History of the Chilton Area Horticulture Substation of the Alabama Agricultural Experiment Station of Auburn University

1948-1982

ALABAMA AGRICULTURAL EXPERIMENT STATION
AUBURN UNIVERSITY
GALE A. BUCHANAN, DIRECTOR AUBURN UNIVERSITY, ALABAMA

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C. C. Carlton, Superintendent

ESTABLISHMENT AND DEVELOPMENT

The Chilton Area Horticulture Substation was authorized by an act of the Alabama Legislature in 1947. Land for the Substation was selected by a committee named by the Director of the Alabama Agricultural Experiment Station System. Dean and Director M. J. Funchess appointed P. O. Davis, R. E. Cammack, and L. M. Ware to review the possible location sites.

M. R. Glasscock, County Agent, and C. C. Carlton, Assistant County Agent, obtained options on three possible sites in Chilton County. Autauga and Elmore counties did not submit proposed sites.

The site in Collins Chapel Community east of Thorsby was selected because it was more typical of the central Alabama land than the site in the Pools Cross Roads Community or the site near Verbena.

Eighty acres of land was purchased from R. T. and Mattie Davis and 65 acres from Luby and Loys Gore by the Chilton County Commission in the summer of 1948. The Chilton County Commission consisted of Dr. Lonnie Parrish, Probate Judge, and Commissioners Hoyt Freeman, Monroe Parrish, R. L. Ousley, and Howard Roper. The price paid the owners for the land was $150 per acre, and the deeds were made to the Alabama Polytechnic Institute.

An additional 16 acres of land were purchased from the adjoining Henry Cox estate in 1960 for $5,000. This purchase, made with funds from the Substation itself, brought the total land area to 161 acres.

C. C. Carlton was hired as Superintendent as of October 1, 1948. Hollis E. Todd was hired as Assistant Superintendent June 4, 1958, and resigned September 5, 1959. Kenneth C. Short was hired to replace Todd January 12, 1960.

A one-time sum of $35,000 was appropriated for buildings and equipment, with an annual appropriation of $12,500 for operation and maintenance. A sales funds has given financial stability for the Substation through the years; State appropriations have been inadequate in most years.

Several special appropriations have been made during late years, and increasing sales funds have provided fairly adequately for operation and maintenance. The most recent financial assist was $40,000 of state bond money for a new office and auditorium, which was completed in 1976. Auburn University added approximately $10,000 to this fund for building and furnishings. Senator Walter Givhan was instrumental in getting the funds to build this building.

Early years were devoted to updating existing buildings and building an office and packing shed, two labor houses, and a superintendent's residence. A metal machinery shed was erected for storage and equipment. Most of the building was done in the fall and winter, with the spring and summer being used to do vegetable research and set orchards. Roads were built, most land was reterraced, and waterways were formed and seeded to fescue and clover. Much of the land on the Substation had to be leveled and reterraced more than once to make it suitable for conducting research. There has been a consistent problem of getting water out of terraces and onto a sodded waterway without undue erosion, either of the plowed soil at the edge of the waterway or the waterway itself.

The building program continued through the years with the addition of a new sweet potato storage house, an assistant superintendent's residence, a pole type machinery shed, a chemical storage house, and the new office-auditorium.

RESEARCH PROGRAM CONDUCTED

Blackberries

When the Substation was established there were about 600 acres of trailing type blackberries in Chilton County. There was a problem of how to control insects, mainly strawberry weevil, and leafspot diseases on this crop. Plantings were made and tests set up with Dr. Bill Eden and Dr. Urban Diener cooperating. These tests were concluded in 1954 and Leaflet No. 46, Control of Leaf Spot and Strawberry Weevil on Trailing Blackberries, was published in 1955 giving the results and suggested spray schedule. In those days DDT and toxaphene were available for use, as was chlordane.

The blackberry industry was phased out during the 1960's due to poor market prices, high labor cost, and competition of peaches for labor.

