

## WARCOTTON CROPS

Methods of Control That Should Increase Yield Without Enlarging Acreage.

### PLAN GIVEN BY GOVERNMENT

Some of Measures Advocated Are Not New in Principle and Have Stood Test of Years—Check Ravages of Weevil.

(Prepared by the United States Department of Agriculture.)

Destruction of weevils in the fall by plowing under or by uprooting and burning the plants. Destruction in their hibernating places of weevils that survive the first operation. Locating cotton fields where heavy infestation may be avoided. Early and thorough preparation of the land to obtain an early crop. This means fall plowing and winter working of the land, or the use of cover crops. Determination by experiments on local soils of best methods of spacing, both between rows and between plants in the row. Insuring an early crop by early planting of early-maturing varieties and by fertilizing where necessary.

These are the main points of the formula set out in Farmers' Bulletin 848, "The Boll Weevil Problem," by which larger war crops of American cotton can be grown without increasing, and possibly by decreasing, the present acreage in this crop.

Some of the measures are not new in principle. They are old methods which, modified and improved, have stood the test of years. They represent plain and practical farming methods, and, although they may appear less attractive than many of the fanciful panaceas which spring up from time to time in cotton-growing sections, they are sound and reliable. Individually, they are effective in checking the ravages of the weevils and collectively they offer a practical system which, if followed carefully, will insure a crop in spite of this pest. The system may have to undergo slight modifications to meet local conditions. For example, in some localities hand picking of weevils and infested squares at times may prove a profitable measure.

#### Problem of Control.

The case cannot be rested, however, with the announcement of this anti-boll weevil system. The problem of boll weevil control becomes more serious as the pest continues its invasion of the cotton belt. Eastern planters must expect a more serious problem than that which confronted the farmers of Texas, because the humid conditions in the East are more favorable to the life of the weevils. Better means of control must be devised for the region that is becoming invaded, and, if possible, other means must be developed to reduce the enormous loss that is suffered, especially during unfavorable seasons in Texas. The principal work of the bureau of entomology at this time is in attempting to devise means for this requisite additional control.

Much has been learned about the habits of the boll weevil. Many seemingly excellent theories of control have fallen before this newly discovered information. A few may be mentioned: Repellants do not repel the boll weevil. Sprays innumerable have been tried unsuccessfully. Nor are the weevils attracted to light. Lantern traps have been hung in cotton fields by many farmers, but only occasional stragglers are caught in this way, the specialists learn.

#### Machines Are Injurious.

Machines employing suction and jarring devices, designed to pick weevils and infested squares or to shake the weevils to the ground, have proved in-

jurious to the plants and are not sufficiently attractive to pay for the cost of operation. Mechanical ingenuity is needed, however, the specialists point out, especially in developing effective machinery for aiding in the destruction of weevils in the fall and also for a better cultivation of the crop.

It is estimated that boll weevils now cause to the cotton industry a loss of 400,000 bales of cotton annually. Although farmers in older regions, in many cases, are increasing their production, there is loss in the newly infested regions which offsets that gain. A conservative estimate shows that since the weevil has invaded this country it has caused a loss of 4,550,000 bales of cotton, with a value of about \$250,000,000.

The figures which have been cited show clearly the enormous reduction in cotton production which the boll weevil causes.

In order to make the picture complete, however, it is necessary to call attention to the effect the weevil has on the production of crops other than cotton. Wherever the insect invades a region, diversification of crops and animal husbandry receive a powerful impetus. This is shown, for instance, in the state of Mississippi. For many years preceding the advent of the boll weevil, namely 1904-1908, the average value of all crops was \$116,783,104. For the boll weevil years, 1909-1913, the average was \$132,031,800. The loss in cotton production was more than offset by the increased planting of corn, forage and other crops.

