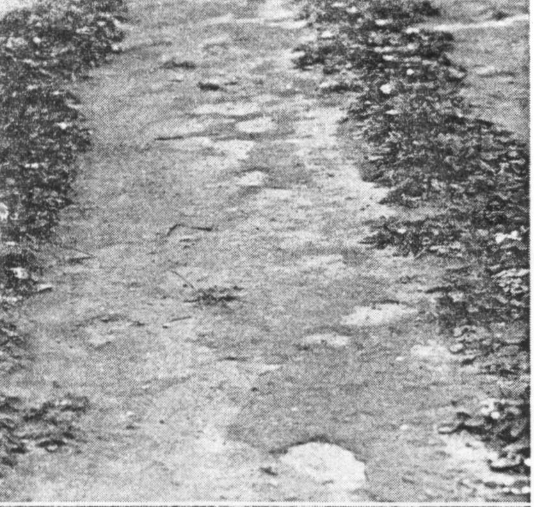
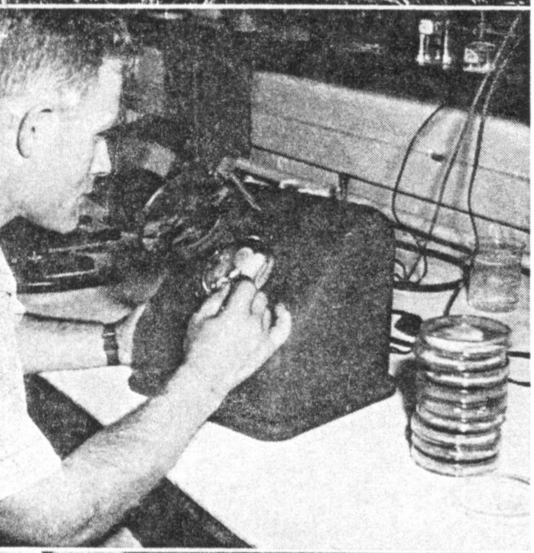
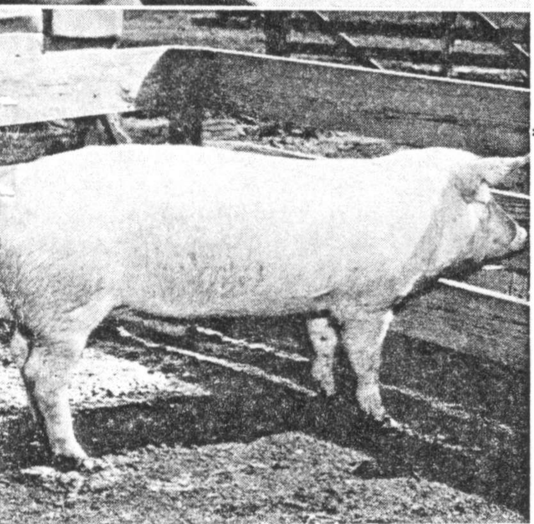


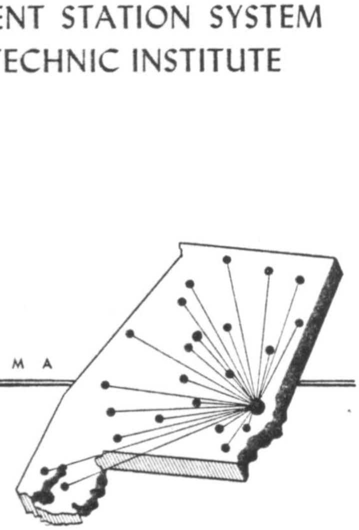
VOL. 4 NO. 2 SUMMER 1957

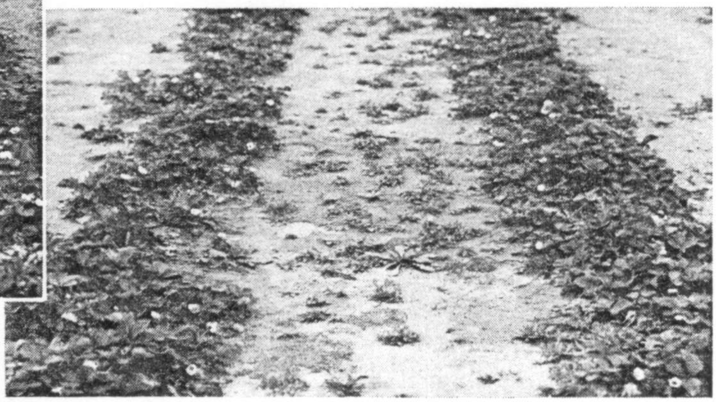
HIGHLIGHTS of AGRICULTURAL RESEARCH

In this issue—Weed Strawberries with Chemicals . . . Plastic Hose A Labor Saver in Sprinkler Irrigation . . . Perennial Summer Grasses for Upland Pastures . . . Tanks Replace Milk Cans . . . Fowl Pox—A Constant Threat . . . Microbe vs. Microbe . . . Betters Hogs through Performance Testing

AGRICULTURAL EXPERIMENT STATION SYSTEM
of the ALABAMA POLYTECHNIC INSTITUTE

SERVING ALL of ALABAMA





Strawberry plants in March (left) were free of weeds 3 months after CIPC and Sesone were applied. Note weeds in plots below where no chemicals were applied.