Peaches

A major effort at the Chilton Area Horticulture Substation has been to solve problems associated with growing peaches in central Alabama.

A sod culture test was set in 1949 because it was believed that some sod could be grown on the orchard floor that would be compatible with trees and prevent plowing, clean culture, and soil erosion. Crops tried as sod were sericea lespedeza, alfalfa, bur clover, and abruzzi rye. The abruzzi rye treatment was best because it was disked down in the spring and did not compete with the trees for moisture at the time the fruit was on the trees.

Most peach growers used a side plow under the trees to control in-row weeds and grass, but this built a terrace under each row and left the ground uneven. The middles were disked, leaving the soil bare and thereby subject to erosion. When herbicides that would kill grasses and weeds and not harm trees became available, the Substation was the first to use them in orchards. Paraquat used as a directed contact spray on the weeds and grasses under the trees worked well, along with the use of Sinbar as a preemergence treatment for germinating seeds under trees over 3 years of age.

It was found that leaving the native grasses and weeds in the middles and mowing was satisfactory in controlling erosion. Today many herbicides can be used under fruit trees to suppress weeds and grasses.

The first peach variety test was set up in 1949, with Dr. Ben Hagler as cooperator (substations did not have project leaders at that time). Sixty-five varieties were included in that test. When this test was completed, Leaflet No. 48, Peach Varieties for Alabama, was published in 1958 giving the characteristics of each variety. One of the findings that came from actually weighing the trees and roots as they were pulled from soil was that a peach tree usually produces more pounds of fruit each year than the top and roots weigh.

Variety testing has continued as new releases became available and many numbered selections from peach breeders have been grown and characteristics recorded in Circular No. 209, Performance of Peach Varieties and Selections in Central Alabama, of November 1973. In general, the lines from Fort Valley, Georgia, have performed best in our area.

The latest variety test was pulled in 1977 due to high incidence of phony disease, in order to prevent the spread to a rootstock test in the same area. New trees were set in 1978.

Some tests were conducted in the early years for the control of peach tree borers. Ethylene dichloride, emulsion, PDB, and DDT were used, but current control involves trunk sprays in the fall with Thiodane or Lorsban.

In 1948 and 1949, parathion was a new insecticide on the market that was effective against plum curculio (peach worms) and it is still effective. Other material, such as malathion, BHC, chlordane, Dieldrin, and Thiodane, have given good control of plum curculio; therefore, we have not conducted much research with peach insecticides.

Peach fungicide tests were started in 1952 with Dr. Urban Diener as project leader. One of the early tests showed that a combination of Captan and Cyprex was effective in the control of brown rot, rhizopus rot, scab, and bacterial spot. Prior to that time there had been no effective control of bacterial spot on peaches. This combination, however, caused shotholing of leaves on plums. Many compounds have been tested at this Substation through the years and results reported in Agricultural Experiment Station publications, the latest being Circular No. 217, Control of Peach Diseases in Alabama, in 1975 with Dr. Archie Latham as project leader. It is believed that the best control for bacterial spot of peach and plum is for the plant breeders to develop resistant cultivars. Many are available, but do not cover the entire growing season.

The search should continue for control methods for fruit diseases.

Due to the high number of man-hours required to hand thin peaches in the spring, a test was started in 1959, with Dr. Harry Amling as project leader, to seek some answers to chemical thinning. The first test was to screen compounds such as CIPC, NAA, and 3CP to determine to what extent their use would induce abscission of some of the small fruits. The compound 3CP was found to be most effective in causing increased drop.

The next test was set up to determine the proper stage in the fruit development for application of 3CP and the concentration of 3CP that would cause the desired thinning. On a few varieties, such as Elberta, Ranger, and Redhaven, thinning was best when the ovule length in the seed was 8 to 10 mm, with 125 and 150 p.p.m. of 3CP. This did not hold true for some other varieties, such as Dixired and Redcap. Results were also affected by temperatures at the time of application, with more drop at temperatures above 70°F and less when below 70°F. The complication of this type of thinning was too great for most peach growers to accept as a standard practice.

