantations were established in Kansas under the Timber Culture Act.

Tests for Adapted Forest Trees—1880's

The Division of Forestry, established in the U. S. Department of Agriculture in 1881, cooperated with the Kansas State Agricultural Experiment Station to make tests of forest trees that might be adapted to Kansas conditions.

The tests to identify adapted species of trees in Kansas were planned by B. E. Fernow, Head of the newly created Division of Forestry, USDA. Fernow received his forestry training in the forest schools of Germany.

Those cooperative experiments were later directed by Gifford Pinchot who became the first chief of the U. S. Forest Service. The test results were published in a Kansas Experiment Station bulletin.

Professor Albert Dickens supervised that experimental forestry work and also conducted Farmers' Institutes in which programs included forestry as well as horticultural subjects. He was a member of the Department of Horticulture, Kansas State College, from 1901 to 1930.

First Forestry Organization—1887

The first State Forestry organization in Kansas was created by the state legislature in 1887. This Act created the "Commissioner of Forestry" office with the incumbent serving for two years.

The primary function of the newly created organization was the growing and distribution of trees for conservation purposes. Two tree seedling farms were established—one at Ogallah in Trego County, and one at Dodge City in Ford County.

In 1897, the Commissioner of Forestry was changed to a Commissioner of Forestry and Irrigation to combine investigations of forestry and irrigation.

The Kansas Commissioner of Forestry and Irrigation, in his report to the Governor in 1899, stated:

> The demand for seedling trees is as great as at the time when a large number of timber claims were being planted.
>
> The explanation is found in the fact that people have learned that the windbreak is not a luxury, but a necessity, if they would grow fruit trees successfully.
>
> There can be no question but what the trees that have been furnished by the state in the last few years are better adapted to the country, and are better cared for than formerly, when they were usually abandoned within a short time.
>
> Thousands of homes in Central and Western Kansas have been rendered more homelike, and the people have been greatly aided in the solution of the most important problems of methods and species.
>
> In Eastern Kansas many owners of timber land have become interested in their management and are attempting to find out what they can do to make their forests more profitable, while a few others are actively engaging in the work.
>
> We have not accomplished all that should have been accomplished during the twelve years since the work commenced.
>
> When we take into account the fact that the management has been changed every two years, sometimes without good reason, it is not hard to understand why the results are not entirely satisfactory.

Two Commissioners—1907

In 1907, the Commissioner of Forestry and Irrigation was replaced by two commissioners of Forestry, one for the Ogallah Station and one for the Dodge City Station. They were appointed by the Governor for two year terms and two years "is all the longer" the organization lasted.

Division of Forestry, KSU—1909

In 1909, a new state forestry law established a division of forestry within Kansas State University. This forestry division was under the supervision of a State Forester appointed by the College Board of Regents.

In 1910, Charles Scott, professor of forestry at Iowa State College, Ames, Iowa, was secured for the State Forester position.

At this point, public forestry in Kansas added breadth to depth and a forest program with needed

broad objectives was launched.

It was the duty of the new State Forester to promote practical forestry by both the maintenance and extension of existing forest areas, and the creation of artificial forests by planting.

In addition, the State Forester was available for technical assistance in preparing planting plans or management plans for woodlots.

The only charge to the landowner for this assistance was the actual expense incurred in the work such as transportation costs, board, lodgings, and incidental expenses.

The department organization in 1910 consisted of a State Forester at Manhattan, an Assistant State Forester in charge of forestry work at the Hays Experiment Station, and a foreman at each of the two forestry stations at Ogallah and Dodge City.

Forest Nursery, Hays—1920's

A forest nursery was established at the Fort Hays Branch Experiment Station. For many years it was used for the production of forest planting stock for Clarke-McNary distribution and also for some experimental work with forest trees, ornamental trees, and shrubs.

Forestry meetings with farm groups were conducted by Charles Scott when he served as State Forester from 1910 to 1917. Establishment of catalpa plantations for the production of fence posts received special attention at that time.

No State Forester—1930-61

Professor Albert Dickens was named State Forester in 1916 and held this position until his death in 1930. After his death, no other State Forester was officially appointed until 1961.

Prairie States Forestry Project—1934

In 1934, the Prairie States Forestry Project was started with emergency funds administered by the USDA Forest Service and coordinated with State Foresters.

This new effort, coupled with previously authorized Federal assistance to states for forest tree planting (Clarke-McNary Act of 1924) created a dramatic new interest in tree planting which lasted until the beginning of World War II.

Farm Forestry Project—1935

The Farm Forestry Project in Extension was established in September of 1935. The first Extension Specialist in Forestry was Lloyd Smith. He was employed jointly by the Extension Service and the Department of Horticulture.

Smith taught in the Department of Horticulture during the first semester of each school year and worked for Extension from February 1 to September 1 of each year.

Farm Forestry work in the 1930's was planned around the distribution of trees from the tree nursery at Hays and the establishment of farmstead windbreaks and field shelterbelts.

Developments After 1935

First Extension Forester—1936

In 1936, Lloyd Smith was appointed as the first Extension Farm Forester in the state. He was employed half time by the Kansas State University Extension Division and half time by the Agricultural Experiment Station.

The duties of the Extension Forester included the promotion of good forestry practices throughout Kansas.

One of Smith's first jobs was to participate in a state-wide forest survey made by Kansas State University, in cooperation with the U.S. Forest Service.

This survey was part of the national forest survey authorized by Congress in 1928. Most of the actual field work was done in 1937 and the results published in a Kansas Agricultural Experiment Station Bulletin of 1939.

Although the position of Extension Forester has been continuous since 1936, it was quite often vacant during the first fifteen years of its existence.

Because of the limited abilities of one person to cover a state the size of Kansas, the work was mainly confined to information and education.

Prairie States Forestry—1938

The Prairie States Forestry Project Director, T. Russell Reitz, and Extension Director H. Umberger, developed a memorandum of understanding in 1938 on the educational program in forestry.

The director of the project and the Extension Forestry Specialists cooperated with the County Extension Agents in an educational program for the

care of shelterbelts.

A report made by Reitz on September 20, 1939, summarized Extension activities in shelterbelt work: work in 34 Central and Western counties with 781 miles of shelterbelts, 10,425 acres, 1,286 farms, and 6,493,340 trees.

WWII Personnel Problems

During World War II, the Extension Service experienced difficulty in retaining personnel for the project. Richard Johnson resigned on May 21, 1943. George Fisher was appointed to fill the vacancy, but was called into military service within a few months.

The position was then filled on a temporary basis by Robert Cameron, an employee of the Soil Conservation Service. SCS paid his salary and the Extension Service paid his expenses.

That arrangement ended in April, 1944. The position was then vacant for nearly two years when Donald Duncan was employed on January 1, 1946.

Forestry Program Declined—1951

In the fall of 1951, the tree nursery at Hays was closed because of pressure by commercial nurserymen who objected to the competition in their business, even though they were not able to provide an adequate supply of quality trees to fill the demand made by farmers.

At the same time, the Department of Horticulture discontinued teaching farm forestry. The farm forestry program was at a low ebb.

Extension Forester—1951

In 1951, Harold Gallaher was appointed to the Extension Forester position. His work for the first six years followed along the line of his predecessors, emphasizing information and education.

To supply some of the research needed for this information and education, the Kansas Agricultural Experiment Station appointed a full time research forester at the University in 1955.

Research Forester—1955

Paul Roth, a forestry graduate from Purdue University, began work in August, 1955, as Research Forester in the Department of Horticulture.

Extension/Forestry Agreements—1956

In the latter part of 1956, the Kansas State Extension Service entered into five cooperative agreements with the U. S. Forest Service. Those agreements, for the first time in Kansas history, provided an overall forestry program to offer much of the technical forestry assistance needed.

Specific recommendations based upon applicable research were available for management of individual Kansas farm woodlands. The recommendations were established for broad resource protection and for profits.

