

## CHEAP FEED FOR WINTERING COWS

Experts Favor Corn Silage and Wheat Straw With Hay or Cottonseed Meal.

### EXPENSE OF RAISING CALVES

Experiments Conducted in Blue-Grass Regions of Appalachian Mountains in West Virginia—Rations Used for Cattle.

(Prepared by the U. S. Department of Agriculture.)

Corn silage and wheat straw with either mixed hay, soy-bean hay or cottonseed meal is a much cheaper ration for wintering beef-breeding cows than shock corn, mixed hay and wheat straw as tried out in feeding experiments recently carried on by E. W. Sheets and R. H. Tucker of the bureau of animal industry, and described in Department Bulletin 1024, "Feeding Experiments With Grade Beef Cows Raising Calves," which has just been issued by the United States Department of Agriculture. The work described in the bulletin has to do with the advantages of certain practices, the economy of a number of rations and the cost of raising calves to weaning age. It applies to the blue-grass region of the Appalachian mountains, a region that furnishes most of the grass-finished beef for the Eastern markets.

**Conditions Similar in Other States.**  
The farm on which the feeding was done is in the southeastern part of West Virginia, but the conditions there are similar to those in parts of Pennsylvania, Ohio, Virginia, North Carolina, Georgia, Kentucky and Tennessee. The conclusions also apply in part to other nearby regions.

The rations used for the four lots of cows were: Corn silage, mixed hay and wheat straw; corn silage, soy-bean hay and wheat straw; corn silage, cottonseed meal and wheat straw; and shock corn, mixed hay and wheat straw. As mentioned in the first paragraph, corn silage and wheat straw, with either mixed hay, soy-bean hay or cottonseed meal, is a cheaper ration than shock corn, mixed hay and wheat straw for wintering beef cows. As the cows fed on the mixed hay and soy-bean rations produced a larger calf crop than those fed the cottonseed meal, the average cost per head of raising their calves was practically 6 per cent less. As sources of protein, mixed hay and soy-bean hay, where they are grown successfully, have additional advantages in that they can be raised on the farm, while cottonseed meal must be purchased.

**Cost of Raising Calves.**  
Actual costs of raising calves vary with the time and locality, but by a



Cattle on West Virginia Pasture.

study of the tables in this bulletin any farmer in this blue-grass region may determine with considerable accuracy what it will cost him to grow feeder calves to the weaning age. The bulletin should be studied in connection with Department Bulletin 1042, "Effect of Winter Rations on Pasture Gains of Calves." These bulletins may be obtained by addressing the Department of Agriculture at Washington.

### CLOVER BEST FOR ROTATION

Good Plan to Keep Soil Supplied With Necessary Humus—Also Furnishes Cash Crop.

A two-year rotation of wheat, clover pasture and back to wheat keeps the soil supplied with humus and nitrogen. A three-year rotation may be of wheat, clover, pasture, corn. Clover pasture also keeps the land in good condition and returns a cash crop two years out of three. If a seed crop of clover is harvested, then each crop in this rotation becomes a cash money crop. In addition to the regular crop profits, we have the pasture, and the soil improvement as extras.

### SELECT VEGETABLE VARIETY

Should Be of Highest Quality, Adapted to Soil and Region and Disease Resistant.

The gardener should choose the vegetable variety of highest quality that will mature within his season, be productive, adapted to his soil, resistant to disease, and have an attractive appearance when ready for the table. The list to choose from is long and the gardener should, if possible, be governed by his own or his neighbors' experiences.

## SOLVING PROBLEM OF PROFITABLE ALFALFA

Of Advantage to Market Roughage Through Stock.

Suggested to Farmer That He Discard Practice of Marketing His Hay and Feed It to Good Grade of Dairy Cattle.

(Prepared by the United States Department of Agriculture.)

