

**COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF OKLAHOMA**

D. P. TRENT, *Director*

OKLAHOMA AGRICULTURAL AND
MECHANICAL COLLEGE AND
UNITED STATES DEPARTMENT OF
AGRICULTURE, COOPERATING

EXTENSION SERVICE
COUNTY AGENT WORK
STILLWATER, OKLAHOMA

Distributed in Furtherance of the Acts of Congress of May 8 and June 30, 1914

FARM PLANS

FOR

1930

FACTS ABOUT COTTON

D. P. TRENT
Director of Extension

The first business of farming is to make a living. The only sure way to have a living is to produce it on the farm. Unless we produce the living on the farm, in large measure we will do without it.

FILE COPY
Office of Publications
Okla. Agri. Extn. Sta

THE COTTON PLANT

“What a royal plant it is! The world waits in attendance on its growth. The shower that falls whispering on its leaves is heard around the earth. The sun that shines on it is tempered by the prayers of all people. The frost that chills it and the dew that descends from the stars are noted, and the trespass of a little worm on its green leaf is more to England than the advance of the Russian army on her Asian outposts.

“Its fibre is current in every bank. It is gold from the instant it puts forth its tiny shoot, and when loosing its fleece to the sun, it floats a banner that glorifies the field of the humble farmer. It is the heritage that God gave to this people forever as their own when he arched our skies, established our mountains, girt us about with the ocean, loosed the breezes, tempered the sunshine and measured the rain—ours and our children’s forever.”—Henry W. Grady.

Cotton always has been and probably always will be the greatest cash crop for the South, if used strictly as a cash crop. Too long it has been used as the credit crop of the South and as such it has served to impoverish rural people, deplete the fertility of the soil, reduce standards of living, prevent progress and education in rural districts, and to quench the fires of hope and ambition in the hearts of young men and women on cotton farms. The farmer who plants most of his land to cotton and depends upon the proceeds of his crop to buy his living, or the landowner or banker who requires that this be done, has no conception of the proper place of cotton in the farming system of the South. Cotton is a cash crop without a peer in the South, provided the farmer who grows it has first made ample provision for the food for his family, feed for his livestock, has looked carefully to the fertility of his soil, has provided some other sources of cash income as a matter of safety, and will grow the quality of cotton which the market wants. The surplus acres of fertile land may well then be planted to cotton as a means of providing clear cash.

FARM PLANS FOR 1930

D. P. TRENT, Director of Extension
Oklahoma A. and M. College

What The Federal Farm Board Says About Cotton: Chairman Legge of the Federal Farm Board has said, "The Federal Farm Board can not protect farmers when they deliberately overproduce." Carl Williams, member of the Federal Farm Board, recently said, "What the board does this year will be governed largely by what the farmer does at planting time. If the Federal Farm Board is to be of the greatest possible service to the cotton farmer, it must not have to deal with an unwieldy surplus." Mr. Williams said further, "The South planted last year 47 million acres to cotton and harvested 46 million acres. It is dangerous to plant in 1930 more than 40 million acres to cotton." The Federal Farm Board has appealed to the farmers of the South not to plant more than 40 million acres to cotton this year. The leaders of the southern states have joined the board in this movement. Every southern state is putting on an intensive campaign to acquaint farmers, bankers, landowners and others with the cotton situation. Oklahoma must not be found wanting in this emergency. Every farmer who grows cotton should plan his farm operations with extreme care and caution in the light of the information presented in the following pages, in other publications and in the press.