#### General Account of Problem.

The bulletin mentioned above, which will be sent to anyone on request, contains a general account of the boll weevil problem. It deals with the history of the insect in the United States, the damage it has done in different regions, the reasons for local variations in damage, the indications for the future, the habits of the weevil as far as they are related to control measures, and ways of reducing the injury it causes by methods which have been tested in many experimental fields and by large numbers of practical planters.

### MATERIAL FOR WEANING PIGS

Concentrates That Are Rich in Muscle and Bone-Making Essentials Are Necessary.

(Clemson College Bulletin.)

Weaned pigs need good concentrates that are rich in muscle and bone-making material to insure thrifty development. Accustom them to their feed gradually, as overfeeding will readily produce scouring. From ten to twelve days are essential in getting young pigs adjusted to the change. However, they should be fed lightly at least three times daily during this time.

The following rations are good for young pigs: (1) Skim milk and wheat middlings. (2) One part ground grain of some kind to two parts wheat middlings or rice meal. Ground oats and rice meal make a splendid mixture. Feed as indicated above with skim milk.

### CONVENIENT PLACE FOR SILO

Should Be Located Outside Rather Than Inside of Barn—Allow Space for Feed Room.

In general the silo should be located outside rather than inside the barn. Place it a few feet away from the barn so that a small feed room may be built between. This arrangement not only provides a convenient place for the silage cart but also a means of separating the silo from the milking barn where silage odors are undesirable.

### MILK RECORD IS BENEFICIAL

Farmer Who Wishes to Carry on Work in Businesslike Way Will Keep Tab on His Cows.

Any farmer who is making a specialty of milk production and wishes to carry on his work in a businesslike way will keep milk records, individual performance records for each cow in the herd, says John M. Scott of the University of Florida experiment station.

## DAIRY

### GOOD BUTTER-MAKING RULES

Best Churning Temperature Is 58 Degrees on Ordinary Thermometer—Care for Cream.

(Clemson College Bulletin.)

Cream is made up of little fat globules floating in milk. In making butter the fat globules are brought together into a mass and the milk is removed as buttermilk. These fat globules will stick better when they are just the right temperature than they will if either too warm or too cold. A good temperature for churning is 58 degrees on an ordinary thermometer. When the cream is the right sourness it churns better than when sweet or too sour. The cream should be kept at 50 degrees or lower till the day before churning. Then warm it up to 70 degrees, or room heat, which will bring about the souring by the next day.

When the barrel churn is used, allow gas to escape every few minutes at first. When the butter begins to come keep a close watch and stop churning when the butter granules are the size of wheat kernels. Draw off the buttermilk and wash in the churn repeatedly with cold water till the buttermilk is all removed. Then remove the butter from churn and work it with a paddle. Add an ounce of salt per pound of butter.

### MANNER OF HANDLING SILAGE

When Time for Feeding Top Layer, Which Has Molded, Should Be Removed—Heap Top Level.

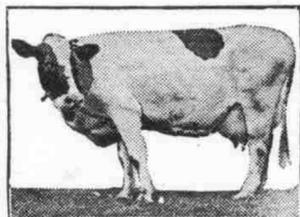
(Clemson College Bulletin.)

When the time comes for feeding silage the top layer, which will be found to be molded, should be removed. The molded part usually extends for several inches below the surface. At least two inches of silage should be fed each day in order to prevent the formation of the mold. The top of the silage should be kept level so as to expose the smallest surface possible to the air. Only enough silage for one feeding should be put out, as it soon dries out if not fed at once.

### ROUGHAGE OF HIGH QUALITY

Average New York Cow Credited With \$66.09 Yearly Income—Scrub Cows Responsible.

Success in dairying is based on the production of high quality roughage. The truth of this basic principle of dairy farm management finds support in estimates recently made by the New York State college of the average dairy cow's product in that state. The average New York cow is credited with only \$66.09 total income yearly. The cost of maintaining her is estimated at \$61.85, not including the cost of labor. The difference amounting to only \$4.25 a cow, would give to the man who



Splendid Type for Milk.

cared for 20 cows a yearly wage of \$85 which is less than the lowest wage paid to ordinary farm labor. Scrub cows are largely responsible, it is said, for this poor showing in New York and the college advises that they be weeded out if dairy herds are to be profitable to the farmer. These herds may be improved greatly by better breeding methods and by eliminating the culls. Behind the cows lies the farm on which they are kept. If the farm is not properly managed, the cows are laboring under a severe handicap.