WEED STRAWBERRIES *with chemicals*

R. L. LIVINGSTON, *Asst. Horticulturist*

C. C. CARLTON, *Supt. Chilton Area Horticulture Substation*

T. B. HAGLER, *Associate Horticulturist*

HIGH ACRE COST of weeding strawberries and scarcity of labor may become headaches of the past.

New chemical control methods promise to do the job effectively at comparatively low costs with no danger to plants, according to results of studies at the Chilton Area Horticulture Substation, Clanton.

Tests were conducted at the substation in 1956 to learn effectiveness of certain chemicals on weed control in strawberry patches. Klonmore plants were set 18 inches apart in 3½-foot rows on March 26. Fertilizer was applied 2 weeks before transplanting. When the plants were established, all plots were cultivated to remove existing weeds. Plots were then irrigated at a rate of 1 inch of water per acre. This was done to maintain a stand, to stimulate germination of weed seed, and provide proper moisture conditions for chemical applications.

Treatments

Treatments included: (1) Check plot (no chemical applied), (2) CIPC used at two different rates, (3) Sesone (Crag Herbicide-1), and (4) a mixture of CIPC and Sesone. (See table.)

Prior to each chemical application, plots were cultivated and irrigated. Chemicals were applied on and between rows with a fan-type nozzle to insure complete coverage of treated areas. Applications were made on April 23, August 10, and December 14. Weed counts were made on June 9 and October 17 in 1956 and on March 13 this year.

Chemicals applied, the date weed counts were made, and per cent reduction of weeds compared to the check are given in the table. Best results were obtained by using a combination of CIPC and Sesone at the rate of 2 pounds of active material of each chemical per acre. CIPC and Sesone used alone were not as effective as the combination of the two in the spring and summer applications. However, satisfactory control was obtained from each chemical when applied during the winter.

EFFECT OF CHEMICALS ON REDUCTION OF WEEDS AND GRASS IN STRAWBERRIES

Active material used per acre	Weed reduction following each application		
	June 9, 1956[1]	Oct. 17, 1956[2]	Mar. 13, 1957[3]
	Pct.	*Pct.*	*Pct.*
None (check)	----	----	----
2 lb. CIPC	45	21	82
3 lb. CIPC	24	48	82
2 lb. Sesone (Crag Herbicide-1)	63	45	79
2 lb. each CIPC and Sesone	81	58	93

[1] Sprays were applied April 23.
[2] Sprays were applied August 10.
[3] Sprays were applied December 14.

Recommendations

Based on results obtained, these treatments and precautions are recommended:

(1) Apply a mixture of CIPC and Sesone at rates of 2 pounds of active material of each chemical per acre dissolved in 50 gallons of water.

(2) Before chemicals are applied, cultivate thoroughly. Apply chemicals after irrigation or rain. Weeds are controlled best when germinating. These chemicals are not effective in killing large weeds.

(3) Do not apply chemicals during periods of flower, fruit, and runner development. Gardeners should not use Sesone in areas where it will come in contact with roots of grapes or other sensitive plants.

(4) On new plantings, apply chemicals 2 weeks after plants are set, followed by second and third applications in summer and in late fall.

(5) Three applications of chemicals are applied on established plantings each year. The first application is made in late winter after berries are fertilized and cultivated but before mulching. A second application is applied following harvest after plants have been thinned, fertilized, and cultivated. A third application is made following fall fertilization and cultivation.

Plastic hose a LABOR SAVER *in sprinkler irrigation*

HERMAN BOUWER

J. O. HELMS

Department of Agricultural Engineering

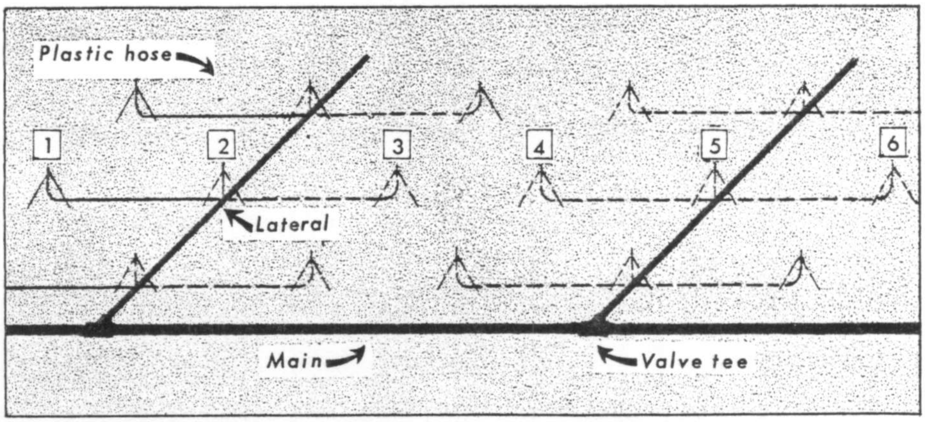


Fig. 2. Diagram shows how 80-foot plastic hose and portable, tripod-mounted sprinkler are used to cut labor cost. From a single setting of the lateral pipe, the operator moves sprinkler twice—from position 1 to 2 to 3. The lateral is then moved 240 feet to next setting for positions 4, 5, and 6. Thus lateral has to be moved only a third as often as with the conventional system.

