

Jack McCullough
County Agent
McKinney, Texas

B-99

1937

Filling the Farm Storehouse



issued by
The Extension Service
Agricultural and Mechanical College of Texas and
The United States Department of Agriculture
H. H. Williamson, Director, College Station, Texas

IN EDITING this bulletin the following Extension specialists have prepared and checked with other authorities the sections listed below:

Grace I. Neely and Lula M. Dilworth, Extension specialists in foods, "Make Plans by These Standard Nutritional Needs"; E. R. Eudaly, Extension dairyman, "Every Family Needs These Dairy Products", "Raise Feed for the Dairy Cow", and "Use a Trench Silo"; Geo. P. McCarthy, Extension poultry husbandman, "Poultry Products Can Be Provided at Home"; E. M. Regenbrecht, Extension swine husbandman, "Two Hogs Will Supply the Pork and Lard for a Family of Five"; G. W. Barnes, Extension animal husbandman, "Feed One Beef Calf for Family Consumption"; W. R. Nisbet, Extension animal husbandman, "A Lamb May Be Slaughtered for Home Use"; Roy W. Snyder, Extension supervisor—specialists' work, "Horses and Mules Play an Important Part"; J. F. Rosborough, Extension horticulturist, "A Garden Is Essential in any Live-At-Home Plan", "Every Farm Should Have a Fruit Plot"; E. A. Miller, Extension agronomist, "Cereals for the Table Can be Grown at Home", "Crops and Soil Suggestions", "Plant Enough Acreage to Produce Needed Hay", and with E. R. Eudaly "Sudan and Small Grains Provide Pasture"; R. R. Reppert, Extension entomologist, "Honey and Syrup Help Provide Sweets"; and M. R. Bentley, Extension agricultural engineer, "Storage Should Receive Attention."

Filling the Farm Storehouse

Feeding the family begins a long way before that pleasant moment when happy faces look at each other across the dining table. The job begins in the fields and the feed lots, the gardens and the orchards, works its way up through the dairies, poultry houses and pantries by way of the kitchen to the table appearance of the foods.

In these days of national agricultural programs, the task of filling the farm storehouse is getting new recognition. Its importance has won for it a place in the Agricultural Conservation Program at least to the extent that no grant will be made for diverting any land from soil depleting crops if those crops are food and feed crops needed by the family.

In other words the government program for improving the condition of agriculture recognizes the family food supply as of first importance. It is likely that this recognition will have the definite effect of causing the plan for the food supply to become incorporated in the regular farm plans of all progressive farmers.

Each family will have to make its own individual plan to utilize available resources. The working out of such a plan offers all the opportunity for development of intellect, imagination, and initiative presented by any other great adventure of life. Success will mean good food and plenty of it. There will be other rewards too in the joint family effort. To aid those families who decide to step boldly out and possess their rich heritage, the findings of science and experience, there is herewith given general information to be used as a guide in making their own plans based on their existing circumstances and needs.

It costs an average family of 5 about \$600 per year for food if every member is properly nourished and all food is bought. The question is how much of this can the farm supply? From 40 to 60 per cent has been the rule on most good farms in times past. During the depression years many of the most alert farm families raised the percentage produced at home to 75 per cent and even to 90 per cent.

To do this takes approximately 25 acres of average Texas land, about \$200 worth of livestock, and the ordinary work stock, farm implements, fences, and buildings that most farms already possess. This living at home demonstration, toward which any farmer can work in a short time, calls, with a family of 5, for 2 hogs, a flock of 50 hens, 4 milk cows, 1 beef animal, and, if desired, a few sheep. Under average conditions 6 acres will be devoted to sudan grass pasture in summer and small grain pasture in fall and winter; 12 acres to corn or grain sorghums or other grain crops; 4 acres in hay and silage crops; one-half acre in garden; one-half acre in orchard; and 2 acres for such crops as sweet potatoes, melons, cane for syrup, and field peas.

Such a system will produce all the food needed for a family of 5, and all the feed required for maintaining the livestock indicated, including work stock, without any cash expense, except about \$100 for buying cans and jars, salt, sugar, coffee, tea, some flour, and spices, and a small amount for purchase of seed, livestock medicine, and incidentals. This cash will be forthcoming from sales of surplus dairy, poultry and other products available in certain seasons of the year in excess of family requirements.