The Situation. In spite of the fact that the average yield of cotton in the United States last year was only 155 pounds of lint per acre, we harvested from 46 million acres at least 4 million bales more than the cotton markets of the world needed, and must carry this surplus over into the next season. This means that we must either reduce our 1930 production of cotton or sell our cotton on a market which is oversupplied. If the farmers of the South plant more than 40 million acres of cotton this year and secure average or better than average yields, they must face a repetition of 1914, 1920 and 1926. If we should plant and harvest the same acreage as last year and secure the 1926 yield of 183 pounds of lint per acre, we would produce approximately 17 million bales, which added to the carry-over, would make a total of over 21 million bales of American cotton. This is at least 5 million bales more than the world needs of American cotton in one year. It behooves every farmer, every banker, every landowner, every merchant and every citizen of the state to aid to the fullest possible extent in bringing this adjustment in cotton acreage about because it is vital to the prosperity and welfare of every farmer family and of the state as a whole.

The Farmer Pays Dearly for Growing Big Crops of Cotton. In past years the farmers of the South have paid dearly for producing large crops of cotton. We have almost always received more for our small crops of cotton than for our larger crops. For instance in 1923 we sold 10 million bales for \$1,600,000,000; in 1924 we sold 13,000,000 bales for \$1,540,000,000; in 1925 we sold 16 million bales for \$1,464,000,000; in 1926 we sold 18 million bales for \$982,000,000, and in 1927 we sold 13 million bales for \$1,269,000,000. In addition to the reduced price received for cotton in the years of heavy production, farmers paid the additional cost of harvesting, ginning and marketing the increased number of bales. The wise course for cotton farmers to pursue this year is to do what

industrial and business institutions do. That is, study the apparent needs for the product which he produces, and produce in accordance with the needs of the market.

We Can Not Compete With Foreign Countries in Producing Short Staple. Several foreign countries have been increasing their production of cotton during recent years. They are particularly adapted to the growing of short staple cotton, and because of cheap labor and low standards of living they can grow short staple cotton much more cheaply than we can ever hope to do, and can sell it at a profit. The United States is particularly adapted to the growing of good medium-staple cotton, and has little competition in that class of cotton. Instead of competing with foreign countries in the production of short staple cotton, and thus forcing them to engage in the production of the better staples, it will pay the farmers of the United States to leave the production of short staple cotton to other countries and to hold onto the reputation which the United States has established for the production of the good staples and grades. **The surplus cotton on the market today is not of the better staples, but the cotton that has pulled the market down is the large amount of untenderable cotton which has been produced during the last two or three years.** There are standard varieties of cotton which have demonstrated their ability to produce as much per acre, gin out as much and bring a better price on the market than the short staple varieties. As a result of the large per cent of short staple cotton grown in much of Oklahoma during recent years, a large portion of the state has been classed as short staple territory, and all cotton purchased in these areas is priced and bought on the basis of half-and-half cotton, regardless of its quality. In other words, much of Oklahoma is being penalized by the cotton trade several dollars per bale on every bale of cotton sold because of the large amount of half-and-half cotton which is being produced. Oklahoma at one time had a splendid reputation for the production of good staple cotton, and is paying the price for the increase in production of short staple, whether we realize it or not. **It will pay us tremendously to standardize on some of the better staple varieties, and not undertake to compete further with foreign countries in the production of short staple.**

What about the Cotton Ginners and Buyer? Assurance has been given by officers of the State Ginners' Association and the State Cottonseed Crushers' Association that cotton ginners and buyers are interested in any movement for improving the quality of cotton grown in Oklahoma. The chief contribution which cotton buyers and ginners can make to this movement is to buy each bale of cotton strictly upon its own merits, paying the price that the market justifies on the better staples and grades and penalizing the short-staple, low-grade cotton as the market and fair-dealing require. (There is also need for greater care in the ginning of the longer staples, in order that the producer may receive full value for the quality of cotton which he produces. Gins can also render a distinct and valuable service in making cottonseed of high quality and suitable varieties available to growers.) No ginner, no cotton buyer, no business man, no farmer can contribute to the general lowering of the quality of a great commodity like cotton without doing a distinct injury and a gross injustice to the state's agriculture and to the next generation of farmers. The growers of short staple cotton and the buyers who pay the same for it as for good staple have already brought a penalty of five dollars or more per bale on much of Oklahoma's cotton area.