### FIRST FEED FOR YOUNG CALF

Skim Milk Is Given Soon as Practicable and Continued Until Animal Is Six Months Old.

At first the calf is fed whole milk, the quantity being gradually increased. Skim milk is substituted as soon as practicable and, if cheap, is continued until the calf is six months old. Ordinarily the maximum quantity of skim milk that can be fed economically is 20 pounds a day. When the calf is two weeks old, grain and bright, clean hay should be offered; the quantity fed should be increased as the calf's appetite demands.

### COMMON CAUSES OF SCOURS

Overfeeding, Milk That is Cold or Sour, Dirty Pails, Troughs or Stalls Are Blamed.

Indigestion is the cause of common scours. This generally occurs when the calf is from two weeks to a month old. Prevention is the best remedy. The common causes of indigestion are overfeeding, feeding milk that is cold or sour, feeding sweet milk one meal and sour the next, dirty pails, troughs or stalls.

## LIVE STOCK

### RATIONS FOR ORPHAN COLTS

Bottle and Nipple Will Be Found Cheapest and Most Satisfactory Means of Giving Milk.

Raising orphan colts is a hard task which requires time and patience. Cow's milk is the usual substitute for mare's milk. Allowance must be made for the fact that cow's milk is lower in per cent of protein, fat, and ash than mare's milk, while the latter is lower in per cent of water and milk sugar.

At first a bottle and nipple probably will be found the cheapest and most satisfactory means of inducing the colt to take the milk. The milk should always be warmed to body temperature before feeding.

Add enough warm water to a tablespoonful of sugar to dissolve it, then add from three to five tablespoonfuls of lime water and enough milk to make a pint. Feed one-fourth of this mixture every hour for a few days, gradually lengthening the intervals and increasing the amount given at a feed as the colt grows older.

When the colt is three or four weeks old the sugar in the milk may be discontinued. At three months the colt should be put on a ration of all the sweet milk it will drink three times a day.

If the colt scours, cut down on the amount of milk and give two to four ounces of a mixture of two parts castor oil to one part sweet oil.

### WORKING HORSE IN SUMMER

Large Number of Animals Lost Each Year Through Lack of Care and From Excessive Heat.

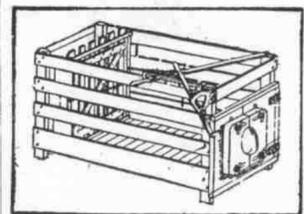
It no doubt would be one of the greatest surprises that we have had for some time, were we to realize the large number of horses that are lost each year from the lack of care and from the heat; the time is here again when we must watch our horses carefully so that they may work safely and to the best advantage for us during the long hot days of summer.

The horse that will stand the hot weather well is the one that has been well groomed and cared for, you must feed your horses well if you want them to work well and if you want to get the most from your feed you must keep them clean and comfortable. The horse that is working hard during the hot weather should be watered at least four or five times each day, and every hour or hour and a half would be still better.

### RACK FOR STOCK OPERATIONS

Sometimes Difficult and Lengthy Because of Lack of Secure Place to Hold Animals.

Performing needed operations on live stock oftentimes is rendered a difficult and lengthy job because of the lack of a rack in which the animal can be securely held. Here is one which looks rather complex but which will keep the animal where he can't get away to save himself, hard as he may try. The animal is driven into



Rack for Stock.

the rack. Behind him one door swings to, preventing him from backing out. In front another door swings to against the left side of the neck and another slides in against the right side. The lever is locked there and the stock is in the stocks, for all the world like an evildoer in ancient times. Once you've got the animal in that position you are at liberty to do your worst. He can't do anything to stop you.—Farming Business.