The cooperative agreements included:

1) Clarke-McNary Act (Section 4)— Resumption of that cooperative program enabled the Extension Service to resume an organized tree distribution program. Farmers were again able to purchase trees and shrubs for wind break and woodland plantings at a nominal cost through their local County Extension Agricultural Agent.

2) Soil Bank Distribution— The Conservation Reserve section of the Soil Bank program gave impetus to the forestry program by:

   a) Providing funds for the purchase and distrbution of planting stock to farmers who contracted to use them for windbreak or wildlife plantings.

   b) With the Clarke-McNary funds the College was enabled to organize a tree distribution program wherein trees were contracted from federal, state and private nurseries, packaged at a former site of a Soil Conservation Service nursery, and shipped directly to Kansas farmers and land owners.

3) Soil Bank Technical Assistance—Funds from the Soil Bank program were also for promotion, establishment and maintenance of windbreaks, shelterbelts, woodlot and wildlife plantings.

   (The Extension staff was able to provide on the ground assistance to farmers in the preparation of planting plans as well technical assistance to the Agricultural Stabilization and Conservation committees.)

4) Cooperative Forest Management Act— Cooperation with the Forest Service under this act provided technical assistance in woodlot management and marketing to all Kansas farmers.

   Technical assistance became available to farmers in the area of timber stand improvement, harvest cutting, location of markets and preparation of sales contracts. Assistance was also made available to timber operators and processors in marketing and plant management techniques.

5) Watershed Program — Under the watershed, funds were provided for promotion

work and technical assistance in implementing the forest management phases of each watershed plan.

A Forester participated in the preliminary examination of each new watershed and then followed up with whatever technical assistance seemed necessary.

District Extension Foresters—1957

In order to provide the necessary technical assistance as specified in the five new agreements, four District Extension Foresters were employed in 1957.

One was located at Hutchinson, one at Iola and two at Manhattan. Each had an assigned area in which to work.

Assistance was available to County Extension Agents, Soil Conservation Service personnel and committees in the Agricultural Stabilization and Conservation program.

The district plan has continued with a high degree of satisfaction.

State and Extension Forestry—1961-87

In 1961, the Extension Forester's role was technically clarified by the Board of Regents, designating the incumbent jointly as the State Forester and Extension Forester.

Harold Gallaher, the Kansas State University Extension Forester, was officially designated State Forester with overall responsibility for the state forestry programs. The operating unit became designated as State and Extension Forestry.

In 1962, the Cooperative Fire Control Program was added to the USDA Forest Service agreement, under authority of Section II of the Clarke-McNary Act of 1924.

In 1965, the Legislature re-wrote and codified the State Forestry legislation in KSA 76-425.

In 1967, a Tree Improvement Project was begun under the provisions of Title 4 of the Soil Bank Act.

In 1972, the Urban and Community Forestry Assistance program was initiated on a pilot-grant basis from USDA Forest Service.

In 1977, the Department of Forestry was organized in the College of Agriculture at Kansas State University. This action combined the positions of State Forester and academic Department Head.

This brought together the state agency service programs, the forestry Extension education programs, the forestry research programs, the resident instruction curriculum of pre-forestry, and the parks and recreation areas management option of the natural resources management curriculum.

In 1981, Harold Gallaher retired as Department Head/State and Extension Forester. John Strickler, Associate State Forester served as Acting Department Head and State Forester until August of 1982 when A. Jay Schultz was hired.

State/Extension Roles in Kansas—1987

Schultz resigned as Department Head and State Forester in 1987.

In September, 1988 Thomas Warner was appointed to serve as the Department Head, Department of Forestry, with administrative responsibilities over teaching, research, and the State and Extension programs.

Raymond Aslin was appointed in December, 1988 as the new State Forester, to provide operational oversight for the State and Extension Forestry Division, reporting to the Department Head.

Tree Distribution

After 1988, the Forestry "Extension Specialist" position in the Department of Forestry was split between three professionals who also had "State" Forestry appointments.

The Clarke-McNary Act of 1924 authorized Federal and State cooperation for the distribution of forest planting stock to farmers. Planting stock was made available from the tree nursery at the Fort Hays Branch Experiment Station.

The first trees were distributed in 1928, when 10,277 trees were distributed. By 1937, that number had increased to 310,141, and to nearly half a million by 1940.

The Prairie States Farm Forestry plan for establishing shelterbelts greatly increased the demand for trees.

Extension Forestry—WWII

During the years of World War II, because of a shortage of manpower, the need for food production, and the frequent changes in Extension Foresters, shelterbelt and windbreak plantings were given less emphasis.

Foresters, when employed, gave their emphasis to the production of native lumber for home use to relieve the demand on commercial supplies.

Post War Forestry Years

During the post-war years interest in tree planting was revived and distribution from Hays reached 700,000 in 1950. The forestry program in Extension suffered a definite setback when the State Nursery at Hays was closed in the fall of 1951, particularly in the field of windbreak and shelterbelt plantings.

The lack of a reliable source of quality trees almost eliminated an organized action program in windbreak and shelterbelt establishment.

Forestry Program—1951

Harold Gallaher was employed as Extension Forester, December 1, 1951. He successfully developed the farm forestry program in Kansas from the time of his appointment.

In his report for 1952, Harold Gallaher wrote:

Some weaknesses in this year's program were:

1) Lack of some and short supply of some of the more desirable species.

2) Distribution system for many counties was not satisfactory.

3) The prices for the quality of planting stock in some cases was too high. The prices of evergreens ranged from $20 to $150 per thousand. Hardwood seedlings prices ranged from $10 to $50 per thousand.

Forestry Program—1952-57

During the next five-year period emphasis was given to selection of tree species, care of young trees, and methods of planting.

The Extension Forestry Specialist cooperated with the Extension Specialist in Landscape Architecture in holding training meetings for County Extension Agents and leaders.

Farmers desiring trees for planting secured them from nurseries within Kansas or out of the state, a few from the Fish and Game Commission, and some from the Soil Conservation Service tree nurseries.

Soil Bank Program—1957

In 1957, with the establishment of the Soil Bank program, Kansas renewed a cooperative agreement under the Clarke-McNary Act and initiated a new tree distribution program.

Tree Nursery Facilities—1957

The facilities of an abandoned tree nursery with packing shed, etc. were available from the Soil Conservation Service. Those facilities were located a few miles from Manhattan on the site of the horticultural experiment farm.

In the first year, a total of 2,338 orders were filled with over 600,000 seedlings; enough to plant 1,558 acres of windbreak and shelterbelt plantings.

The intent of the Clarke-McNary program was to furnish planting stock for forests and windbreaks at a price so nominal that land owners could make tree plantings without financial sacrifice.

In 1959, the reported price farmers paid for trees in the distribution program was four cents for deciduous trees and six cents for evergreens.

The trees were available at these prices only for windbreak, woodlot, or shelterbelt plantings. Four hundred thousand of the trees distributed in 1964 were for Christmas tree production.

Tree Improvement Project—1972

A Kansas tree improvement program was initiated to select, develop, and progeny test genetically superior strains of walnut and cottonwood for eventual use by growers.

The black walnut was the most valuable timber tree in the United States. Kansas was second among States in the production of high quality walnut veneer and number one in overall walnut production in 1972.

Ten thousand train carloads of cottonwood were shipped from Kansas annually in the early 70's to pulp mills in Texas and Louisiana.

The tree improvement program had as one of its objectives the development of black walnut selections that would produce a black walnut veneer log in a shorter time than the 60 to 100 years normally required.

At the same time it should produce an annual income through nut sales. Another objective was to develop genetically superior strains of cottonwood that yielded high quality timber and pulp.

The initial success of the tree improvement program was made possible by a cooperative public who participated in the program by reporting superior trees

to County Extension Agents and District Extension Foresters. Most of the selections established in the orchard were obtained in this way.

Seedling Distribution—1977-79

In this twenty-first year of the KSU Tree Planting program, a total of 1,201,311 seedlings were distributed to 5,571 landowners. Nearly 5,500 acres of the plantations were established.