The mechanical tree shaker was developed about the time that problems were identified with chemical thinning, and efforts were turned to the use of this method of reducing numbers of fruit on trees. The operator determines when enough fruit has dropped from the tree while he sits on the tractor at each tree. This seems to be the best method known, along with hand thinning after the tree shaker has been used.

A new chemical thinner came out in 1977 that has looked promising in some tests. It is safe in that one application can be made early and if not enough drop is induced a second and even a third application can be made. The material, CGA-15281, has not been cleared by EPA at this time.

Peach Replant

Another problem that has been studied at the Chilton Area Horticulture Substation is on replanting of orchards on old peach sites and on newly cleared woodlands. The problem seems to be depleted subsoil fertility, root diseases, nematodes, and low pH.

Tests with new-ground plantings showed the soil was low in phosphate and calcium and that peach trees are susceptible to some of the same root diseases as timber. Trees that were set the first year after clearing timber did not survive as well as those set 2 or 3 years after clearing.

Other tests are underway to determine peach tree life and survival on different rootstock. Of nine peach rootstocks under test, the best at the present seems to be Lovell.

Mechanical Pruning

A Fossum tree trimmer was purchased in 1971 and mounted on a tractor front end loader. The trimmer consisted of a boom with eight 14-inch circular saws mounted underneath and offset to the right side of the tractor. This machine has been used to hedge fruit trees to desired heights and shape, thereby reducing man-hours required to prune. Labor reduction by hedging has been more than 50 percent in most cases.

An experiment was set up in peaches to determine the effort of mechanical pruning and hand pruning on yield of fruit. Trees that were mechanically pruned produced as much fruit as the hand pruned trees. A test has been concluded with mechanical and hand pruning of apples, with Dr. W. A. Dozier as project leader, and results reported in Bulletin No. 519, Pruning and Training of Red Delicious Apples, in 1980.

Mechanical pruning without hand pruning is not as desirable in apple production as in peaches because of canopy type information of the branches in the area where they are cut each year. Apple tree branches have to be thinned as well as shortened to allow sunlight to penetrate and aid in developing red color.

Apples

At the time the Chilton Area Horticulture Substation was established in 1948, Director Funchess said the Substation should not spend much time and effort on apple production because the apple industry would not be of great importance in this area. In the late 1950's, however, there was some serious efforts by an extension agent, namely Hoyt Webb, and some farmers to establish apple plantings and marketing operation.

In 1958, a variety test of about 50 kinds of apples was put in at this Substation. Getting these trees to set fruit proved difficult due to excessive growth and fire blight. Many of these varieties were highly susceptible to fire blight and we were never able to control the disease in this planting.

These trees were pulled and another test started with different rootstocks. This test was not very successful, but it did give an indication that MM 106 rootstock was the best.

In 1964, an orchard of Vance Red Delicious and Golden Delicious was established for research with fertilizers and mechanical pruning. Also set at this time were Starkrimson Red Delicious and Stark Spur Golden, as well as some Lodi. The Lodi trees were so susceptible to fire blight that they were removed in the third year and replaced with Molly's Delicious, which proved just as susceptible to the disease as Lodi. We struggled along with those varieties, and in most years were able to control fire blight on all but Molly's Delicious.

In 1980, fire blight on Molly's was controlled by using 120 p.p.m. of Agrimycin instead of the 60 p.p.m. as recommended and by making applications twice weekly during bloom.

The Vance Red Delicious did not put on enough red color to compete in the market with the apples from other areas, therefore, this variety was difficult to sell. There was also a problem of shelf life with this variety.

The work was completed on mechanical pruning and results published in Bulletin 519. Mechanical pruning alone was not satisfactory for apple production due to the canopy of shoot growth that formed during the following growing season. This canopy of shoots prevented sunlight penetration into the lower and center of the trees and, therefore, resulted in poor red color. Mechanical hedging and hand thinning of the shoots did enhance color development and reduce the cost of pruning operation. This orchard was removed when the work was complete.