### SORE MOUTH IN YOUNG PIGS

Where Disease Has Advanced to Any Great Extent, Animal Should Be Destroyed—Burn Carcass.

(By I. E. NEWSOM, Colorado Agricultural College, Fort Collins, Colo.)

Watch the little pigs for sore mouth. If ulcers are found isolate the litter and treat the affected pigs. Tincture of iodine on a cotton swab used daily will be valuable. If the disease is far advanced the pig should be destroyed and the carcass burned.

### MANAGEMENT OF YOUNG COLT

Teach It to Eat Grain and Alfalfa or Clover Soon as Possible—Allow Access to Grass.

As soon as possible teach the young colt to eat grain and alfalfa or clover, and allow it access to grass. Crushed oats and a little bran make the best grain feed, but if these are not available substitute crushed corn and bran in equal parts by bulk with a little linseed meal.

## UGH! CALOMEL MAKES YOU SICK! CLEAN LIVER AND BOWELS MY WAY

Just Once! Try "Dodson's Liver Tone" When Bilious, Constipated, Headachy—Don't Lose a Day's Work.

Live up your sluggish liver! Feel fine and cheerful; make your work a pleasure; be vigorous and full of ambition. But take no nasty, dangerous calomel, because it makes you sick and you may lose a day's work. Calomel is mercury or quicksilver, which causes necrosis of the bones. Calomel crashes into your bile like dynamite, breaking it up. That's when you feel that awful nausea and cramping. Listen to me! If you want to enjoy the nicest, gentlest liver and bowel cleansing you ever experienced just take a spoonful of harmless Dodson's Liver Tone. Your druggist or dealer sells you a 50 cent bottle of Dodson's Liver Tone under my personal name. back guarantee that each spoonful will clean your sluggish liver better than a dose of nasty calomel and that it won't make you sick. Dodson's Liver Tone is real liver medicine. You'll know it next morning, because you will wake up feeling fine, your liver will be working, your headache and dizziness gone, your stomach will be sweet and your bowels regular. Dodson's Liver Tone is entirely vegetable, therefore harmless, cannot salivate. Give it to your children. Millions of people are using Dodson's Liver Tone instead of dangerous calomel now. Your druggist will tell you that the sale of calomel is almost stopped entirely here.—Adv.



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FRESH - CRISP - WHOLESOME - DELICIOUS  
THE SANITARY METHODS APPLIED IN THE MAKING OF THESE BISCUITS MAKE THEM THE STANDARD OF EXCELLENCE  
Your Dealer has them, or if not he should. Ask him or write us giving his name.  
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**Carter's Little Liver Pills**  
Make you feel the joy of living. It is impossible to be happy or feel good when you are CONSTIPATED  
This old remedy will set you right over night.  
Genuine bears signature  
Usually Need Iron in the Blood. Try CARTER'S IRON PILLS

**PALLID PEOPLE**  
Comparisons.  
"Do you remember in your days of adventure the story you told me about the trouble you had in one voyage to dodge a menacing shark?"  
"Yes, but that's nothing to the trouble I have to dodge my wife when she wants money for shopping."  
How's This?  
We offer \$100.00 for any case of catarrh that cannot be cured by HALL'S CATARRH MEDICINE. HALL'S CATARRH MEDICINE is taken internally and acts through the Blood on the Mucous Surfaces of the System.  
Sold by druggists for over forty years. Price 75c. Testimonials free.  
P. J. Cheney & Co., Toledo, Ohio.

**Somewhat Hunched.**  
A marriage broker brought an assistant along to a conference about a bride. The assistant was to confirm his assertions.  
"She is well made, like a pine tree," said the agent.  
"Like a pine tree," repeated the assistant.  
"She is cultured beyond words," "Wonderfully cultured," came the echo.  
"However, one thing is true," confessed the broker, "she has a slight hunch on her back."  
"And what a hunch!" confirmed the assistant.