TOO MUCH LABOR!

That is the usual criticism of sprinkler irrigation. And it is a reasonable complaint, too, because moving irrigation pipe is a time-consuming and unpleasant job.

But this high labor requirement can be reduced. Using plastic hose in combination with aluminum pipe cut labor about one-third in tests by the API Agricultural Experiment Station.

Plastic Hose Tested

A sprinkler irrigation system using plastic hose was set up in cotton and corn fields in the test at Auburn. Sprinklers were mounted on tripods, Figure 1, and connected to laterals with 80-ft. sections of 1-in. black polyethylene hose, Figure 2. Sprinkler spacing was 60 x 80 ft.

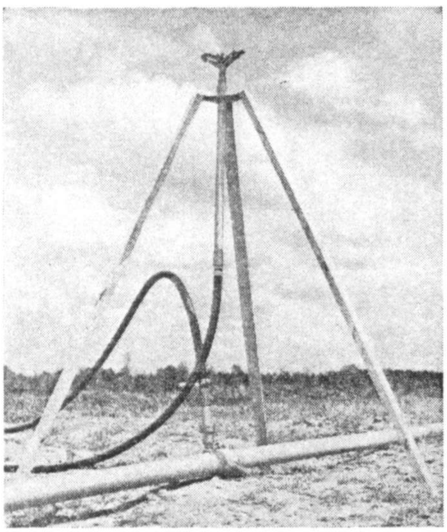


Fig. 1. Tripod-mounted sprinkler at position 2 at lateral. Quick coupler connects plastic hose to aluminum lateral.

The "branched-lateral" arrangement enables the operator to make two sprinkler moves (from position 1 to 2 and from 2 to 3, Figure 2) without moving any aluminum pipe. For the third move (from 3 to 4), the plastic hose is disconnected from the lateral and the aluminum pipe is loaded on a trailer and moved a distance of three lateral spacings (240 ft.). Sprinklers are moved 80 ft. and reconnected to the lateral with the plastic hose.

Quick couplers are used between plastic hose and lateral, Figure 1. To facilitate pipe moving with tractor and trailer, alleys are cut at each lateral location (every 240 ft.).

Since the plastic hose is dragged when sprinklers are moved, lateral lines are run at right angles to rows when irrigating row crops.

Labor Required

Labor requirements for the three moving operations are shown below:

Move	Man-hours per acre per irrigation
Position 1 to 2	0.6
Position 2 to 3	0.6
Position 3 to 4	1.8

These figures show that the average labor requirement with the branched lateral arrangement was 1 man-hour per acre per irrigation. This compares with 1.5 man-hours required with a conventional system in 1955.

In addition to reducing total labor, branched laterals (1) reduced peaks in labor demands (from 1.5 to 0.6 man-hours for two-thirds of the moves); and (2) made the work easier (all aluminum pipe was moved with tractor and trailer).

Cost of plastic hose, adapters, and tripods was approximately $20 per sprinkler. There was a saving in valve tees, however, since only one valve tee was required for every three sprinkler settings. Counting labor at $1 per hour, the labor saved can pay for the net extra cost of branched laterals in about 12 irrigations.

Lasts How Long?

Lasting qualities of plastic hose used with sprinkler irrigation have not been determined. After 1 years' use at the Station's Agricultural Engineering Farm Unit, no visible deterioration or damage to the hose could be detected. Kinks should be avoided and exposure to sunlight kept to a minimum.

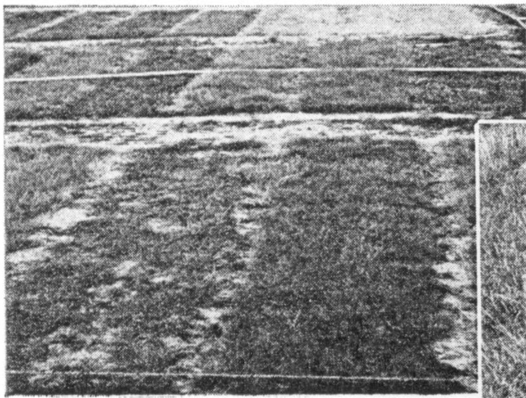
Other features of branched laterals include the following:

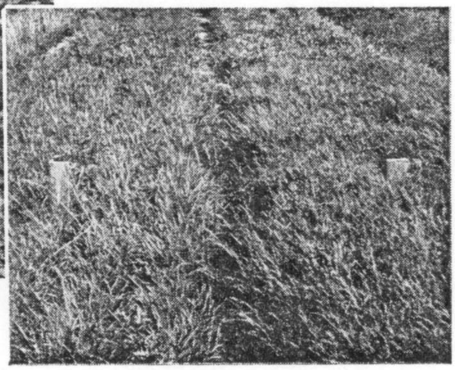
(1) The reduced number of valve tees favors use of permanent underground mains.