Make Plans by These Standard Nutritional Needs

In planning the food to meet the family's daily nutritional needs keep these standards in mind:

Milk—daily to be used for drinking or in cooked foods.

1 qt. for each child

1 pt. for each adult

Vegetables and Fruits

Leafy, Green and Yellow—1 serving daily per person.

"Other" Vegetables—1 serving daily per person. Extra servings of leafy, green and yellow vegetables or fruits other than citrus may be substituted for these vegetables.

Potatoes or Sweet Potatoes—1 serving daily per person.

Dried Peas and Beans—3 times per week.

Citrus Fruits or Tomatoes—1 serving daily per person.

Other Fruits—1 serving daily per person.

Eggs—

Children—5 eggs per child a week

Adults—3 eggs per adult a week

—A few to be used in cooking

Meats—

Beef, Pork, Lamb, Fish, Poultry, Cheese—5 times per week.

Grains—

Cereals—1 serving daily per person

Bread—at every meal

Butter—at every meal

Sweets—1 serving daily, or twice, if they do not displace “protective foods” which are milk, eggs, citrus, fruits, tomatoes and leafy, green and yellow vegetables.

Note: By a “serving” is meant: fruit, vegetables, dried peas or beans, lean meat at least one-half cup; butter, one tablespoon; American cheese, 2 tablespoons.

Every Family Needs These Dairy Products

For each member of the family a total of 157 gallons of milk per year should be provided; of that total 91 gallons of milk per person should be provided for drinking and cooking; 50 gallons of milk are needed to provide 20 pounds of butter per person; and 16 gallons of milk are needed for cheese making. Cottage, processed cottage and Neufchatel cheeses are types suitable for home manufacture.

Two average cows producing at least 500 gallons of milk each per year will furnish an adequate supply of milk for a family of five, with a surplus for pigs and poultry.

Raise Feed For The Dairy Cow

To feed one 500 gallon cow for a year there will be needed an average of 1 acre of permanent pasture; 1 acre of temporary pasture (sudan in summer and small grain in fall and winter); 1 acre of silage crop (6 tons); $\frac{1}{2}$ acre of hay (1 ton); $\frac{1}{2}$ acre of corn (10 bushels); $\frac{1}{2}$ acre of oats (20 bushels of grain); 400 pounds of cottonseed meal or 800 pounds of cottonseed. This makes a total of $4\frac{1}{2}$ acres needed to produce the feed for an average cow on average land. Grain sorghums may be substituted for corn and oats in sections where these are not adapted.

When the cow is on pasture, the grain mixture should be made up as follows:

100 pounds of ground corn
100 pounds of ground oats
50 pounds of cottonseed meal

When the cow is not on pasture, the grain mixture should be made up as follows:

100 pounds of ground corn
100 pounds of ground oats
100 pounds of cottonseed meal

When the cow is on pasture, feed 3 pounds of the mixture for each gallon of milk produced. When not on pasture, feed 4 pounds of the grain mixture for each gallon of milk produced.

Poultry Products Can Be Provided at Home

According to the suggested food budget each person should eat 20 to 30 dozen eggs and 20 pounds of poultry meat per year. The meat may be either fresh or canned.

For a family of five persons 50 hens and 150 baby chicks are needed to provide the required supply. Housing for this flock is a 12 by 12 foot poultry house and a 10 by 10 foot brooder house with wall ventilators so that it can be used as a pullet range house in summer.

For preventing diseases, houses should be moved to fresh ground at least once a year if possible. Plow the ground near

the poultry houses at least twice each year and plant to green feed. Give the flock worm treatment in spring and fall.

The feed requirements for the 50 hens and 150 baby chicks will be approximately 3,500 pounds of grain. For the hens it is best that half of their feed be fed as scratch grain and the other half mixed in a mash of which at least 20% is a protein feed such as meat and bone meal or fish meal.

Best results can be obtained by feeding 4 to 7 pounds of grain per day to the flock. In the winter time, feed approximately one-third of the grain in the morning and two-thirds in the evening. During the late spring and summer, eliminate the morning feeding of grain and feed only in the evening. The mash should be kept before the birds at all times.

If milk is available, it can replace part of the animal protein in the ration. To supply all animal protein from milk, it will be necessary to provide at least 2 gallons daily. Oyster shell should be kept before the birds at all times in open hoppers. Supply fresh green feed; pastures of small grain in winter and sudan for the summer will be good.