Eliminate the Low Yielding, Unprofitable Cotton Land. Through very careful studies which have been made by the U. S. Department of Agriculture, it has been determined that it takes a yield of more than 100 pounds of lint cotton per acre to pay rent, pay for seed, equipment, feed for teams, etc. without allowing the farmer wages for himself and his family and teams. In 1929 the average yield of cotton in Oklahoma was 128 pounds of lint cotton per acre. At least one-third of the land in cotton in this state last year did not

pay the farmer actual cost of production, not considering wages for himself and family and teams. In other words, many farmers in Oklahoma last year paid for the privilege of growing cotton on poor land and took a loss on their operations. No man can grow cotton at a cost of 20 to 25 cents per pound and sell it at 16 or 17 cents per pound and break even. Unless he secures yields sufficient to pay him a profit above cost of production, he can not hope to make anything from his farm operations. Since the farmer receives no profit for growing cotton on this low yielding land, it would be much better for him and for the state as a whole if it were permitted to lie idle, or if it were planted to sweet clover, cowpeas, soy beans, Japan clover, hay crops or other feed crops. If terraced and handled properly much of this poor land would within a few years regain its fertility and produce profitable yields of cotton. Every farmer should consider very carefully the quality of land which he is farming, the acre yields of cotton which he has been securing, the cost of production of cotton, the profit or loss upon his cotton and should plant no land to cotton in 1930 which has not yielded profitable returns during the past five years. The Federal Census for 1925 shows that according to their own statements the farmers of Oklahoma paid out in that year twenty-six million dollars for farm labor, which is an average of \$133 per farm for the entire 197,000 farms of the state. Much of this labor was used in growing crops which did not return the farmer a profit, and in that case the only man who made a profit from the farm operations was the farm laborer who worked for wages in producing and harvesting the crop. If every farmer in the state who is operating land upon which the yields will not equal the cost of production would plant this land to feed crops, use it for pasture or permit it to lie idle, the problem of over-production of cotton in Oklahoma in 1930 would be eliminated.

What to Grow on the Land Not Planted to Cotton. The Federal Census of 1925 shows that the farmers of Oklahoma, according to their own answers to questions, paid out in that year \$15,618,000 for feed to feed the livestock on the farms. This is an average of \$79 per farm for the entire 197,000 farms of the state. In most cases this feed could have been and should have been produced on the farm.

Let's see how nearly Oklahoma farmers are providing on their own farms the grain, hay and pasture needed to maintain the livestock which are on the farms of the state, not considering the cows, poultry and horses kept in town and not considering the possibility of growing feed to be shipped to outside markets. Leading authorities on livestock feeding have set up definite standards as to the total feed needs per year of different classes of livestock. However, we must consider average conditions on cotton farms in Oklahoma and must take into consideration the fact that on most cotton farms stalk fields, straw stacks, and farm pasture will be available for the livestock and will reduce the feed actually necessary. Taking all things into consideration, it seems that the following requirements are the very minimum necessary for maintaining livestock on cotton farms in Oklahoma in a satisfactory manner. Note we say, minimum requirements.

Class of Livestock	Grain Requirements	Hay Requirements	Pasture Requirements
Horses and mules, each-----	50 bu. corn or equivalent	2 tons	1 acre
Dairy cattle, per head-----	25 bu. corn or equivalent	2 tons	2 acres
Beef cattle, per head-----	10 bu. corn or equivalent	1 ton	3 acres
Hogs, per head----	10 bu. corn or equivalent		¼ acre
Poultry, each-----	3 pk corn or equivalent		

(According to feeding standards, in feeding value, two bushels of oats are equal to one bushel of corn, six bushels of barley equal five of corn, and ten bushels of any grain sorghum equal nine bushels of corn and may be substituted on that basis in making feed calculations.)