A study with applications of calcium chloride and boron to the soil and to the fruit and foliage for the control of corking was conducted on Starkrimson apples. This work is completed and is ready for publication.

Apple varieties that have been added to Substation planting have been Smoothe Golden, Topred, Wells Spur, Red King Oregon Spur, Prime Gold, Red Spur Delicious, Granny Smith, Chehalis, Redrose, Criterion, Winter Banana, Sharp Red, and Early Red One.

Work that has been done on close spacing of Red Delicious apple trees is also reported in Bulletin 519, showing that yield was better from trees spaced 10 feet apart in rows than 7½ or 5 feet.

Other apple research done at this Substation has included the use of growth regulators such as Alar, Ethephon, and Promalin:Alar for increased blooming and fruiting, Ethephon for more red color and ripening, and Promalin to induce longer apples instead of flat ones.

Apple marketing has been a problem at the Substation, in that we have been unable to market fruit with the larger users and the quantity is too great for the local trade.

Some apples are sold in market baskets, while others are packaged at the Substation shed in regular apple boxes with trays or bags.

Weather records and the relation to fruit production have been recorded for about 25 years.

Sweet Potatoes

From its beginning, the Chilton Area Horticulture Substation has worked with the problems of producing, storing, and mechanizing sweet potatoes, and with furnishing certified sweet potatoes for growers in Alabama. Many varieties have been grown, first Porto Rico then Gold Rush, Georgia Red, Centennial, and now Jewel, which is the best of all except for slip production. Since 1969 the Substation has cooperated with Tuskegee Institute in breeding true seed of sweet potatoes, by growing a seed garden, making controlled crosses, and making evaluation of breeding lines from Tuskegee and many other states' breeding programs.

Sweet potato production in central Alabama has gone from the "tater patch" in the 1940's to several hundred acres of commercial sweet potatoes in the 1970's with grading, packaging, and marketing operations. With the aid of soil insecticides, weed control chemicals, nematicides, better varieties, and good mechanization, the yield of sweet potatoes has moved from 150 bushels to 500 and 600 bushels per acre in the past 25 years.

Sweet Corn

During the early years that the Chilton Area Horticulture Substation was in operation, much effort was placed on variety testing and corn earworm control in sweet corn.

One of the best producing and best market accepted varieties was Aristogold Bantom Everygreen Hybrid. The size of ears and stalks was good and quality of the corn was excellent.

The market demanded an almost worm-free ear of sweet corn. Dr. Bill Eden worked with the Substation in research with DDT to control this pest.

Some of the first work was directed toward rates of DDT, but it was soon decided that the rate per acre or per 100 gallons was not as important as the time of application. The timing of application found to control the corn earworm was to start with the first appearance of ear shoots and spray the ear region of the plants with a directed spray at every-other-day intervals, and then as the first silks appeared change to daily applications until silks were brown and then change back to alternate-day spraying.

This was too much spraying for the growers in this area to compete in the market, so little corn was sprayed and the research was discontinued.

Watermelons

Watermelon research has been limited to variety testing and seed multiplication at the Substation, with Dr. Joe Norton as project leader. The 1977 test was excellent, with Garrisonan and Auburn No. 1 being outstanding, along with a few breeding lines.

In more recent years, a breeding line known as Auburn No. 3 has proven to be a valuable line because of its productivity, quality, and disease resistance. This line is to be introduced soon.

The Substation grew a few acres of Auburn No. 3 each year and selected the best melons for seed production. Further seed increase is planned.

Cantaloupe

Cantaloupe variety testing and seed increase of varieties and breeding lines have been major efforts in some years. Some work was conducted in cantaloupe production and market studies were carried out with Dr. Norton, the Department of Agricultural Economics and Rural Sociology, and Winn-Dixie stores in the Montgomery Area.