(2) Traction problems in moving pipe with tractor and trailer on irrigated land are reduced, since soil at the lateral starts drying while irrigation is being done at the last sprinkler setting before moving lateral.

(3) Smaller pipe sizes can be used for the lateral because it is possible to compensate for excessive pressure variation by selecting plastic hose with proper diameter.

(4) Because of friction losses in the plastic hose, additional pressure is required (5 p.s.i. in Auburn study).





Left: Summer grasses being studied at Auburn. Below: Pensacola Bahiagrass (left) and Coastal Bermuda in test plots near Brewton.

W. R. LANGFORD
Associate Agronomist

Perennial summer grasses for
UPLAND PASTURES

ARE YOU GETTING the most out of your grassland . . . highest forage yields . . . maximum beef gains . . . growth when needed most . . . most economical production?

These questions are hard to answer because too little is known about growth habits and weight-producing abilities of grasses. This lack of knowledge makes it difficult to plan a profitable pasture program.

Grasses Being Studied

To determine yield, seasonal growth, and other agronomic features of grasses, API Agricultural Experiment Station studies have been in progress for several years at eight locations in the State. Common and Coastal Bermudagrass, Argentine and Pensacola Bahiagrass, Dallisgrass, Pangolagrass, King Ranch bluestem, bufflegrass and Rhodesgrass were tested in small plots. The more promising ones are being evaluated in experimental pastures.

Based on total yield, persistence, and other desirable characteristics, Coastal Bermuda and Pensacola Bahia have been superior to other grasses tested for upland pastures. They were most productive in every test.

On a sandy loam soil at the Wiregrass Substation, Coastal Bermuda pastures produced more forage and greater steer gains at each level of nitrogen than Bahia or common Bermuda during 1953-56. In a clipping test, Coastal and Pensacola Bahia were equally productive from 160 or 320 lb. of nitrogen per acre annually. Bahia produced more forage than Coastal with no nitrogen or at the 80 lb. per acre rate.

Performance Varies

Performance of the individual grasses varied between locations because of climatic and soil conditions. At the Brewton Experiment Field on a soil low in fertility but above average in moisture condition, Pensacola Bahia was the most productive of six grasses studied during 1955-56, Table 1. Coastal Bermuda exceeded all others under drouthier conditions near Prattville and Tuskegee.

Coastal and Midland Bermuda were the only grasses in a 1-year-old test at the Alexandria Field that satisfactorily survived the late March, 1955, severe freeze. Pensacola Bahia stand was reduced about 50% and that of Argentine Bahia an estimated 90% by the freeze. Pensacola Bahia has been more winter hardy and more productive than Argentine Bahia in all tests.

TABLE 1. TWO-YEAR AVERAGE YIELD OF FORAGE, 1955-56

Grass	Pounds per acre, oven dry		
	Brewton	Prattville	Tuskegee
Dallisgrass	3,128	4,580	4,423
Coastal Bermuda	6,536	9,949	6,036
Argentine Bahia	5,936	5,748	4,802
Pensacola Bahia	7,032	7,654	5,341
K. R. Bluestem	2,511	....	2,061
Buffelgrass	2,658	1,026	565
Rhodesgrass	....	4,521	

Dallisgrass yielded less than Coastal Bermuda or either Bahia variety in 7 of 8 experiments. The one exception was on nonirrigated red soil plots at the Tennessee Valley Substation. There, yield was slightly above that of Bahia, but considerably lower than Coastal. Coastal Bermuda produced considerably more forage than Dallis or Bahia with natural rainfall at Auburn and the Tennessee Valley Substation during 1956, Table 2. With irrigation, Bahiagrass almost equalled production of Coastal.

Bufflegrass and Rhodesgrass were unable to thrive under frequent mowing and their stands were injured by cold even in southern Alabama. King Ranch bluestem survived the winter in central and southern Alabama. However, frequent close mowing thinned the stand in all cases.

Based on experiments to date, three conclusions concerning productivity of Bahia and Coastal Bermuda can be stated: (1) the two grasses are about equal under conditions of high rates of fertilization and adequate soil moisture, or with low fertility and inadequate moisture, (2) Coastal is superior on drouthy soils when well fertilized, and (3) Bahia is better on moist soils of low fertility.

Other differences between Bahia and Coastal have been observed. Growing clovers and vetches has been somewhat more successful with Coastal than with Bahia. Experimental plots and pastures of Bahiagrass have fewer weeds than those of Bermudagrass. Bahia begins growing a little earlier in the spring and frequently remains green later in the fall. However, Bahia stands have shown more winter injury in central and northern Alabama.