Included in these figures were 107,215 containerized trees which were produced in the greenhouse facilities and 20,000 trees from plant materials produced in the tree improvement orchard.

In 1978, the twenty-second year of the KSU Tree Planting Program, a total of 1,334,000 seedlings were distributed to 6,292 landowners. Nearly 2,725 acres of the plantations were established.

Included were 115,740 containerized trees produced in the greenhouse facilities and 20,000 trees from plant materials produced in the tree improvement orchard.

In 1979, the twenty-third year of the KSU Tree Planting program, a total of 1,413,000 seedlings were distributed to 7,170 landowners. Nearly 3,510 acres of the plantations were established.

Included were 167,000 containerized trees produced in the greenhouse facilities and 20,000 trees from plant materials produced in the tree improvement orchard.

Drought Affects Plantings—1981

In 1981, the 25th year of the Kansas Tree Planting Program, the number of tree and shrub seedlings distributed was down about six percent from the previous year.

The reduced interest in planting trees and shrubs for conservation purposes apparently was due to the drought which extended into the early part of the planting season.

Although the number of plants was less, the number of orders increased seven percent over the previous year and was the largest number processed in the history of the program. A total of 1,332,000 trees and shrubs were distributed to 7,835 Kansans.

The production of container grown seedlings was increased 37 per cent for a total of 283,000 seedlings. From 1957 to 1989 a total of 152,071 orders and 37,131,000 seedlings were distributed through this program.

Scope of Tree Program

The trees were made available at as near cost as was possible. Since the program began in 1957, the number of tree orders and the number of trees distributed were:

Year	Number of Orders	Number of Trees Distributed	Size of Average Order
1957	2,338	628,000	269
1958	3,176	942,000	296
1959	3,462	926,000	267
1960	2,946	862,000	293
1961	3,557	1,207,000	339
1962	3,500	1,083,000	309
1963	3,251	961,000	296
1964	3,498	1,447,000	413
1965	3,055	1,289,000	423
1966	2,968	1,184,000	399
1967	2,727	994,000	364
1968	2,490	910,000	365
1969	2,900	762,000	263
1970	3,402	914,000	269
1971	4,371	1,219,000	279
1972	4,754	1,232,000	259
1973	4,890	1,237,000	259
1974	4,288	1,107,000	258
1975	4,322	1,185,000	274
1976	4,756	1,154,000	243
1977	5,571	1,201,000	215
1978	6,292	1,334,000	212
1979	7,170	1,413,000	197
1980	7,294	1,425,000	195
1981	7,835	1,322,000	170
1982	7,292	1,224,000	168
1983	6,774	1,135,000	168
1984	6,476	1,134,000	175
1985	5,933	1,143,000	193
1986	6,180	1,124,000	182
1987	5,302	1,208,000	228
1988	4,923	1,136,000	231
1989	4,378	1,079,000	246
TOTAL	152,071	37,131,000	

Planting for Conservation—1984-87

In FY 1984, about 200 SCS and Fish and Game specialists were trained in forestry practices using a multidisciplinary training program. A companion public motivational package directed toward increased

use of trees in windbreak and conservation plantings utilized 50 radio talks, 100 newspaper releases, 25 television presentations and involved nearly 100 landowners.

In 1984, the Kansas Tree Planting Program, planted 1.1 million trees on 1,900 acres for windbreaks, 300 acres for woodlots, 13 acres for erosion control, 400 acres for wildlife and 180 acres for Christmas trees.

Within 10 years, the 180 acres of Christmas trees had a market value of $1.8 million.

In 1986 landowners, with assistance from the Kansas Tree Planting Program, planted 1.1 million trees on 1,750 acres for windbreaks, 250 acres for woodlots, 10 acres for erosion control, 480 acres for wildlife, and 225 acres for Christmas trees.

Shelterbelt and Windbreak Plantings

In 1987, landowners, with assistance from the Kansas Tree Planting Program, planted 1.2 million trees on 6,680 acres for windbreaks, 1,430 acres for woodlots, 63 acres for erosion control, 2,070 acres for wildlife, and 835 acres for Christmas trees.

Within 10 years, these Christmas trees had a market value of approximately $12 million.

The Prairie States Forestry Project was created in 1934 with a two-fold purpose:

1) To provide work for unemployed persons
2) To reduce soil erosion brought about by high winds over unusually dry soil.

Research indicated that the eroding effect of a high wind could be effectively broken as far as 25 times the height of the trees in a shelterbelt.

During the operation of the Prairie States Project, from 1934 to 1942, 35 million trees were planted on 5,000 farms in 29 counties in central Kansas.

The total acreage was 39,400. The shelterbelts, if placed end to end, would have been 3,072 miles long. The Prairie States project brought about an increased interest in trees for farmstead and field protection.

Drought Effects—1952-56

From 1952 to 1956, a general drought prevailed over most of Kansas.

Many of the trees in the shelterbelts, then from ten to 15 years old, died due to the lack of moisture and because they were too thickly planted. At the time, new plantings had difficulty in surviving.

In spite of the drought, many of the Prairie States Forestry Project plantings are still functioning in 1989.

Shelterbelt Management—1957

In 1957, Harold Gallaher, Extension Forester, started shelterbelt management demonstrations in several counties. In some cases two or three rows of deciduous trees in a seven to ten-row shelterbelt had died.

These were removed and replaced with evergreens. With proper renovation the shelterbelts were brought into a healthy state and continued to serve their purpose—to protect the soil on the leeward side from wind erosion.

In the following years shelterbelt and farmstead windbreak management received continued attention as the Extension Specialist conducted an educational program in woodlot management.

Training Schools—1950's

Agent and leader-training schools were held throughout the state on a rotation plan whereby the entire state would be reached within three years.

Emphasis was given to selection of adapted species, methods of planting, site selection, care and source of quality trees.

Windbreaks Save Energy —1982-83

There were about 70,000 farmstead windbreaks in Kansas in 1982. An estimated 64,000 additional windbreaks were needed.

In 1982, 7,292 Kansans planted 1,224,000 tree and shrub seedlings for conservation. Three-fourths of the plantings were categorized as windbreaks, covering an estimated 2,300 acres.

In 1983, 6,774 Kansans planted 1,135,000 tree and shrub seedlings for conservation. Over 5,700 windbreaks were planted.

The annual impact of a windbreak was estimated at over $200 savings in heating homes, two per cent

savings in a calf crop, $10 savings in feed per head in a feedlot, and over 200 pounds savings per head in milk production.

Kansas and Nebraska cooperated in an effort, called the "Prairie Tree Project," to encourage proper windbreak management and to stimulate planting new windbreaks for multi-purpose benefits.

To ensure an effective interdisciplinary thrust, a wide range of organizations were involved.

Initial emphasis was on developing a state-of-the-art windbreak training package for presentation to agency personnel who worked with cooperators in windbreak planting and management.

The effect of the educational program served to increase Kansans' awareness of the benefits of windbreaks and the proper way to design, plant, and care for them. The ultimate effectiveness of the project was determined by the improvement in the quality of life and farm economy.

Hedgegrow Root Pruning—1982

Kansas had over 6,000 miles of Osage orange hedge grows in 1982, which provided valuable soil protection and wildlife habitat, but which also competed with adjacent crops for soil moisture

Past response by landowners had been to bulldoze the hedgerows to reclaim the productivity of these adjacent strips of land. This, in turn, removed the beneficial protection of the hedgerows, accelerated wind erosion and displaced dependent wildlife.

Lumber Harvesting/Woodland Management

A cooperative demonstration was established between State and Extension Forestry and the Kansas Fish and Game Commission on three miles of hedgerows adjacent to cropland on the game management reserve at Marion Reservoir.

The demonstration incorporated seven different combinations of cultural treatments, including root pruning with a 36" cable laying machine, cutting posts, pruning side branches, and combinations of these treatments.