The Chilton variety was named because it showed real promise for crating, yield, and high quality in this area. This variety has been grown several years at this Susbtation for market with the best melons cut for seed multiplication. The Chilton cantaloupe is of high quality, flavor, and size when grown under good conditions, which in most years means irrigation.

Many farmers still grow the Hale Jumbo in the area and haul them in bulk to market.

Bush Snap Beans

During many years, research with bush snap beans has been conducted. The early trials were variety tests for multi-pick harvesting for fresh market. The two varieties that came to light in the early fifties were Top Crop and Contender. These varieties are still being used by many growers for home use.

Recent work at the Substation with bush snap beans has been directed toward spacing and variety test for once-over harvest. It has been found that seed should be planted about 2 inches apart for best results. There

are a number of good varieties available, but Provider is one of the best. Several breeding lines have looked even better in the tests.

Muscadine Grapes

A muscadine grape variety test has been maintained at the Substation since the first year of operation. Such varieties as Hunt, Thomas, Yuga, Scuppernong, Dulcet, Burgow, Topsail, and Tarheel were first grown. These varieties were not self pollinators, except for Tarheel which was used instead of a male vine at the beginning.

As perfect flowered varieties were available from breeders in other states, several were added to the plantings. We worked closely with a Dr. Lommis of the USDA Horticulture Field Station, near Meridian, Mississippi. Dr. Lommis made many crosses and came up with many perfect flowered lines. In these lines we found good producers that were good for jellies, jams, and wine. These lines were named Southland, Bountiful, and Chief.

Plums

Research with plum varieties began with the planting of several trees of Ozark Premier and Methley. These trees were planted away from peach trees because phony disease symptoms were not easily detectable in wild or domesticated plum cultivars. In fact, wild plums were pulled or dug up along fence rows and roadsides on Substation property and neighboring farms to lessen the chance of phony disease being spread to peaches. The only control for phony disease in peach trees is to destroy the tree when the first symptoms appear. The disease is spread by leaf hoppers from infected to clean trees. One of the great problems is that a peach tree may have the phony causing bacteria, Rickettsia, in the zylum tissue a year and half before the shortening of internodes, flatting of leaves, and reduced size fruit become visible.

A plum variety test was set, with Dr. Norton as project leader, which included some 30 varieties and breeding lines in 1965. These trees were isolated from peaches as far as possible. From this and work at Auburn emerged such varieties as Crimson, Purple, Homeside, Bruce B14, and AU Producer.

The problem of boron deficiency appeared on the first planting of Ozark Premier plums on the Substation as a sunken dimple about ¼ inch in diameter on the maturing fruits. The flesh under the skin was brown and it detracted from the appearance of the fruits to make them unsaleable.

Dr. Norton set up a rates of boron to the soil test at the Substation and at Marvin Durbin's farm. It seemed there was less boron deficiency on the fruits after several annual applications of 3/4 pound fertilizer grade boron was applied. Other varieties of domesticated plums do not seem to show the boron deficiency on the fruits.

A second variety test of plums and another study with boron deficiency on Ozark Premier was set in 1971. During the 1977 growing season, Dr. Latham checked these trees for phony-causing bacteria by a new method developed by a Dr. French in Florida. This method is to pull, with a vacuum pump, a solution through a section of root or stem and observe the number

of rickettsia-like bacteria under a high-powered microscope. The bacteria have been found in every tree in the test, so this means phony is present and thus trees are to be removed.

A new plum variety test was planted in the early spring of 1977, but it is not known whether the trees carry the phony-causing bacteria. This test included 17 varieties replicated 5 times.

A planting of about 500 seedling plums was made in 1974 with Dr. Norton as project leader. Some of these seedlings fruited in 1977. The trees were rogued for vicious thorns, black knot disease, poor fruit size and quality, tree vigor, and tree shape. Several selections were tagged and saved for possible use as new varieties and in breeding programs in 1978.

Irrigation

A portable system consisting of a pump with a VF4 Wisconsin engine, a few hundred feet of 4-inch aluminum main with sprinklers, and a set of 3-inch perforated pipe for irrigating square areas was purchased in 1953.