Using these standards, the total feed needs of the livestock on the farms of Oklahoma, according to the latest dependable data, may be calculated as follows:

Feed Requirements of Livestock on Farms in Oklahoma

	Bu. Corn	Tons Hay	Acres Pasture
843,000 horses and mules...	42,150,000	1,686,000	843,000
610,000 dairy cows.....	15,250,000	1,220,000	1,220,000
1,665,000 other cattle.....	11,320,000	1,165,000	3,495,000
1,215,000 head of swine.....	12,150,000		303,750
13,023,000 head of poultry....	9,765,000		303,750
	90,635,000	4,071,000	5,861,750

To meet this need for feed for minimum maintenance requirements of livestock on the farms of Oklahoma, we produced in 1929 the quantities of the different feed crops indicated in the following table.

Grain and Hay Produced in Oklahoma 1929

	Acres Harvested	Average Yield	Total Production	Corn Equivalent
Corn - - -	3,029,000	16 bu.	48,320,000 bu.	48,320,000 bu.
Oats - - -	792,000	26 bu.	20,594,000 bu.	10,297,000 bu.
Barley - -	57,900	25 bu.	1,425,000 bu.	1,185,000 bu.
Grain Sorghums	1,384,000	15 bu.	20,483,000 bu.	18,435,000 bu.
Tame hay - -	668,000	1.31 T (11-3)	875,000 T.	
Wild hay - -	556,000	.88 T. (9-10)	499,000 T.	
Sorghum and other forage		(Estimated)	1,000,000 T.	
Acres Pasture				
(1924) -	13,000,000			
			Hay and forage 2,764,000 T.	78,237,000 bu.

By checking the total production of grain and hay against the minimum needs to maintain the livestock on the farms of the state we find that the state is actually producing over 12,000,000 bushels less grain and over a million tons less hay and forage than are needed. This means that the state needs about a million acres more land to feed and a million acres more land to hay crops, to meet the very minimum requirements of the livestock on the farms. Available data show that the state has more land in pasture than is needed, if it were distributed among all farms. However, there are thousands of farms in the state that do not have ample pasture for their livestock and much of the poorer lands could be more profitably used for pasture than for cotton. It is particularly desirable that more land be planted to leguminous crops, such as sweet clover, cowpeas, soybeans, mungbeans, etc. These crops are soil-building crops and by following a system of rotation with legumes and other crops, much of the farm land could be made fertile and productive again. No farmer should plant land to cotton in 1930 which has not yielded more than a hundred pounds of lint per acre for the past five years. Under normal conditions it is impossible to produce profitable yields of cotton from poor, gullied, worn-out land and it is an injustice for farmers and their families to expend their money, time and energy in attempting to grow cotton on such land. Such land should be planted to feed crops, turned to pasture or permitted to lie out. Eliminate the low-yielding land and you will eliminate the problem of an overproduction of cotton.

PLAN YOUR FEED PRODUCTION

The farmer who guesses at his feed needs and his production of feed will probably not produce sufficient feed for his livestock, or may produce a surplus of some feeds. It is wise to make definite advance feed calculations in accordance with needs and acre yields which may reasonably be expected. The plan below, which is based upon an imaginary farm for purposes of calculation, will illustrate a method of planning the farm operations.

It is realized that no plan will suit all farms and that each farmer must necessarily work out a plan to fit his own conditions and needs. Any farmer should be able to calculate fairly accurately the amount of grain, hay and pasture needed for the livestock on his farm. Then from his knowledge of what his land may reasonably be expected to yield per acre, he can determine the number of acres necessary to produce the required amount of feed. If he grows kafir or other grain sorghums instead of a part or all of the corn, he should substitute ten bushels of grain sorghum for nine of corn and then determine the number of acres necessary to produce the required amount of feed. If he wants to grow some oats, he can substitute two bushels of oats for one of corn and then determine the necessary acreage of oats to be grown. It should be kept in mind that the plan suggested is not just for 1930, but is such as should be adopted permanently on the farms of Oklahoma.

METHOD OF PLANNING FEED PRODUCTION

160 acre farm, five people, eight head of work stock, 12 head of cattle, eight head of hogs, and 75 head of poultry.