The visible effects of root pruning the hedgerows were dramatic, especially during dry years. The mature trees displayed no adverse effects, while crops such as grain sorghum and wheat were able to grow successfully right up to the edge of the hedgerows.

During the World War II years, production of timber for lumber, particularly walnut for gun stocks, received much attention.

Because of the demand, size limits were lowered and many woodlots were depleted of good young trees which should have been left for future harvest.

The supply of trained Foresters was inadequate to give lumber harvesting proper supervision.

For two months, February 10 to April 18, 1944, Robert Cameron was borrowed from the Soil Conservation Service to conduct an educational program in lumber production and utilization.

Emphasis was placed on the use of native lumber as a means of reducing the drain on the lumber supply needed for war-time uses.

Woodlot Wasteland Concept—1940's

Many farmers with an established woodlot considered it to be a tract of waste land. It was usually part of a pasture.

Standing timber was usually sold regardless of the amount of money offered.

The Extension Forester and County Extension Agents started a program to offset the waste land idea and transform woodlots into profitable farm enterprises.

This was done by encouraging proper management and giving assistance in locating suitable markets for trees ready for harvest and sale.

Market Walnut and Oak Trees—1950's

In 1953, 86 farmers in 16 counties were given assistance in marketing walnut trees. An example would be on the Gordon Harding farm in Neosho County.

The County Agent, Extension Forester and Gordon Harding inspected the 20-acre woodlot and marked trees that would provide 8,000 feet for veneer.

Since Harding then knew how much he had

for sale, he was able to receive a higher price than had he sold it on a "lump sum" basis. Furthermore, the younger trees were left undamaged for future harvest.

Although a satisfactory market was developed for walnut and oak trees, less desirable species such as elm, hackberry and cottonwood were not as easily sold. They usually made good lumber for home use.

In 1955, County Extension Agents reported 2,595 farmers using native lumber.

A survey of the pulpwood resources in Southeast Kansas was made for the Central Fiber Products of Hutchinson in an effort to encourage conversion of their plant to the use of pulp wood.

The survey covered 20 counties with approximately 456,000 acres of timberland.

In 1959, the survey revealed the area had a total volume to support a pulp mill with a capacity of 150 tons per day.

But the Hutchinson company did not become sufficiently interested to convert to pulpwood processing.

Wood Pulp

A Kansas City plant, which was manufacturing asphalt-roofing paper, began using 60 tons of wood pulp daily made from such species as cottonwood, willow, elm and box elder.

Plant Woodlots—1950's

Through the 1950's, additional plantings of farm woodlots were made. Satisfactory seedlings were obtainable through the tree distribution program supervised by the Extension Forestry Specialists.

Through proper management, woodlots became a profitable enterprise on farms.

Much land not suitable for cultivated crops readily grows trees, thus providing an income from an acreage which was actually poor pasture or waste land before being planted to trees.

Sawmills in Kansas

More than 250 small portable or semi-portable sawmills were operating on a part-time or full-time basis in Kansas.

Farmers and sawmill operators were given assistance in methods of stacking and curing native lumber.

Woodlot Management Example—1958-59

An example of woodlot management was given in the report from Leavenworth County in 1958.

> A result demonstration has been established on the W. C. Walden farm to show recommended management practices.
>
> A 25-acre plot of timber containing considerable walnut and oak, mostly of pole size, is being cleared of undesirable trees at the rate of five acres each year. High grade trees, such as walnut and oak, are being thinned and pruned for future lumber production.
>
> All dead wood and wood from other trees are cut into 22-inch pieces and sold in Kansas City for fire wood.
>
> The sale of the firewood practically pays for all labor in clearing all dead and culled trees from the woodlot.

Timber industries, in 1959, asked for and were given assistance in locations for new sawmills, procurement of stumpage, production problems, and improved merchandising.

A quarterly *Newsletter for Timber Industries* was started and received excellent response.

In addition to new production methods, the newsletter provided timely information on market trends, prices, sales, and equipment information.

Two sawmill clinics were held at Everest and Ottawa. A session on lumber grading was held at Ottawa.

Charcoal Plant—1960

A market was needed for low-value timber such as blackjack and post oak. Promotional work was started in 1957 to develop a satisfactory market.

Talks were given to civic groups and chambers of commerce in an endeavor to secure a charcoal plant.

In 1960, a charcoal plant was constructed and started operation in Chetopa, Kansas, the first of its kind in Kansas.

The plant produced 250 tons of raw charcoal monthly. A year later the size of the plant was tripled.

The new market for low-grade or cull hardwood provided an economic incentive for timber stand improvement.

In 1961, a $100,000 briquette plant was con-

structed and started operations with a capacity of 25 tons per day.

The new charcoal industry, in 1961, employed 43 men who produced $1,200,000 worth of the finished product, retailed from Kansas to California. The company planned to enlarge the plant at Chetopa.

Timber Improvement Contractors—1960's

Improvement of timber stands by cull tree removal, vine removal, thinning and pruning was a much needed practice in the early 60's, and was recognized as such by most timberland owners.

Getting the work done was difficult because of lack of time, the hard physical labor involved, the advanced age of many owners, and absentee ownership.

Extension Foresters helped train contractors, beginning with two part-time loggers in Wilson County in 1964. Several jobs were lined up at a flat rate per acre.

Additional contractors were then trained in Linn, Chautauqua, Labette, and Coffey counties. A total of 750 acres of woodland was improved in these and surrounding counties.

Advantages were:

1) Provided a convenient way for woodland owners to get stand improvement work done.

2) Crew members actively sought jobs and helped sell owners on the advantages of timber stand improvement.

3) Crew members became more conscious of good forestry practice, and as a result did a better job in their regular logging activities.

Timber Marketing—1963

The Extension Forestry Specialist's report for 1963 listed these accomplishments in Timber Marketing:

1) Two sawmills moved to new locations, adding more yard storage and new equipment, and are now selling on a graded lumber market. Complete plans for mill layout, storage yards, and equipment needs were developed for these two mills.

2) Improved manufacturing techniques have increased the market for native lumber. Some 2,742 farm structures were built with native lumber.

3) Direct marketing assistance was given to 346 farmers in 45 counties.

Under "Woodland Management" the report stated:

1) Woodland management plans were made for 341 farmers involving 7,849 acres.

2) Reforestation plantings were made by 895 farmers in 69 counties.

3) Tree Farm Certification was made to 12 woodland owners.

4) Timber stand improvement cuttings were made on 1698 acres.

Kansas Forest Inventory—1965

Kansas State University Foresters completed a survey in 1965 which disclosed that there were 1,300,000 acres of woodlands in the area. John Strickler, District Forester, directed the survey.

One conclusion was that the Eastern one-third of Kansas had in its wooded acres a resource more valuable than was generally recognized.

By 1968, Kansas had some of the most comprehensive and up-to-date woodland resource information in the nation in published form.

This information was the result of a statewide forest inventory conducted by Extension Foresters in cooperation with the U.S. Forest Service.

The state's share of the inventory cost was financed by a $39,000 appropriation of the 1964 Kansas State legislature.

The field data were collected during 1964 and 1965, and processed by computers at the North Central Forest Experiment Station, St. Paul, Minn. Kansas Woodlands, was the 1968 state report presenting this data.

Strickler and Clarence Chase, United States Forest Service (USFS), were co-authors.

Only a few of the facts from the survey were:

1) Kansas had approximately 1,407,000 acres of productive woodland, containing over 2.5 billion board feet of standing sawtimber with a stumpage value in excess of $72 million.

Each year this acreage grew an additional 115 million board feet with a potential of $4.7 million.

2) Kansas was one of the top states in volume of walnut growing stock, the most valuable of American woods. Kansas ranked second in production of walnut logs for domestic veneer quality logs.

3) The annual cut was increasing steadily. By 1968, five of the largest sawmills, of 95

Kansas forest industries surveyed in 1964, had expanded to where their combined capacity was equal to the 1964 cut.

4) Counties in Eastern Kansas which had 20,000 or more acres of forest land were:

Atchison, 27,470.