Later, in 1955, Dean and Director E. V. Smith was offered some 4- and 5-inch pipe by Reynolds Aluminum Company. Using their pipe and purchased couplers made possible expansion of the irrigation system.

A runoff pond was constructed soon after the Substation was started to store available water for irrigation of crops in the immediate area. This pond supplied water for spring crops but not for summer and fall crops; therefore, a pond was constructed east of the headquarters area where there were two springs and branches to supply water continuously. Water was pumped from one pond to the other with a war surplus pump and a portable pipeline, and a second pump distributed the water to the crops.

In 1969, a 25-hp electric pump was installed and a 6-inch PVC underground line was laid from the new pond to the research area. Four-inch steel risers were installed where portable pipe could be attached to distribute the water to the crop area. A spray filler station was put at the end of the line with cut-off value and relay switch to start and stop the pump. This has been a great service due to the many times that sprayers are filled and washed while doing plot work as well as regular crop and weed spraying. This system delivers 450 gallons of water per minute at about 80 p.s.i.

Early work was done to measure increased yield and quality of vegetable crops from irrigation with varying amounts of fertilizer and organic matter.

Irrigation has been used every year it has been available to insure crops and research can receive adequate water during periods of low rainfall.

Tomatoes

Since tomatoes are such an important crop commercially and for home gardeners in the central Alabama area, much time has been devoted to researching this crop.

Early variety test work started with Marglobe, Rutgers, and breeding lines from other stations. Rutgers was used for many years as the standard for comparing new varieties and breeding lines. When inspecting plots at harvest time, a good looking variety would many times turn out to be Rutgers.

For many years the Substation cooperated with Dr. Walter Greenleaf as project leader in the Southeastern Tomato Evaluation Project (STEP) trials. These trials have tested breeding lines from the Southeastern States against named varieties as to yield, shape, size, color, acidity, internal color, firmness, resistance to rots, and resistance to cracking of fruits.

From the STEP trials, such varieties as Homestead 24, Flordel, Atkinson, Walter, and Auburn 76 have been released to the public. These cultivars have resistance to nematodes, mosaic, cracking, and sun scald. There is a need for tomato lines that will set fruit when the temperature is in the high eighties and nineties in the central Alabama area.

During the early years of the Substation, tests were concerned with fertilizers, irrigation, staking versus nonstaking, and cost of production.

Tomatoes use fertilizer and water efficiently and in large quantities. They respond in higher yields and better quality fruits to irrigation and staking.

In 1967, the food processors in Alabama became interested in more tomatoes for their plants to can from machine harvested operations. Auburn University purchased a once-over tomato harvester from Food Machinery Cooperation and set up tomato plantings at the Chilton Area Horticulture Substation, as well as at Fairhope, Headland, Auburn, and Cullman, for work with once-over harvest. Tests were conducted with varieties, bed shaping, and cost of production.

The mechanization of tomato harvesting was successful on level or near level land, but not on hillsides. Studies show that 20 tons of ripe tomatoes at harvest were required to reach the break-even point in cost of operation. Tomato varieties were not available that would produce 20 tons in Alabama, and they are not at this writing.

Although the tomato harvesting mechanization project has been discontinued, much information was obtained that can be used when plant breeders find varieties suitable for once-over harvest.

Cooperators on this project were Jack Turner, Department of Horticulture, Charlie Stokes, Department of Agricultural Engineering, and members of the Department of Agricultural Economics and Rural Sociology.

In 1976, 1977, and 1978, tomato variety tests were conducted in cooperation with Jack Turner, using the best known methods of production, staking, fertilizing, and irrigating. These tomatoes were hand harvested and graded for fresh marketing. Several varieties, including Auburn 76, Traveler, and Terrific, produced near 20 tons of marketable fruits. Test continued yearly through 1983.

Cull tomatoes are a problem in the production of market tomatoes. There is a big need for varieties and production methods that will reduce number of culls, which often amounts to one-third or more of the crop.