Baby chick feed might well be bought ready mixed for feeding chicks up to six weeks old. After this up to laying age feed whole grain and growing mash free choice plus small amounts of milk. This mash is:

80 pounds of grain	2 pounds bone meal
5 pounds meat scrap	1 pound oyster shell
10 pounds cottonseed meal	1 pound salt

Culling and death losses will reduce the flock about 50 percent by fall. The new crop of pullets will replace those lost. Cull consistently—not in spurts—and fatten the culls to eat or can.

Two Hogs Will Supply The Pork and Lard For a Family of Five

Two hogs weighing 225 to 250 pounds each live weight will supply a family of five with the needed cured meats, sausage and lard. For most economical use these hogs should not be slaughtered at the same time. One should be slaughtered

in the fall as soon as the weather is sufficiently cold to cure meat safely and the other should be slaughtered in January or February. The cured meats should be stored in refined cottonseed oil in order to keep good quality for the whole year.

A good pig, fast fed, will reach weight for slaughter when six months old. Therefore, a pig farrowed in May that is to be slaughtered in November must be fast fed during the entire time. A pig farrowed in March must be slow fed until it reaches 100 pounds in weight and then fattened, if it is to be the right weight for November slaughter. Pigs farrowed in the late spring can also be used for January and February slaughter provided they are slow fed until they reach a weight of 100 to 150 pounds but it is more desirable to slaughter pigs that are farrowed in the late summer or early fall and then fast fed.

For fast feeding use a self-feeder or a feeding floor and supply the hogs all the grain they care to eat and in addition supply the pigs with one gallon of skim milk or two-thirds of a pound of mixed protein supplement per head per day. For slow feeding give the hogs access to good pasture and feed about 4 pounds of grain per head per day and in addition feed from one-half to three-fourths gallon of skim milk or one-third to one-half pound of protein supplement per head per day. Regardless of whether slow feeding or fast feeding is practiced, allow the pigs free access to pasture at all times and supply them with a mineral mixture consisting of two parts of bone meal and one part of salt.

To produce two 250 pound hogs for meat from weaning age to slaughter will require 30 bushels of corn, grain sorghums or other grains; 250 gallons of skim milk; 14 pounds of the bone meal and salt mixture; and plenty of pasture. If skim milk is not available about 160 pounds of a mixed protein supplement will be required.

Feed One Beef Calf for Family Consumption

The most economical method of producing a fat beef for home consumption is to feed the calf grain—oats, shelled corn or milo—before weaning. Self feed the grain in a pen that the

cow cannot enter, or feed the calf after the cow has been put out for the day.

For best quality beef, feed the calf 3 months after creep feeding and weaning. Supply at all times all the good hay that the calf will eat. Feed a protein supplement of 1 to 1½ pounds of cottonseed meal per day or use a limited amount of cottonseed, not over 2½ pounds daily. Feed the grains that are available—shelled corn, crushed ear corn, or ground milo heads—in the amount the calf will eat without scouring. In the beginning this will be about 2 pounds daily and may be increased gradually to 10 or 12 pounds. Start feeding with small amounts of cottonseed meal, cottonseed or grain, and increase gradually. Feed only good, clean feed; gentle the calf; let him have salt and plenty of clean water; shelter if possible. Be sure calf is vaccinated for blackleg.

A Lamb May Be Slaughtered For Home Use

If the lamb is not already fat on grass it will take a 3 months feeding period to put it in proper condition for slaughter which will take 120 to 150 pounds of grain, 150 pounds of hay and about 40 pounds of protein supplement.

Supply all the hay the lamb will eat, feed grain sparingly, 1/5 pound per day for the first few days, and make increases slowly. One-third pound cottonseed meal per day would improve the grain mixture. Cotton seed may be fed but should not exceed 2/3 pound per head daily. Lambs are on full feed when they are eating about 2 pounds of grain feed (including cottonseed meal) and 1 pound of hay each day. Provide plenty of clean water, salt, clean feed, and keep the water trough and feed troughs clean or the lamb will not thrive.

Horses and Mules Play an Important Part

Work stock on the farm is a part of good economy. Power is supplied by their strength and land enriched by the manure.

On the average a mule or horse will need about 60 bushels of grain and 2 tons of hay during the year. Naturally a good manager will vary the feed according to the daily work, increasing the grain during the heavy work season.