TABLE 2. RESPONSE OF GRASSES TO IRRIGATION IN THREE EXPERIMENTS, 1956

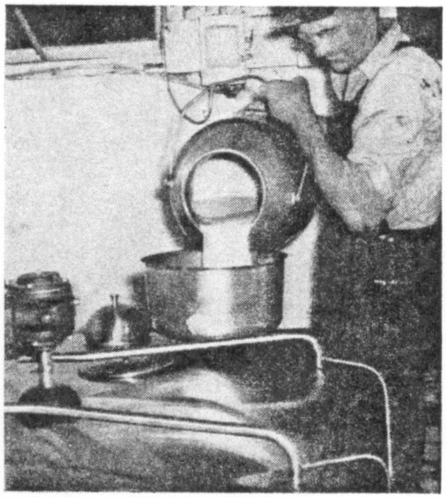
Grass	Pounds dry forage per acre*	
	Not irrigated	Irrigated
Dallisgrass	7,240	10,037
Coastal Bermuda	12,707	14,305
Bahia	7,965	13,208

* Average yield of one test at Dairy Research Unit (Auburn) and two tests at Tennessee Valley Substation. All grasses received 200 lb. of nitrogen per acre.

TANKS *replace* MILK CANS

W. W. MARSHALL, *Assistant in Agricultural Economics*

J. H. YEAGER, *Associate Agricultural Economist*



THE TANKS ARE coming! Farm bulk tanks, that is.

About 250 of these refrigerated, stainless steel tanks are on Alabama dairy farms today. And more and more dairy farmers are asking about them. They want to know "how much do they cost?", "what changes must I make in the milk room?", and "will it pay?"

To answer these and other questions, the API Agricultural Experiment Station studied 15 dairy operations in 3 Alabama areas. The initial cost of a bulk milk tank and installation varied from $1,525 for a 150-gallon tank to $7,411 for a 1,500-gallon tank. (See table.) Cost per hundredweight of milk capacity varied from $118 for the smallest to $57 for the largest tanks.

Getting the right size tank for a dairy operation is important. Some farmers may have to expand their herds, or production per cow, or both to justify or to get the most net returns from bulk tanks. The 15 dairymen who had an average size herd of 78 cows (herds varied from 17 to 214 cows) planned to expand to an average size herd of 91 cows after installation of bulk tanks. This is a 17 per cent increase. Three dairymen did not plan to increase and two actually planned to reduce the size of their herds. It is doubtful that all expansion could be attributed directly to the bulk milk tank. Before buying a tank, it would be wise for a dairyman to do some planning about the future of his dairy operation.

Some physical layout and space problems were encountered in installing bulk tanks. Space vacated by removing aerators, can-racks, and can-coolers was, in most of the 15 milk rooms, adequate for installation of the tank. On 8 farms it was necessary to widen the doorway or to knock out a portion of a wall to install the tank. One dairyman had to raise the ceiling in his milk room to provide space to open the lid of a 1,000-gallon bulk tank.

Some electrical rewiring was necessary at each dairy. The amount varied from a simple outlet installed outside the milk room to a complete rewiring of the milk room. Rewiring expenses were a small part of total initial bulk tank costs.

Labor Difference

Does the dairyman save labor or reduce the time required in milking with a bulk tank operation? Records were kept at each dairy before and after installation of tanks. Eleven of the 15 farmers showed a lower time per cow per milking after tank installation. On several farms the average was little different. Three farmers put in pipe lines at the same time they installed tanks. One changed from a stanchion barn to an 8-cow elevated stall parlor. In other cases personnel or milking procedure was changed. Therefore, "before" and "after" labor time records were not comparable.

Some dairymen can save time with bulk tanks. Tanks involve less effort and energy. There is no lifting of full cans, handling or washing empty cans, and watching cans for spillage during straining of milk.

Annual Costs

It costs money to go bulk, sometimes as much as a dairyman paid for his farm several years ago. What about annual costs of tank ownership and operation?

Bulk tank costs averaged 6 cents per hunderweight more than can-cooler costs for the 15 dairymen (table). This is based on the total annual production for each herd. These costs included depreciation, interest on investment, repairs, property taxes, and electricity. Depreciation, taxes, and interest were annual cost items that increased most with installation of a bulk tank.

Premiums, Hauling Rates

Eight farmers received temporary premiums of 5 cents per hundredweight for bulk milk. Six dairymen realized reduced hauling rates to the extent of 15 cents and four, 5 cents per hundredweight. Three sold to a cooperative and, at the time of the study, no change had been made in hauling rates. Two dairymen hauled their milk to the plant when they operated with can coolers.

Besides advantages to the farmer, there are a number of savings in bulk handling at the milk plant.