Anderson, 26,060.

Bourbon, 41,290.

Chautauqua, 73,490.

Cherokee, 47,450.

Crawford, 34,780.

Doniphan, 49,540.

Douglas, 45,160.

Elk, 36,720.

Franklin, 37,910.

Jackson, 40,580.

Jefferson, 49,080.

Johnson /Wyandotte, 39,830.

Labette, 24,700.

Leavenworth, 47,340.

Linn, 62,120.

Marshall, 37,360.

Miami, 45,790.

Montgomery, 45,150.

Neosho, 28,170.

Nemaha, 24,240.

Osage, 40,040.

Shawnee, 22,230.

Wilson, 37,110.

Forestry Production/Marketing—1971

Extension Foresters gave forest production field assistance to 1,117 landowners involving 19,206 acres.

Timber was marked for selective harvest on 3,092 acres. Sales of such marked timber yielded $59 thousand.

Timber stand improvement, including cull tree removal, thinning, pruning, and vine removal, was accomplished on 513 acres.

These cultural practices were done in areas of high value black walnut. Six hundred and seventy-eight acres of commercial tree plantings were established.

Extension Foresters conducted 95 forest management field schools. These were held in the woods and involved the audiences in improved cultural and marketing practices.

Physical improvements were completed on a black walnut seed and cottonwood clone orchard. Genetic duplicates of 110 black walnut trees displaying superior characteristics were grown in the field.

Seed and seedlings produced from these trees were to be made available to Kansas landowner.

Kansas Saw Log Production—1972

Periodic surveys were made to determine the timber drain by domestic and foreign wood industries.

The amount of harvested log volume provided information about the rate of depletion of saw log class timber and the possible need for more intensive management of the more promising species.

The primary objective of the Kansas saw log production report in 1972 was to measure the total volume of hardwood saw logs processed.

A secondary benefit was the opportunity to visit with loggers and primary processors about the changes in log procurement and markets.

Data were compiled on all log volume that was processed in Kansas but shipped to out-of-state markets. Extension foresters visited sawmills and log concentration yards in Kansas.

The results indicated about 23 million board feet of saw logs were harvested in Kansas in 1969, compared with 16.5 milion board feet in 1964.

The most important species, based on volume, were cottonwood, walnut, and elm, followed by hackberry, ash, and sycamore.

Ash saw log output more than doubled from 1964 to 1972, while cottonwood, sycamore, elm, and hackberry production rose 76, 65, 43, and 35 per cent, respectively.

Forestry Incentive Program—1974

Funds to encourage intensified forest management under a new Forestry Incentive Program resulted in expanded demand for forester services.

In the 21 counties designated to receive earmarked cost-sharing funds through the Agricultural Stabilization and Conservation Service (ASCS), over 160 cost-sharing applications were filed between March and June, 1974.

To qualify for the $50,000 Forestry Improvement Program (FIP) funds, Kansas landowners were to invest an additional $17,000 of their own money to assure good forest resources for future generations.

Forest Management Program—1979

In 1979, a total of 1,031 individuals received direct assistance on forestry problems on 18,587 acres. These included 153 forest industry assists and 439 detailed forest management plans.

Timber sales assistance was provided to 204 cooperators on 6,649 acres for harvest of 4,290,000 board feet and 4,204 cords of standing timber valued at $490,900.

In 1981, a total of 814 individuals received direct assistance on forestry problems on 16,423 acres. These included 92 forest industry assists and 314 detailed forest management plans.

Timber sales assistance was provided to 197 cooperators on 3,146 acres for harvest of 2,106,000 board feet and 1,843 cords of standing timber valued at $383,000.

Kansas Forest Inventory—1981

A second statewide forest inventory was conducted by State and Extension Forestry in cooperation with the North Central Forest Experiment Station, U.S. Forest Service.

The state's share of the inventory was funded by a one-time appropriation by the 1980 Kansas Legislature. The field work was conducted in 1980 and 1981.

For the first time, by comparing current data with the 1965 forest inventory, Kansas had reliable data to measure change and project trends in its forest resources.

The results of this second forest survey were published in Kansas Forest Inventory, 1981 (Research Bulletin & NC-83) by the North Central Station.

John Strickler, Associate State Extension Forester; Bill Moyer, Extension Forester; and Jack Spencer, Resource Analyst, USFS were the authors of this report.

Kansas Forest Management—1983

In 1983, a special effort was made by State and Extension Forestry to consider multiple use forestry as extending beyond individual ownership.

Thus, individual owners were assisted to manage for their ownership interest, with multiple use within the context of groupings of ownerships.

Assistance was extended to 863 forestland owners. Forest management plans were prepared in cooperation with 286 owners, emphasizing the multiple benefits of timber harvesting, timber stand improvement, wildlife habitat improvement, watershed protection, forage production, recreation, and energy production and conservation.

Farm Forestry in Kansas—1984

Seven hundred and twelve woodland owners received direct management assistance in 1984 and achieved:

229 Management plans covering 5,560 acres.

227 Acres of timber stand improvement and 372 acres of new tree planting.

738 Improved acres for outdoor recreation and 2,513 acres for wildlife habitat.

2 Million board feet of sawtimber harvested from 1,513 acres with $400,000 on-farm value.

Farm Forestry in Kansas—1986

Woodland owners received direct management assistance and achieved:

307 Management plans covering 8,060 acres

545 Acres of timber stand improvement and 2,674 acres of new tree planting.

552 Acres improved for outdoor recreation and 2,474 acres for wildlife habitat.

1 1/2 Million board feet of sawtimber harvested, valued at $300,000 from 2,219 acres.

Christmas Trees

Farm Forestry in Kansas—1987

Six hundred ten woodland owners received direct management assistance in 1987, and achieved:

175 Management plans covering 6,279 acres.

581 Acres of timber stand improvement and 2,680 acres of new tree planting.

1,349 Acres for outdoor recreation improved, and 2,403 acres for wildlife habitat.

954,700 Board feet of sawtimber harvested, valued at 191,000 from 1,644 acres.

While there had been limited attempts at growing Christmas trees prior to the 1960's, these had been largely unsuccessful. The first sale of Kansas-grown Christmas trees was around 1963.

Christmas Tree Growers Association—1965

In the 60's, Kansans purchased 500,000 Christmas trees a year at an estimated cost of $2,000,000. Until recently all these trees were imported from other states.

In 1956, there were no known producers of Christmas trees in Kansas. Then one Extension cooperator made a trial planting.

The trees did well and he planted another group of trees. Other cooperators watched and then followed suit.

By 1964, Kansas State and Extension Forestry was distributing nearly one-half million seedlings per year for Christmas tree plantations.

As the number of growers increased and the older plantings matured the Foresters found they were spending a great deal of time giving technical assistance to individual growers.

A questionnaire was sent to known producers and their reply indicated an interest in an association.

After a planning meeting to establish committees, a second meeting was held at KSU in October, 1965, and a Kansas Christmas Tree Growers Association was formed.

Its main purposes were:

1) To promote the interests of the Christmas tree industry and the forestry program in Kansas.

2) To associate its members together for their mutual benefit, to solve common problems through the exchange of experiences and cooperative effort, to engage in any activity involving or relating to the production and marketing of high quality Christmas trees and associated products.

3) To engage in publicity and education, in cooperation with existing agencies where possible.

4) To encourage, promote, and assist financing, where possible, the research work by private, State, and Federal agencies or educational institutions in this field.

5) To cooperate with local, State, and Federal agencies and law making bodies on matters affecting the field.

6) To keep its members informed concerning current developments and the results of research.

7) To advise and urge the organization of a Christmas tree marketing association or associations.

Several committees were formed:

1) A publicity committee to draw attention to Kansas grown trees and their advantages.

2) A marketing committee to investigate the possibilities of cooperative selling and to promote and encourage the growing of quality trees.

3) A research committee to consult with Extension Foresters on needed research.

The Kansas State University Endowment Association made an 80 acre Christmas tree plantation available for research and demonstration purposes.