Under average conditions a horse will consume in feed about 2 per cent of his live weight each day, of which 1 per cent will be grain and 1 per cent hay. In seasons of heavy work the grain consumption will increase.

A Garden is Essential in Any Live-At-Home Plan

Plan a total planting of 700 feet of vegetables for each adult person in the family. Average yields of vegetables in areas of ample rainfall amount to a pound per foot of row space, while in areas of limited rainfall or other unfavorable growing conditions, yields may be reduced to a half pound per foot of row space or less. In the latter instance, instead of planting 700 feet of row space per person, 1,400 feet should be planted. Under ordinary conditions, one-tenth acre (21 by 21 feet) should be planted per person, or for a family of five persons, a minimum of one-half acre in vegetables should be planted.

Vegetables are classified according to the food elements which they supply, as follows:

1. Leafy, green and yellow vegetables: lettuce, cabbage, collards, spinach, mustard, turnip tops, swiss chard, endive, kale, english peas, green string beans, yellow string beans, green peppers, carrots, yellow squash, asparagus, pumpkin, and yellow turnips. Plant a total of 100 feet of row space of this type of vegetable per person in areas of ample rainfall; plant a total of 200 feet of row space per person in areas of limited rainfall.

2. Starchy vegetables: Irish and sweet potatoes. Plant a total of 200 feet of row space per person in areas of ample rainfall; plant a total of 400 feet of row space per person in areas of limited rainfall.

3. Tomatoes: plant 100 feet of row space per person in areas of ample rainfall; plant 200 feet of row space per person in areas of limited rainfall.

4. Garden fruits: these may be substituted for any fruit except citrus or tomatoes; they include watermelons, cantaloupes, and rhubarb. They may be planted in the garden or in the field. About three rhubarb plants will be needed per person.

5. Other vegetables: beets, shelled fresh beans, cauliflower, celery, corn, cucumbers, onions, okra, radishes, parsnips, white squash, white rutabagas, white turnips. Plant a total of 200 feet of row space per person, exclusive of corn, in areas of ample rainfall; plant a total of 400 feet of row space per person in areas of limited rainfall. For corn, see "cereals for the table."

6. Dried mature peas and beans. Plant about 25 feet of row space per person. Plant 100 feet of row space of peas or beans to produce about 5 pounds of dried peas or beans.

7. Some herbs should be planted for seasoning.

Every Farm Should Have a Fruit Plot

Each person should have 300 pounds of fruit per year. This would amount to about 7 servings per week. To obtain this quantity of fruit, the farm fruit plot should include the following plantings per person.

South Texas: 4 citrus trees, 2 fig trees, 4 grape vines, 12 dewberry or blackberry plants.

Central, East and North Texas: 6 peach trees, 2 plum trees, 6 grape vines, 16 dewberry or blackberry plants. For nuts plant 3 pecan trees per family.

West and Northwest Texas: 6 cherry-plum trees, 8 grape vines, 20 dewberry or blackberry plants.

In determining the yield of various trees or vines in pounds of fruit the following table may be used as a basis:

KIND OF FRUIT	AVERAGE YIELD PER TREE	WEIGHT IN POUNDS
Peaches	$\frac{1}{2}$ bu.	24 lbs.
Plums	$\frac{1}{2}$ bu.	28 lbs.
Citrus	1 bu.	50 lbs.
Apples	2 bu.	96 lbs.
Pears	2 bu.	100 lbs.
Cherries	$\frac{1}{2}$ bu.	28 lbs.
Figs	3 gals	18 lbs.
Grapes	1 bu.	12 lbs.
Berries	1 qt.	1 $\frac{1}{2}$ lbs.

In setting the orchard, the trees should be spaced as follows: peach, plum, cherry-plum, citrus, and fig, 25 feet apart; apples and pears, 40 feet apart; grape vines, 12 feet apart; berries, 3 feet apart. In areas where the growing of fruit is

impractical, or where the orchard has not yet come into production, an additional planting of tomatoes may be substituted for the quantity of fruit needed.

Cereals for the Table Can Be Grown at Home

There should be provided 50 pounds of corn meal and 20 pints of canned corn per person. The corn meal will require one bushel of shelled corn and the canned corn about one bushel of roasting ears. To produce these amounts will require 600 feet of row space for each on land that will yield 25 bushels of corn per acre.