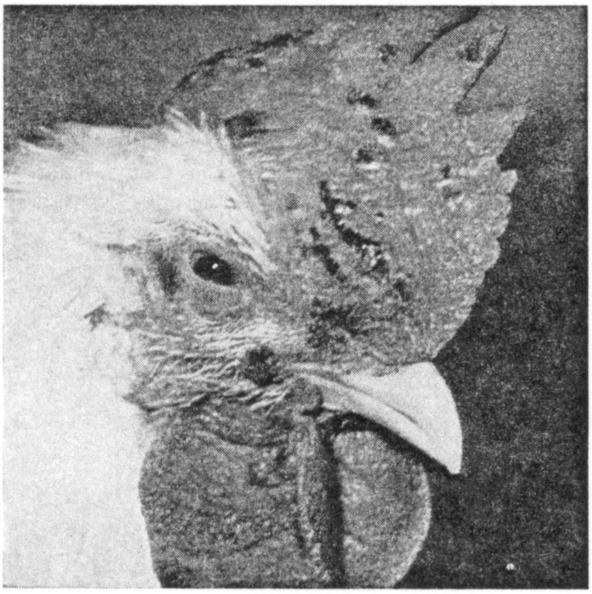
Generally, farmers were pleased after installation of tanks. One dairyman commented, "I like it better than I meant to."

BULK TANK SIZE, INITIAL COST, AND PER HUNDREDWEIGHT COST OF MILK PRODUCED COMPARED TO CAN-COOLER COST FOR 15 DAIRY FARMS IN 3 ALABAMA AREAS, 1956

Number of farms	Average annual milk production (cwt.)	Bulk Milk Tank			Can-cooler annual cost per cwt.
		Capacity (gal.)	Initial cost[1]	Annual cost per cwt.	
1	1,105	150	$1,525	$0.19	$0.12
2	1,146	185	1,778	.22	.10
4	1,860	250	1,852	.14	.09
1	3,660	400	2,695	.10	.04
1	5,900	500	2,412[2]	.12	.07
1	7,720	700	3,460	.06	.04
2	10,026	1,000	4,826	.08	.04
3	9,483	1,500	7,411	.11	.06
Average	5,108			.13	.07

[1] Includes cost of tank and compressor installed, cost of building changes where needed, less any receipts from sale of cans and cooler.

[2] Cost not representative for this size tank.



This 10-week-old rooster has a serious case of fowl pox. Note large sores on comb and chicken's droopy condition. Fowl pox cuts egg production and delays marketing of broilers.

FOWL POX —

a constant threat

S. A. EDGAR, *Poultry Pathologist*
D. S. BOND, *Graduate Assistant*

WATCH OUT for fowl pox this summer and fall!

Commonly called sorehead, fowl pox is a constant threat to commercial poultrymen during warm weather. Affected birds may have difficulty eating and breathing. Severe outbreaks cause unthriftiness, slow-down in growth, and sometimes death. Birds affected at 6 to 9 weeks of age may be retarded as much as ½ to ¾ lb. per bird. Poultrymen may have to wait 2 to 4 weeks to market affected broilers because of slow growth or appearance of birds.

Fowl pox is caused by a virus that attacks epithelial cells of skin and mouth. Raised, reddish brown sores develop. Those on head, feet, or other bare areas are called dry pox. Sores in the mouth are wet pox. Light breeds seem to be affected more than heavy breeds.

Transmission

The diesase is often transmitted by a common night-biting quinq mosquito, *Culex quinquefasciatus*. This was found in tests by the API Agricultural Experiment Station. The mosquito breeds in containers, puddles, ditches, slow-moving streams, and other places. It prefers chicken blood to that of other domestic animals. Most abundant in spring and fall, the mosquito is often numerous during summer months. Some may be found in chicken houses even in midwinter. In addition to transmitting pox, large numbers attacking birds can retard growth or cause a drop in egg production.

In research at Auburn, it has been found that vaccination gives quick protection against fowl pox. Growth of chickens was not slowed by use of a commercial vaccine. However, vaccination with a wild strain isolated from a natural outbreak retarded growth. In an experiment comparing a commercial and wild vaccine, Leghorn pullets were vaccinated at 32 days of age. There was no apparent effect the first 7 days, but the Georgia (wild) strain retarded growth significantly by 14 days. Maximum effect was apparent in 3 to 4 weeks. The Lederle vaccine had no effect on growth. In other studies when chickens were vaccinated from 2 to 7 weeks of age, most birds resisted severe exposure by 4 days after vaccination and all within 8 days.

Length of Immunity

Since fowl pox is a threat to broilers and laying stock, it is important to know how long chickens vaccinated at an early age will be protected. In 16 field trials near Auburn, chickens were vaccinated at 1 day or 2 weeks of age. Results are shown in the table. Chicks vaccinated at 1 day old resisted exposure to the disease at 28 days. From 10 to 70% of those on wire were protected at 41 days and all were susceptible by 56 to 80 days. Birds on litter were resistant at 28 to 41 days, with protection ranging from 20 to 100% at 56 or 80 days. Chickens vaccinated at 2 weeks of age were protected through 41 days. On litter, 70 to 90% resisted exposure at 80 days; all on wire were susceptible at 80 days.