Southernpeas

During the early years of the Substation, variety tests with southernpeas were conducted. Among the better varieties found were the Giant Blackeye and the Alalong, developed by Dr. C. L. Isbell, of the Department of Horticulture. The Giant Blackeye had some off-type seeds in it and more selections were made to purify the strain.

This station cooperated with the Foundation Seed Stocks Farm in producing and maintaining a seed source of these two southernpea varieties throughout the years.

Dr. Sam Jones was project leader for southernpeas research for several years until his untimely death in 1969. His work was with varieties, chemical weed control, and spacings.

After Dr. Jones came Dr. Oyette Chambliss, who continued variety testing and selecting for machine harvest types.

Cucumbers

The first tests conducted with cucumbers were a cost of production and man-hour labor demands by dates. the price paid for processing cucumbers was from 1¢ to 5¢ per pound, and this was not enough to pay cost.

During 1968, 1969, 1970, and 1971, variety tests, spacing tests, and machine harvest test were conducted with Jack Turner and Dr. Oyette Chambliss as project leaders. W&W Pickle Company, of Montgomery, furnished a once-over harvester to pick the cukes. This FMC machine was efficient in harvesting, but the problem was to get sufficient yield of No. 1 size cukes ready at one time. This once-over harvest was not found to be a practical way for a farmer to make much money producing processing cucumbers.

Another project was planned for multi-pick harvest with a machine that was also provided by W&W Pickle Company. In this test, one row was planted on 5-foot, flat shaped beds. When the cucumbers were ready for harvest the machine was operated over the field twice weekly for 3 weeks. The yields from these six harvests were about 150 bushels per acre of all sizes.

Then the once-over machine was used to complete the harvest and picked about 150 additional bushels per acre, making a total of 300 bushels per acre. Low yields of desirable size cukes and high yields of jumbo sizes were obtained.

There was a high cost for hand labor for hoeing to control grass and weeds because there were no effective herbicides for cucumber plantings.

The multi-pick and then a final destructive harvest method operation resulted in a break-even type of operation at prevailing prices for processing cucumbers.

Project Leaders

The following is a list of project leaders and other persons who have contributed to the operation and research of the Chilton Area Horticulture Substation through the years:

L. M. Ware - Fruits and Vegetables
Dr. Ben Hagler - Fruits
Hubert Harris - Food Processing
Aubrey Johnson - Vegetables
Dr. C. L. Isbell - Vegetables
Dr. Bill Eden - Fruit and Vegetable Insects
Dr. Urban Diener - Fruit and Vegetable Diseases
Dr. R. L. Self - Vegetable Diseases
R. L. Livingston - Fruits
Lacey Hyche - Vegetable Insects
Dr. Don Canerday - Vegetable Insects
Dr. Harry Amling - Fruits
Dr. Joseph D. Norton - Plums and Melons
Dr. Sam Jones - Vegetables
Dr. W. A. Dozier - Fruits
Jack Turner - Vegetables
Dr. Don Perkins - Head, Department of Horticulture
Dr. Archie Latham - Fruit Diseases
Dr. Walter Greenleaf - Vegetables
Dr. Costas Kouskolekas - Vegetable Insects
Charlie Stokes - Vegetable Machinery
Dr. Booker T. Whatley - Sweet Potato Breeding
Dr. Ken Rymal - Food Processing
Lavern Brown - Buildings
Jenny Knowles - Fruit Tree Life
Henry C. Williams - Fruit Fertilizer and Tree Life
Tom Eagar - Buildings

Workers

Long time workers who made contributions to the operation of the Substation:

George Davis
Alford Davenport
Eugene Spigner
Arthur Carter
Monroe Ivey
Dorothy Messer
Leroy Johnson
Grady Adams
Douglas Scott
Lessie Davis
Gertrude Spigner
Lela Carter
Bell Ivey
Frances Davenport
Peggy Scott
Reta Adams

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