The Association had 45 members in 1965, representing about 700 acres of Christmas trees.

Kansas producers marketed approximately 25,000 trees in 1965, about 75,000 trees in 1966, and currently are producing 125,000 trees.

July, 1968, was the completion date for the State and Extension Forestry Building on which construction was begun in 1967.

The building was located on University land on Claflin Road in Manhattan, west of the Kansas Artificial Breeding Unit (KABSU) buildings.

The building was situated in a l0-acre Ponderosa Pine Plantation that was started in 1942. The structure was a steel, rigid frame design with a clear span and enameled steel roof and siding. Native limestone was used as facing on the wing housing the offices.

The building, contained approximately 14,000 square feet, provided office space for the State and Extension Forestry personnel, facilities for storing and shipping trees, and a maintenance shop.

One area of about 3,600 square feet was refrigerated to provide cold storage for one million tree seedlings. The maintenance shop area was used primarily for processing excess military vehicles for use in the Rural Fire Program.

Hardwood paneling of twelve different native woods were used in the offices: walnut, black cherry, red oak, pecan, American elm, hackberry, green ash, silver maple, sycamore, cottonwood, honeylocust and hickory.

Housing for State and Extension Forestry

The wood paneling, 20,000 feet in all, was furnished at no cost by one of the large hardwood mills in the area.

The total cost of the building, $175,000, was from Cooperative Program funds through the U.S. Forest Service.

Income from the sale of pecans in Southeast Kansas counties was the major source of income for some farms during dry years, even though a sideline.

Some farmers gathered as much as $1,500 worth of pecans from wooded areas along the streams.

All of the pecan groves needed some type of improvement work.

In 1957, stand improvement demonstrations were conducted in Labette, Cherokee, Neosho, and Montgomery Counties.

Instructions were given in budding, grafting, thinning, and fertilizing pecan trees. Modern harvesting methods for the time were demonstrated.

In 1958, pecan tree stand improvement demonstrations were continued. At a district meeting, 80 persons discussed pecan growing possibilities for Southeast Kansas. The growers formed a Kansas Nut Growers Association.

A representative of Sunkist Nuts became interested in the native Kansas pecan as it was found to be superior in flavor and had as good a cracking percentage as the paper-shell southern varieties. The 1958 crop in eight counties totaled 829 tons, worth $348,180.

Black Walnuts

During 1960, a new market for black walnuts developed. A survey in the fall of 1959 revealed that about 15 million pounds of walnuts were produced, with a value of four cents per pound. A walnut cracking and processing company was contacted and later set up hullers in 20 eastern Kansas counties.

That new market encouraged farmers to take better care of their walnut stands because some revenue could be realized before the trees were ready to harvest for lumber.

Much land along rivers that frequently subject to flooded was producing walnut trees. The walnut industry in Kansas supplied 200 bushels of walnuts for seed, in the tree distribution program. The seeds are stratified prior to distribution so that they will germinate readily when planted.

Nut Sales—1961

In 1961 the Extension Forestry Specialists reported that pecan sales were about $1 1/2 million, and walnut, a half-million dollars. With improved and enlarged stands this could become a five million dollar industry.

Recommended Practices for Nut Trees

During 1962 over 100,000 new nut trees were planted, mostly from stratified nuts ordered through the tree distribution program.

Approximately 1,729 acres of existing groves were thinned. New pecan plantings were made on 680 acres.

Commercial spraying of nut trees began, with 2,314 acres being sprayed in 1962. Nuts harvested were pecans, 1,271,350 pounds and walnuts, 1,480,850 pounds.

Forestry in the Watershed Program

In 1957, three pilot watershed programs were underway in Kansas. The Little Delaware and Snipe Creek were to be completed in 1958 and the Switzler Creek in 1961. There were also 11 watersheds planned under Public Law 566.

Watershed Surveys—1958

Extension Foresters were brought into the planning program for all watersheds as a member of the survey committee. Forestry measures were a part of the land treatment to prevent water run- off and soil erosion. On the three pilot watersheds in 1958, 88 cooperators planted 30,450 trees.

Assistance was given 12 farmers in woodland management, 28 in marketing, and two in pruning and thinning. Approximately 150,000 acres of land were involved in the forest aspects of all watersheds being developed in 1958.

By 1961, 55 watershed applications had been made through channels to the state watershed committee. Most of those applications involved a forestry program to some degree.

Plans were developed on eight watersheds during 1962, and on nine watersheds during 1963.

Small Watershed Program (PL 566)—1967

Passage of the Small Watersheds Bill (P.L. 566) in 1954 gave added impetus to forest management practices in many parts of Kansas.

Acceleration of conservation land treatment measures, including the areas occupied by woodlands, was an important phase of improving the hydrologic condition of a watershed.

An Extension Watershed Planning Forester conducted a field survey on each new watershed to collect basic data for use in determining woodland treatment measures needed to improve hydrologic conditions.

The field surveys were used by the forestry planner and Extension Service Foresters for estimating program needs and goals. The planner then prepared the plan of work for the forestry program on the watershed, incorporating the information secured in the field survey.

Data from the Forestry Work Plan was used by the Soil Conservation Service to prepare the Watershed Work Plan.

By 1967, 29 Kansas watersheds with 64,500 wooded acres had forestry work done through the Small Watershed program. An additional 37 watersheds with 147,000 acres of woodlands had been approved for work or planning but were awaiting funding.

By 1969 Extension Forestry was offering professional assistance in thirteen active watersheds.

These areas included 59,000 acres of privately owned forest land that was important in stabilization of streamflow, reduction of surface water runoff, and protection of soil.

Vegetation Management on Kansas Lakes

A fresh approach to Kansas resource conservation and development was taken in 1965 through cooperative contract and agreement among the State Forester, Cooperative Extension Service, Kansas State University; U.S.D.A. Forest Service, Region Two; and the U.S. Army Corps of Engineers, Kansas City District of the Missouri River Division.

The purpose of interagency co-operation was to effect the best forest and vegetative cover for outdoor recreational uses within designated reservoir public use areas.

As a consequence of agreement, the State Forester was given authority to develop and execute "Outdoor Recreation Forest and Vegetative plans."

These plans were to serve as a guide for the establishment, improvement and maintenance of woody and herbaceous plant materials.

Reservoir Development Projects—1965

The first water development projects were Milford and Wilson Reservoirs. Milford is located in Geary, Clay, Riley, and Dickinson counties, and Wilson in Russell and Lincoln counties.

By 1967, with the program in its third year, the pilot project had proven itself in terms of interagency cooperation, public appeal, and most importantly, in visible, usable results.

Vegetation Management Plans—1969

By 1969, vegetation management plans had been developed for seven reservoirs—Wilson, Milford, Pomona, Perry, Council Grove, Elk City, and Tuttle Creek.

Evaluate Cooperative Program—1969

The U.S. Corps of Engineers made an intensive evaluation of this program compared to other approaches, in 1969, because of its uniqueness.

The conclusion was that the Kansas approach was "far superior to any alternative approach" and should be expanded in Kansas and other states—Missouri, Nebraska, South Dakota, Iowa, Oklahoma, and Colorado.

Bureau of Reclamation—1970

The success of the program with the Corps of Engineers prompted the Brueau of Reclamation to include the Vegetation Management Program at Glen Elder Lake in 1970. Lovewell Lake was also added to the program in 1973.

Professional Assistance—1975

As the Vegetartion Plans were completed the Corps of Engineers decided to use their own crews to maintain the vegetation.

However, the need for professional assistance was still needed so in 1975, the program at Wilson Lake was changed to professional assistance only. Milford Lake was changed in 1976 and other lakes followed as plans were completed.

Tulsa District—1982

In 1982, the Tulsa District of the Corps of Engineers decided that because of changing Federal regulations and funding problems, they would continue the maintenance part of the program themselves without the assistance of the State Forester.

23 Years Later—1988

The Vegetation Management Program is still a viable program after 25 years. Eight lake projects still receive professional assistance from the State Forester.