Without mosquitoes, chickens vaccinated at 1 day of age and reared on wire were not re-exposed to virus. Therefore, they were not fully protected beyond 28 days. Some flocks on litter were re-exposed and were fully protected throughout the usual broiler-growing period. Fewer than 0.5% of chicks vaccinated at 1 day old died from vaccination. There were no deaths from pox among those vaccinated at 2 weeks. Therefore, it is safe to vaccinate chicks at an early age. Length of protection varies with type of management and other environmental factors.

Recommendations

Based on Experiment Station research results, the following preventive measures help combat fowl pox:

(1) If pox is anticipated because of time of year and expected mosquitoes, vaccinate chicks by 2 weeks of age.

(2) If an outbreak occurs, destroy or spray mosquito breeding sites and hiding places in houses and surrounding buildings with DDT or other suitable insecticide.

(3) If an outbreak is noted early, vaccinate all chickens immediately.

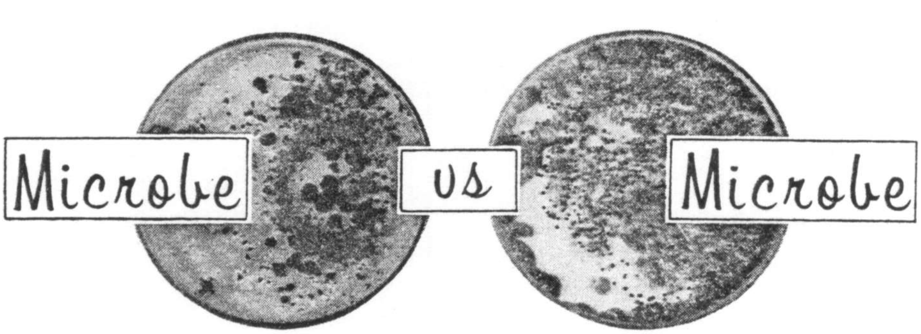
(4) Vaccinate laying stock at least once, 4 weeks or more before maturity. Two vaccinations are better, at 2 to 4 and at 10 to 16 weeks old.

DURATION OF IMMUNITY FROM EARLY VACCINATION, FLOOR AND WIRE MANAGEMENT

Number flocks	Age vaccinated	Percentage protected at different ages				Type management
		Age	Protection	Age	Protection	
No.		*Days*	*Pct.*	*Days*	*Pct.*	
3	1 day	28	100	56	20-100	floor
7	1 day	41	20-100	80	0	wire
2	14 days	41	70-100	80	0	wire
4	14 days	41	100	80	70-100	floor

E. A. CURL, *Assistant Plant Pathologist*

Microbe vs Microbe



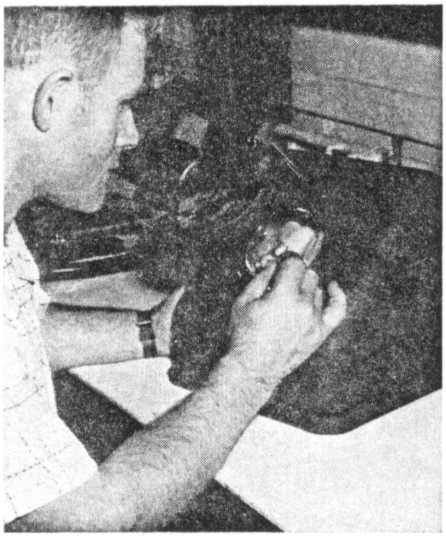
These plates contain pure cultures of rival microbes. The parasite at right feeds on plant roots. In turn, the fungus at left attacks this root-infecting species. The microbe war may help farmers reduce losses caused by diseases.

BIOLOGICAL "WARFARE" could benefit Alabama farmers.

Pitting microbe against microbe may become a common practice to control certain important soil-borne plant parasitic fungi. Studies at the API Agricultural Experiment Station already are well along toward this goal.

Root-infecting fungi cause a number of destructive diseases of crop plants in Alabama. Each of these parasites can kill plants. However, they frequently join forces with other organisms, which alone seldom attack healthy plants. Together they form a complex and efficient team of killers.

Effective control measures for root-infecting fungi are limited, because many activities of these parasites in the soil are not understood. Some new chemicals are showing promise for control of soil-borne diseases in small acreage crops of high cash value. However, it is not practical at this time to use chemicals over large areas of such crops as forage legumes. The practice of crop rotation, widely used for disease control, is not always effective, because many soil-borne fungus parasites attack a number of different plants. Also, many of them can live in the soil for more than a year even if no plants are present.



Graduate student uses microbe colony counter to determine number and kinds of microorganisms taken from soil around roots of plants. From group, he will choose microbes for cultures and study.

New Approach

Every particle of crop soil is teeming with tiny organisms. The largest numbers are in root zones of plants. Most of them are fungi, bacteria, and actinomycetes. These organisms live together in "communities." The numbers and kinds of organisms in a community depend upon such factors as soil type, temperature, moisture, fertility, and kind of crop plant. Some of these organisms are helpful, whereas others are harmful to plants. However, all are constantly competing with each other for available nutrients and space.