Feed Requirements

8 head of work stock	400 bu. corn	16 T. hay	8 acres pasture
12 head cattle	240 bu. corn	24 T. hay	24 acres pasture
8 head of hogs	80 bu. corn		2 acres pasture
75 head poultry	56 bu. corn		
	776 bu. corn	40 T. hay	34 acres pasture

Land Division

776 bu. corn, 16 bu. per acre, (state average)	48½ acres
40 T. hay, 1.6 T. per acre	25 acres
Pasture	34 acres
Potatoes	1 acre
Garden	1 acre
Orchard and lots	3 acres
Other crops	10 acres
Balance to cotton	37½ acres

We have assumed in this case that the cattle were dairy cattle. Beef cattle would require less grain. We have figured corn at the state average of 16 bushels per acre which is considerably below the average yield of good land. Where the land will yield more than sixteen bushels per acre, the acres of corn may be reduced and more land allowed for cotton and other crops. Cowpeas or soybeans may be grown in with the corn and pastured off, thus reducing the hay requirements slightly. Each farmer will necessarily work out a system to meet the requirements of his particular farm.

THE BUSINESS OF FARMING IS FIRST OF ALL PRODUCING THE LIVING.

It has been said that "The man who farms to make money will go broke, but the man who farms to make a living will make money." Certainly the first business of farming is to make a living and the most economical and surest way to provide a living on the farm is to produce it on the farm. Unless we produce the food on the farm, in large measure we and our families will go without much of the food which we need and want to eat. Unless we have milk cows to produce plenty of milk and butter throughout the year, much of the time we will go without milk and butter. Unless we grow ample vegetables and fruit and preserve enough of these for winter, much of the time we will not have vegetables and fruit to eat, because no farmer can depend upon producing products for the market and buying all of the food which he and his family want and which they need for good health. The only sure way to have a good living is to produce it on the farm. Every farm family that expects to grow cotton should first make the following provisions for the living.

1. At least one good milk cow. Two will be better.
2. At least one acre of fertile land to garden, with an additional acre of potatoes and other food crops.
3. At least one good brood sow to produce pork for the family.
4. One or more good beef animals to be butchered during the year and a sufficient quantity canned with the pressure cooker to last through the year.
5. At least fifty good hens, properly housed and fed.
6. One or more acres of orchard, properly pruned, cultivated and sprayed.
7. Provision for storing and caring for supplies of food sufficient for the winter months.
8. Bees or sorghum to produce honey or syrup for the year.

The farm family that fails to produce these on the farm will in most cases, not have them regularly and in liberal quantities.

THE SITUATION SUMMED UP

1. If the farmers of the South plant another crop of 47,000,000 acres to cotton in 1930, they are almost certain to face conditions such as we experienced in the South in 1914, 1920 and 1926.
2. No farmer should plant any land to cotton until he has first made ample provision for food for his family and feed for his livestock. Unless he produces the living on the farm, in large measure he and his family will go without much of the food which they need and want.
3. No land should be planted to cotton in 1930 which has not, on the average, yielded profitable returns for the past five years. It takes more than a hundred pounds of lint cotton per acre to pay necessary costs of production.
4. There is need for a million acres more land to grain crops and a million acres more land to hay crops in Oklahoma to produce the minimum requirements to feed the livestock on the farms of the state.
5. No farmer should produce a quality of cotton which must compete with the cotton produced by India and China. It is the duty of every farmer, every cotton buyer and every ginner to cooperate in rebuilding and holding the reputation of the United States for the production of the better staples.
6. Every farmer should seek one or more other sources of cash income and not depend too largely upon cotton for the money which he needs.
7. Every farmer should plan his farm operations from year to year so as to take care of the fertility of the soil, terrace the land if it needs it, grow legume crops, practice crop rotation, turn under all possible organic matter, use commercial fertilizers if considered profitable and reduce the cost of production of farm products by increasing the yield per acre and improving the quality of products grown.