Although the emphasis of the program has changed over the years, the benefits to the Kansas recreation areas continue to increase every year as the trees grow and become more important to the people using the camping and picnic sites.

Vegetation Management Summary

The Vegetation Management program has included 15 lakes over the last 25 years. Approximately 70,000 landscape plants were planted to improve the recreation aeras.

Future recreation areas were planted with 2,500 acres of trees and additional areas included 195,000 trees and shrubs to benefit wildlife.

To control soil erosion, over 10,000 acres of grass have been seeded to establish a permanent grass cover. The program has required the cooperation of both state and Federal agencies and is a good example of what can be done to benefit the people of Kansas when agencies work together.

Rural Fire Control Program

In 1962, State and Extension Forestry entered into an agreement with the U.S. Forest Service so the State Forester could secure excess trucks, water tanks, pumps, and other equipment for use by rural fire protection districts.

In the 1963 report, the accomplishments were:

1) Twenty rural fire districts have qualified for excess army equipment that will be used for fire protection.

2) Another 32 rural districts are in the process of organizing and are expected to qualify for the time.

Most counties or townships have some type of rural fire district. Most do not have adequate equipment or training to provide fire control on forest or watershed lands.

Rural Fire Training Program—1967

A program to develop fire protection throughout the rural areas of Kansas was initiated in 1963 by State and Extension Forestry.

Vehicles and other items were issued through excess property procedures to rural fire districts when they complied with state laws.

By early 1966, some 431 agreements were in effect, and some 3,000 fireman were recruited, most of whom were volunteers.

Some firemen had varying degrees of fire service training, but most of them had no training.

There was a need and a demand for training that had not been filled by existing fire training agencies.

In February, 1967, a Forester with career experience in fire control and training was employed and assigned the task of developing a fire training program for the Rural Fire Districts.

In May another Forester was also assigned to assist with rural fire training.

Long-range training programs were outlined, and the development of training plans began. The basic rural firemanship courses were programmed and classes held at county locations.

By 1967, twenty classes had been given with a full schedule firmed up for the next several months. The classes continued throughout the year as seasonal conditions allowed.

To supplement the classroom instruction, demonstrations and actual practice sessions were planned.

Sixteen, eight and four-hour basic rural firemanship courses were available to the fire districts.

Also included in the program was issuance of a Rural Fireman's guide.

Very effective progress was made in converting excess military equipment into rural fire trucks. Equipment was acquired through General Services Administration and issued to cooperating fire districts at no cost.

The estimated value of this excess equipment issued by 1968 was $11 million.

The number and types of equipment converted to fire fighting use by the districts by 1968 was:

1,600 Motorized vehicles, primarily 2 1/2 ton 6 wheel drive trucks.

500 Cargo and/or water trailers.

250 Portable electric generators.

1,600 Water tanks.

16 Buildings for use as fire houses.

Thousands of other items, such as fire extinguishers, tools, nozzles, vehicle parts, valves, sirens, and red lights, were also secured.

By 1968, 267 rural fire districts had been organized to provide fire protection to 37 million acres of rural lands.

Most of the fire districts were coordinated with Civil Defense and were effective for emergency situations.

Mobile Fire Simulator Training—1969

From 1963 to 1969, 274 rural fire districts were organized in Kansas. These districts, protecting 40 million acres, were staffed by approximately 5,000 volunteer firefighters.

As a means of providing training for these rural firefighters, a mobile Fire Control Simulator—on loan from the USDA Forest Service—was used throughout the state for the two years, 1967-69.

The initial training problems were designed primarily for district chiefs and their assistants.

A simulated radio communications capability was used to present problems to be solved and acted upon by the trainees. Each exercise was followed by a self-conducted critique, and reinforcement of relevant principles by the training officer.

The simulator was housed in a semi-trailer van with folding sides that extended to form an auditorium that seated up to 26 trainees. Trainees viewed a Kansas scene on a large screen.

Simulated fire and smoke could be made to travel in different directions, or changed in size and intensity to fit existing weather, fuel and topographic conditions.

By means of a simulated radio the trainees organized into a firefighting unit and analyzed and solved the problem confronting them.

The sounds of fire trucks, sirens, etc. were carried over the radio to add realism to the exercise. Following the initial use of the simulator, an eight-hour training course in Basic Firemanship was offered to 5,900 firefighters (rural and city) in 101 counties.

During 1969, the simulator was set up at 19 locations and used to provide simulated fire control problems to 670 firefighters from 30 counties. Rural fireman were enthusiastic during and after the exercises. Discussions continued long after the exercise.

In 1969, rural fire districts controlled 2,205 fires, holding acres burned to 33,600.

Rural Fire Protection Program—1974

During the year, State and Extension Forestry assisted an expanding rural fire protection system to an additional 1.2 million acres—bringing organized fire protection to almost 43 million acres, or about 81 percent of the total rural lands in Kansas.

Continued assistance was also provided for 300 organized rural fire districts. Thirty-eight vehicles and numerous repair parts were procured, basic firemanship training given to 887 firemen, and advanced training to 1,087 more in the Mark II Fire Control Simulator.

Fire prevention training was provided to 650 people, and over 281,000 pieces of prevention literature distributed to fire departments and schools.

Rural Fire Protection—1977

By 1977, organized rural fire protection was still needed on six million acres of rural lands in Kansas. Fire planning, consolidation and coordination of rural fire districts at the county level was needed to improve efficiency and effectiveness.

Much fire equipment needed to be replaced, upgraded, standardized, or additional equipment provided.

An adequate level of training was difficult to sustain because of the large turnover each year.

Kansas rural fire protection encompassed two programs: The Clark-McNary Act Program and the Rural Community Fire Protection Program - Title IV of the Rural Development Act.

Both programs were administered by State and Extension Forestry in cooperation with the U. S. Forest Service.

Three new cooperative agreements were initiated, making 308 cooperative agreements in effect with rural fire districts protection over 85 per cent of the rural land area of Kansas.

Fire losses up to October stood at 2,735 fires that burned 59,596 acres of forest and grass and caused $6.9 million in damages to capital improvements.

Thirteen excess vehicles were provided to rural fire districts. In 1977, 1077 firemen received three hours of basic rural firemanship training and 531 received advanced training.

Over 221,500 pieces of fire prevention material were distributed and four "Smokey Bear" costumes were used in fire prevention programs.

Cooperative Forestry Assistance Act—1978

Prior to 1978, the Kansas Rural and Community Fire Protection was actually authorized by two separate acts: the Clark-McNary Act of 1924 and Title IV - Rural Development Act of 1972.

These programs were later funded through the Cooperative Forestry Assistance Act of 1978.

Increased funding during FY1978 made it possible to improve assistance in the program. The time allocation of the two Extension Foresters, Northwest and Southwest areas, was increased to 50 per cent of the program.

An additional Area Extension Forester was hired to devote 90 per cent of his time in the program in the South Central and Southeast areas. And an Extension Specialist in Fire Training was hired to cover the remainder of the state. By increasing staff, it was possible to improve the training frequency of rural fire fighters.

An effort was made to develop a Rural Fire District Development program for each county. This helped rural fire districts inprove their budgeting, planning, and fire protection.

The increase in funding also made it possible to purchase and loan to rural fire districts 20 slip-on fire fighting units.

The units were designed to fit on 3/4 to one ton, four-wheel drive pickups that the districts purchased with their own funds.

Rural/Community Fire Protection—1979

Fiscal year 1979 was a year of change in the Rural Fire Protection Program.

The number of field contacts had increased, resulting in heightened interest and concern in the rural Fire Protection Program.

Many fire districts were starting to manage budgets to upgrade and improve fire fighting equipment and facilities.

Rural Community Fire Protection—1981

Two new cooperative agreements were initiated in fiscal year 1981, and the area protected was expanded by four existing rural fire districts. Over 89 per cent of the rural areas of Kansas had organized fire protection.