Some organisms have been "domesticated" to serve mankind, such as certain soil bacteria that fix nitrogen and improve soil fertility. Other soil organisms produce antibiotics that are used in human medicine and in control of certain plant diseases. Many organisms in the soil produce toxins that make conditions unfavorable for growth of their neighbors. A few actually live on neighboring organisms. The principle of plant disease control by biological "warfare" is based on these reactions among soil microorganisms.

Program at Auburn

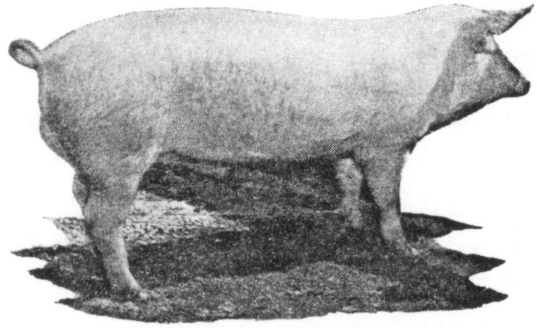
In 1954, the Experiment Station began a new program of plant disease research. The program has two main objectives: (1) to secure much needed basic information about activities of soil microorganisms in their relationship to crop plants and root-infecting fungus parasites, and (2) to apply this information toward developing practical control measures for plant root diseases. This research program is supported by federal funds and is part of a regional project, "Soil Microbiology of Plant Diseases." Two other southern states, Tennessee and South Carolina, are cooperating on the project.

Outlook Promising

During the past 2 years, a large number of soil samples were taken from Alabama fields and processed for presence of rival microorganisms. Hundreds of fungi, bacteria, and actinomycetes were taken from the soil and tested in the laboratory against common root-infecting fungi. Two promising organisms have been found. One of these is a bacterium; it produces a toxin that slows growth of several parasitic fungi. The other is a fungus, which appears to attack these same plant disease fungi. This "enemy" fungus not only stops growth of fungus parasites but destroys parts of them. Both organisms seem to be present in large numbers in crop soils of Alabama.

These "enemy" organisms are being studied in the greenhouse for their ability to prevent disease-producing parasitic fungi from attacking plants growing in soil. Following this test, the organisms will be studied to learn conditions under which they multiply rapidly in soil and control plant disease.

It is not likely that rival microorganisms alone will completely control soil-borne diseases. However, this practice could be used along with crop rotations and other good cultural systems in reducing crop losses caused by diseases. Effective and lasting control of root-infecting fungi will require much research.



BETTER HOGS *through performance testing*

C. D. SQUIERS, *Associate Animal Breeder*

TOO OFTEN ONE HEARS such expressions as "a hog is a hog" and "time is nothing to a hog."

One might just as well say, "money means nothing to a hog." A hog will be perfectly content to be lardy, lazy, and a financial liability, if we let him.

The hog can no longer be allowed to manage our pork program. We have lost a substantial portion of our pork market because we have allowed excessively fat porkers to reproduce themselves year after year. Many of us have kept for breeding stock gilts that should have been slaughtered and boars that should have been barrows simply because we did not bother to find out how well they had performed.

Too often we have purchased a boar simply because he was cheap, thinking that, after all, "a hog is a hog." Since a hog is a hog, he cannot tell us his litter size, how well his dam milked, how fast he grew, or how thick the layer of fat is on his back. But if we expect to stay in the hog business in Alabama for long, we must know, according to results of research studies at the API Agricultural Experiment Station.

The Landrace boar above gained nearly 2¼ pounds per day while on test at the Main Station. He weighed 208 pounds at 154 days of age and had an average of less than ¾ inch of back-fat at that weight. Of 22 purebred Landrace and Hampshire boars tested during the winter of 1956-57, 11 weighed 200 pounds or more at 154 days of age. The average back-fat thickness of these 11 pigs ranged from less than ¾ inch to 1¼ inches. All were from litters weighing 300 pounds or more at weaning.

In the summer of 1956, 57 Landrace boars were placed on feeding test. Twenty-eight with good gains finished the test. The 10 top-gaining boars averaged 1.17 inches of back-fat at 200 pounds, while the average of the 28 was 1.10 inches.

The tests indicate that it is quite possible to combine leanness and muscling with ability to grow and good litter performance. Our corn-belt competitors will make use of this fact. So can Alabama producers if we will do something about performance testing.

New and Timely PUBLICATIONS

Listed here are timely and new publications reporting research by the Agricultural Experiment Station.

Bulletin 304. Southern Fusiform Rust is a report of research on factors affecting the incidence of southern fusiform rust in Alabama's Coastal Plain Region.

Bulletin 305. Boron Requirements of Crops in Alabama gives boron requirements of different crops and describes deficiency symptoms.

Circular 118. Azalea Fertilization reports on azalea nutrition experiments and describes nutrient deficiency symptoms.

Circular 119. Consumer-Market Study of Chilco Jam and Jelly reports market acceptance of blackberry products made by an improved, Station-developed process.

Progress Report 66. Design for A Low-Cost Farm House describes a new design developed by the Experiment Station.

Free copies may be obtained from your county agent or by writing the API Agricultural Experiment Station, Auburn, Alabama.

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