Surcropper sugar and honey june are well adapted varieties of sweet corn which have been developed especially for Texas by the Agricultural Experiment Station.

Only sound ears of corn free from weevils, smut, or other damage should be used for meal or hominy. The tip ends should be removed before shelling. After shelling, the corn should be allowed to fall through the wind from one container to another to remove any light, damaged kernels, particles of cob or trash.

Wheat should be free from smut and well cleaned before being milled into flour.

Honey and Syrup Help Provide Sweets

Of the 70 pounds of sweets required for one person for one year, 10 pounds may well come from honey and syrup. Where nectar producing plants are available and in cases where some member of the family has a natural inclination for bee-keeping, from 2 to 5 colonies of bees may be profitably kept. In such locations a yearly average of 30 pounds of honey per colony should be produced. The cost of equipment will be about \$5 per colony.

Storage Should Receive Attention

With the production of an ample supply of food crops, some thought should be given before harvest time to storage places. This applies particularly to semi-perishable products, such as potatoes, cabbages, onions, and many others. To make

storage of such products reasonably safe, a storage place should be provided that is well ventilated and dry, and insulated against excessive heat or cold. Many farms have such places, but some do not. Storage places need not be expensive; they may be built very inexpensively where native materials, such as logs, or rock, or sand and gravel for concrete, or adobe are available. Blue print plans for storage places made of logs, of lumber, and of concrete, are listed at the end of this publication. The ventilated pantry is suggested as a suitable indoor storage place for canned products and small quantities of fresh products.

Crops and Soil Suggestions

In those regions where oats are adapted, it is a good policy to grow oats for grain in addition to corn and grain sorghum in order to be able to balance the dairy, beef, and poultry rations properly with home grown feed. Oats should replace corn in the horse ration provided oats can be raised as cheaply as corn or grain sorghum.

In growing feed crops, it is important to maintain or increase the soil fertility by a good crop rotation, including such legumes as are adapted, and by terracing and contouring as needed. All available manure may profitably be utilized on the land for the production of feed crops. On sandy soil, in the eastern half of Texas commercial fertilizers may be used in addition to manure in order to increase the yields.

Plant Enough Acreage to Produce Needed Hay

The yearly hay requirement for livestock is given in the table on page 14. The Texas average yield of two tons per acre of alfalfa and sorghum hay and one ton per acre of other legume and grass hays may be used as a guide in determining the acreage required. The yield will of course vary on different farms and sections of the state, depending upon the fertility of the soil and the amount of moisture available. Some good hay crops are sorghum, alfalfa, cow peas, soy beans, sweet clover, sudan grass and native prairie grass.

A common mistake in hay making is to allow the plant to become too mature before harvesting, thereby increasing the crude fiber and lowering the vitamin and protein content of the hay. Sorghum should be harvested for hay when the

seed is maturing, alfalfa when about one-fourth in bloom, cow peas when the first pods are maturing, soy beans when the pods begin to form and sudan grass when the plants begin to head.

Use a Trench Silo

For the 3 tons of silage which are required per cow, a trench silo can be used. Good silage crops are grain sorghums, especially hegari; red top or other adapted varieties of sorghums may be used. Corn is an excellent silage crop.

It is also a good policy to have at least a year's surplus of silage on hand in case of crop failure. For this purpose another silo of needed dimensions may be provided, or a silo large enough to carry 2 years' silage may be dug. To supply an adequate amount of silage, it is best to plant 1 acre per cow of any of these crops and put up a 2 year's supply.

Feed Required for Farm Livestock and Poultry

Product	Yearly Requirements							Total
	50 Laying Hens	One Dairy Cow	One Beef Calf	One Hog	One Lamb	One Horse or Mule		
*Grain lbs.	3,500	1,760	1,500	840	150	3,400	11,150	
**Protein supplement lbs.	200		250	80	40		570	
Cotton seed		800						
Cotton seed meal		400		or				
Tankage								
Meat scrap and bone meal								
Fish meal								
Skim milk gals.	365			125			490	
Minerals lbs.								
Salt		50	25		10	50	135	
Oyster shell	50						50	
Hay tons		1	½		¾/40	2	3 ²³ /40	
Silage tons		3					3	
Improved pasture acres	½	2	½	⅛	¼	2	5 ⅜	

*Grains such as corn, grain sorghum, wheat, oats, and barley.