Fire losses reported during calendar year 1980 were 5,190 rural fires that burned 109,033 acres of rangelands, cropland and forest. Fire losses for the year were over 11.4 million dollars.

Calendar year 1981 (to September), reflected a better picture due to more precipitation and moderate temperatures. By September, 1981, 1,359 reported rural fires had burned 16,014 acres of grass and rangelands, 2,151 acres of forestland and 965 acres of cropland.

Dollar damage to capital improvements amounted to 2.9 million and to rangelands, grass and cropland .4 million.

Eight hundred thirty-eight rural firemen received 5,028 hours of basic firemanship training and 640 rural firemen received 1,920 hours of advanced fire training in the Fire Control Simulator.

Seven firemen received 40 hours of special training at the State Fire School in Hutchinson.

Requests for two prescribed burning workshops stressing fire behavior and fire control were held. Sixty individuals received 1,920 hours of training at these workshops.

Fire prevention films and visual aids were also made available on request.

One hundred fifty requests were received requesting 50 per cent funding of $487,250 in the Rural Community Fire Protection Program. These requests involved about 400 communities.

One hundred and twenty-seven were approved for cost-share funding, at least in part. The Federal share amounted to $115,100 for fire training, protective clothing, safety and emergency equipment, communications and general replacement equipment.

Training of Rural Firefighters—1982

The Kansas Rural Fire Program was working with 323 organizations combining over 500 separate fire protection districts in 1982.

These rural fire districts protected 44,960,150 acres of rural lands, 91 per cent of the state, with about 8,000 volunteer firefighters.

Fire fighting is one of the most hazardous occupations. A continuous training program was a must to insure that the firefighters were using the most modern, efficient, and safe methods of controlling rural fires.

It was hoped that the training package could be presented to each county at least once over 4 to 5 years. To be effective in protecting lives and property, a firefighter must be properly trained.

Rural Fire Protection—1986

In 1986, the program was working with 500 rural fire departments, 8,000 volunteer firefighters protecting nearly 94 per cent of the rural lands.

These rural fire departments were budgeted from local funds of more than $10,000,000 annually.

Accomplishments:

1) Expanded rural fire protection by 199,052 acres.

2) Issued 8 excess vehicles, 6 slip-on units, and disposed of 63 worn out vehicles.

3) Trained 752 firefighters in basic firemanship and 575 in advanced firemanship. Seventy-five firefighters attended the Rural Fire Control section for 15 hours of training at the State Fire School in Wichita.

4) Provided 400 teachers' kits on fire prevention.

5) Fire statistics show 5,596 fires burned 56,737 acres. Loss to capital improvements and range amounted to $15,532,876. The five-year average for Kansas — 3,870 fires burned 59,183 acres and caused $8,707,977 damage per year.

Urban and Community Forestry

Urban and Community Forestry in the Kansas Cooperative Extension Service includes all activities pertaining to the management of trees necessary to maintain and enhance the environment in cities and towns.

There are 628 incorporated municipalities in Kansas occupying a total of 1,643,000 acres (3.1% of the State's land area). Seventy percent, or about 1,150,000 acres, is tree covered and constitutes the states Urban and Community Forest.

This municipal forest resource was valued in excess of $l billion in 1988.

In 461 of the Kansas municipalities there are-populations of 200 or more. These communities presumably have the financial and human resources to manage their public owned trees, if local priorities allow such to occur.

Urban Forestry Task Force—1970

The many unique problems of growing and maintaining healthy trees in developed areas was brought into sharp focus by Dutch Elm Disease which entered Kansas in 1957, and had destroyed much of the American Elm population by the late 1960's.

By 1970, cities and towns of all sizes were seeking assistance in restoring their urban tree populations which had predominately been elm. The single event most responsible for alerting people to the need to manage their tree resource was this devastating fungus disease.

A joint Urban Forestry Committee was formed as a cooperative effort between several departments at Kansas State University. This committee brought together the expertise of several Extension Specialists with skills in tree management.

A Landscape Architect, an Ornamental Horticulturist, an Arborist, a Plant Pathologist, an Entomologist, a Resource Economist, and two Foresters comprised the committee.

On the basis of a direct request from the City of Chanute, the committee agreed to develop a pilot project.

The purpose of the pilot study was two-fold:

1) To guide the committee in developing methods and techniques of analyzing and solving urban forestry problems.

2) To serve as a proving ground for the development of a state wide Urban and Community Forestry Program.

The Neosho County Agricultural Extension Agent was the coordinator of the project.

Dutch Elm Disease Control

The pilot study in Chanute indicated that citywide tree management was needed not only to slow the impact of Dutch Elm Disease, but to replant urban areas after the disease had taken its toll. It also indicated the need to manage the tree resource because of community and tree age.

When Kansas communities approach or have passed the century mark, their tree resource is also old and in a state of decline. Seventy to 100 year old trees were the norm.

Therefore, even without Dutch Elm Disease, citywide tree management was needed to restore the urban and commuunity forest resource.

Urban/Community Forestry—1971-73

Kansas was one of four states to implement statewide pilot programs. The other states were Missouri, Georgia, and Florida.

The pilot program was funded by a General Forestry Assistance Grant from the U.S. Forest Service and matched by the state. The grant was for $40,000 and was for a two year period, July 1, 1971 to June 30, 1973.

The objective of the pilot program was to develop Urban and Community Forestry programs in ten Kansas communities.

By the end of the two-year period, State and Extension Forestry had developed programs in over 80 communities.

On May 5, 1972, the Cooperative Forest Management Act was amended to give the U.S. Forest Service and State Forestry Agencies the authority to enter into cooperative agreements to administer programs in Urban and Community Forestry.

Involvement in this program by the Division of Kansas State and Extension Forestry was by statutory authority of the State of Kansas.

Urban/Community Forestry—1973-1980

The two year pilot grant was extended for two more years.

In 1978, the Cooperative Forestry Assistance Act was passed to fund technical assistance to local governments through state forestry agencies.

The passage of this act resulted in a $3.6 million national appropriation, of which Kansas received $58,400. The same funding level prevailed in 1979 and 1980.

By June 30, 1980, 175 communities had developed comprehensive Urban and Community Forestry Programs from 1971 to 1980.

Urban/Community Forestry—1980-88

The Urban Forestry program was funded throughout these years at a level between $1.8 million and $2.2 million nationally. (Kansas received $29,000 in 1981, and $37,000 in 1988.)

Federal dollars were matched by the State, in effect doubling these figures.

In 1982, a survey of all program towns indicated that 74 were active. Since 1982 only active, viable programs have been counted. To date, 117 Kansas municipalities have organized tree programs. This indicates that 25 percent of the communities in Kansas, with the potential to do so, have programs to manage their trees.

Nationally, 39 percent of cities and towns have such programs.

Collectively, the 117 Kansas communities manage a municipal forest resource of over 216,000 acres with a tree value in excess of $148 million.

Fifty-two communities have earned the National Tree City USA award for their superior programs. Kansas was fifth in the nation in the number of communities earning this award.

The Urban and Community Forestry program has helped to moderate and improve the living and working environments of people by:

1) Providing protection from solar radiation, wind, noise, air pollution.

2) Reducing soil erosion.

3) Improving privacy, aesthetics, and wildlife habitat.

Well managed and designed municipal forests increased property values from 15-20 percent. They also saved an estimated 17 percent a year on energy costs to heat and cool buildings.

Over 600 projects--such as park plans, street tree plans, and community improvement designs --have been developed for over 400 Kansas communities since the program started in 1971.

Contributing Authors. The primary contributing authors to this summary of the Kansas Cooperative Extension Service educational programs and activities in State and Extension Forestry, from 1965 through 1988, were John K. Strickler, Extension Forester; Raymond G. Aslin, State Forester; William L. Loucks, Tree Planting Program Leader.; and James J. Nighswonger, Urban & Community Forestry Leader.)

A complete list of personnel involved in State and Extension Forestry is included in Volume II, Chapter 6, Extension Personnel, pp. 52-55.