**Want Good Marksmen.**  
At the time of the Spanish-American war an expert rifle shot was refused enlistment as a sharpshooter on the ground that good marksmanship is of no advantage on the field of battle. There are still some military authorities who believe this to be the case. They point out that when the distance is not accurately known, the good rifleman will be sure to miss, while a volley from poor marksmen will cover a large area and score some hits. Nevertheless, the policy is now to encourage marksmanship by every possible means.

**Backache**  
Yager's Liniment is excellent for any kind of pain or congestion. It quickly relieves backache and rheumatic pains, and is a splendid remedy for Neuralgia, Sciatica, chest pains, sprains, strains, swellings and enlargements.  
Keep a bottle in your home for emergencies—you never can tell when you will require something of the sort.  
35c Per Bottle AT ALL DEALERS  
Each bottle contains more than the usual 50 cent bottle of liniment.

**YAGER'S LINIMENT**  
RELIEVES PAIN  
GILBERT BROS. & CO.  
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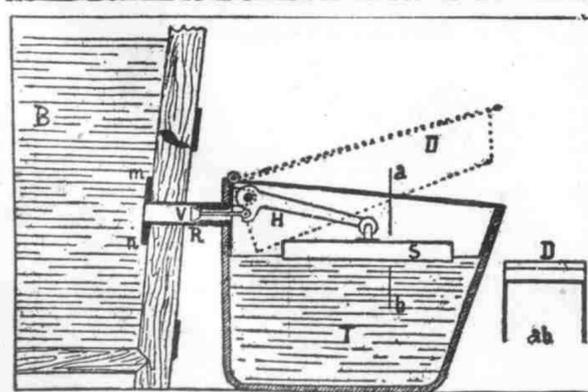
**WINTERSMITH'S CHILL TONIC**  
Sold for 47 years. For Malaria, Chills and Fever. Also a Fine General Strengthening Tonic.

**TEACHERS WANTED**  
SPECIAL ENROLLMENT  
(1) Men for town and country schools, \$75 to \$100; (2) Ladies combining music and common school; (3) Grade and high school. Can place all qualified teachers. Unprecedented demand. Write today. Special enrollment.  
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**People eat Grape-Nuts because they like it and they know it's good for them**  
Concrete is Preferable.  
Steel is going up, and concrete, as a result is coming into wider use. Railway bridges, for example, which used always to be of steel, are now often of concrete. A beautiful concrete railway bridge is being built across the James river at Richmond, Va., and it is much prettier than a steel bridge. For like reasons, concrete is replacing wood in mining structural works where it has the great advantage of being waterproof.  
A Good Word for Adam.  
A Tommy, writing home from the Garden of Eden, says: "I think it's a rotten hole, and I don't blame Adam for getting thrown out."  
No man is so poor that he cannot afford to pay somebody a compliment now and then.

**After the Merine is for Tired Eyes.**  
Movies Red Eyes—Sore Eyes—Granulated Eyelids, Itchy—Refreshes—Restores. Merine is a Favorite Treatment for Eyes that feel dry and smart. Give your eyes as much of your loving care as your teeth and with the same frequency.  
CARE FOR THEM. YOU CANNOT BUY NEW EYES!  
Sold at Drug or Optical Stores or by Mail. Ask Merine Eye Remedy Co., Chicago, for Free Book.

### CONVENIENT DRINKING TROUGH FOR SWINE



WATER FORCED INTO TANK AUTOMATICALLY.

A simple form of automatic drinking trough for pigs is illustrated above. The trough T, is provided with a cover D under which the float S is situated. The lever F, connects the float with the valve V. When the trough is used the float sinks, and by means of the lever pushes the valve open so that the water from the tank or water pipe B can flow into the trough through the pipe R; mn is a flange. To the right is illustrated a section through the cover along the line ab. The cover D is necessary to prevent the animals touching the float and attached parts with their snouts.