**By protein supplement is meant a feed rich in protein to supplement the carbohydrate feeds such as corn or grain sorghums for the livestock. The protein supplement for dairy cows may be cottonseed meal, peanut meal, soybean meal, and so forth. For poultry the protein supplement may be skim milk or meat scraps.

Sudan and Small Grains Provide Pasture

Six acres of pasture sown to sudan grass in spring should give ample grazing from June to October for cows and calves and work stock, except during the usual mid-summer drouth. This will also furnish enough for the chickens, and if fenced hog-proof, will take care of the hogs, too. Sow sudan grass in 30 inch rows at the rate of 10 pounds of seed per acre.

The same 6 acres may be sown to small grain or rye grass in the fall as soon as the sudan grazing plays out, to make a winter pasture. Italian rye grass sown broadcast at the rate of 20 pounds per acre, or 2 bushels of oats per acre, or 1 bushel of wheat or 1½ bushels of barley, or 1 bushel of rye are recommended. Italian rye grass is not so apt to winter kill as the small grains. Mixed winter pastures of Italian rye grass and small grains will provide better grazing and a longer grazing period. On an average such pastures give good grazing for 2 or 3 months.

The ideal to work toward is a permanent pasture composed of improved grasses and clovers in addition to native grass sod. Such a pasture gives grazing nearly every month in the year and saves large amounts of feed. Where a permanent pasture is used the acreage of temporary pasture given above may be proportionately reduced. All land should be terraced or contoured for soil and water conservation and use of barnyard fertilizer is recommended.

Help Can Be Secured

Needed quantities of food and feed for providing an abundant home food supply have been indicated in the foregoing pages. But management of the land, the livestock and labor needed to produce such abundance has only been hinted at here and there. Development of that management will be the family problem. Success will spell family advancement along the lines of "profit, comfort, culture, influence, and power."

Many sources of information are available to those seeking to shorten the "trial and error" road and enter at once into their inheritance of proven scientific knowledge. Extension publications listed on the back of this bulletin are sources which may be secured from the offices of county Extension agents. Counsel and trained guidance may be had at these offices also.

Order These Publications From the Extension Service

Dairying:	B-69	Feeding and Care of the Dairy Herd
Pastures:	B-82	Pastures
Lambs:	C-96	Lamb Feeding
Beef:	B-78	Feeding Beef Calves
	B-79	Killing and Cutting Beef on the Farm
Pork:	B-94	Killing and Curing Pork
	B-98	Successful Hog Feeding
Poultry:	B-83	Growing Baby Chicks
	C-33	Feeding for Egg Production
	C-69	Common Worms in Poultry
Gardens:	B-70	Gardening
	B-92	Subirrigation for Gardens
	C-59	Fall Gardens
	C-62	Tomato Growing in Texas
	C-110	Hotbeds for Home Gardens
Orchards:	B-73	Home Orchards
Food Preservation	C-76	Feeding the Family the 4-H Pantry Way
	C-55	Canning Meat in the Home
	B-85	Canning Fruits and Vegetables
	C-108	Canning Budget
	B-88	Preparation of Fowls for Home and Market
Food Preparation	C-111	Daily Meal Planning Chart
	C-116	Vegetable Cookery
Storage:	MS-133	Log Houses for Storage
	MS-345	The Texas Ventilated Pantry
	BP-62	Concrete Cellar Blue Print Plan
	BP-187	Vegetable Storage House—Smoke House
	BP-202	Smoke House—Storage House
	BP-208	Ventilated Pantry Blue Print Plan
	BP-224	Ventilating a Cellar and Getting a Dry Cellar
	BP-165	4-H Pantry
Silos:	B-84	Trench Silos
Grains:	L-7	Important Steps in Growing Corn
	L-8	Important Steps in Growing Sorghums
Grasses:	L-9	Important Steps in Growing Sudan Grass
	L-10	Important Steps in Growing Sweet Clover
Legumes:	L-11	Important Steps in Growing Peanuts
	L-12	Important Steps in Growing Soy Beans
	L-13	Important Steps in Growing Cow Peas

Distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914.
Cooperative Extension Work in Agriculture and Home Economics, Agricultural and Mechanical College of Texas and United States Department of Agriculture Cooperating.
100M—10-37