Farmers on some of the reclamation projects where alfalfa hay is a cash crop will find it to their advantage to change their practice and market this roughage through live stock, says the office of western irrigation agriculture of the United States Department of Agriculture. On the Newlands project in Nevada the recent prices for alfalfa hay have been \$9 to \$9.50 a ton f. o. b. cars, which nets the farmers about \$5 or \$6 a ton at the stack. Although these prices are considered fairly good at present, figures collected recently on the cost of production go to show that when the farmer is unable to get more than



Cutting Alfalfa.

\$6 a ton at the stack there is a net loss. Indications are that \$7 a ton is nearer the cost of production, and this does not include any labor income for the farmer.

In order that the farmer may make a fair income on these alfalfa lands, it is suggested that he discard the practice of shipping off his hay and start feeding it to a good grade of dairy cows or to some other kind of live stock, particularly cattle and sheep.

Many farmers in this section have already demonstrated that live stock will solve the problem of making alfalfa profitable. The use of live stock keeps up the fertility of the soil and provides concentrated products that do not have to bear such heavy freight costs.

### BENEFITS IN GROWING SEEDS

One Must Be Plant Expert to Be Successful and Vast Amount of Labor Is Required.

Prof. Paul Work of Cornell, speaking on better seeds and how to obtain them, said there were many advantages in growing seed. One knows the percentage of his own seed, and if he grows his own seed and does it well he can turn a profit from the sale of the surplus; but you have got to be a plant expert and it requires a vast amount of labor and care to grow good seeds. It was his opinion that the bulk of the seeds would come from seedsmen; that men in the seed business are spending thousands of dollars to get good seed, while others were giving the matter of quality little attention, preferring to sell the cheaper seed regardless of quality.

### FIRST CULTIVATION OF CORN

As Soon as Plants Are Above Surface Land Should Be Stirred—Deeper Tillage Permitted.

Much will depend upon early cultivation of corn. Here is where "a stitch in time saves nine." As soon as the plants are above the surface the land should be stirred, usually, unless no rain has fallen do not fall to start the cultivators as soon as you can tell the rows by the young plants. If no heavy rains have come since planting it might be well to wait a while for a rain.

The first cultivation of corn will permit deeper tillage than later when the brace roots develop. But care must be taken not to "throw much dirt" as the plants are easily covered and injured by the freshly plowed soil.

### FIRM SEEDBED IS NECESSARY

To Hasten Germination of Grass Seed Field Should Be Rolled After Harrowing.

A firm seedbed is necessary to hasten germination of grass seed. The field should be dragged or rolled after disking and harrowing in order that the subsurface be firm and compact. The surface should be left in a mellow condition but not smooth as it may bake and become crusted before the seed germinates.

### PREPARE SOIL FOR ALFALFA

Land Must Be Well Drained and Sweet—Limestone Will Help in Getting Stand.

Alfalfa, like persons, is particular about its living quarters and in order to thrive must have a dry home or well-drained land. The land must be sweet and limestone will help in preparing the field. Inoculation of the soil gives the roots the right start to prepare nitrogen, and fertility makes the plant strong and vigorous.

# DAIRY

## COW-TESTING ASSOCIATIONS

Small Group of Michigan Farmers First Entered Upon Experiment Considered Doubtful.

(Prepared by the United States Department of Agriculture.)

Fifteen years ago a small group of farmers in Michigan entered upon what many of them probably considered a very doubtful experiment. It was the organization of an association for testing their cows, in respect to how much feed they ate and how much milk they gave; an association such as the farmers of Denmark had original-



Cow-Testing Associations Have Proved Big Success.

ed about ten years before, and which various other European countries had copied.

The experiment, as studied by the United States Department of Agriculture, proved a success, however, and now the number of such associations has grown from 1 to 452. It is notable that some states which took up the idea at an early date have stuck to the movement and organized more and more associations, while others continue with only a few. Most states increase the number of their cow-testing associations as time goes on and the Department of Agriculture is fostering the work.

The lack of testers during the war caused a setback to the movement, but recovery from this has taken place, and the number of associations in the country is now much larger than it was before the war.

### AMOUNTS OF FEED FOR COWS

Upon Capacity of Animal Depends Quantity of Daily Portion of Grain and Roughage.

The quantity of silage to feed a cow depends upon the capacity of the animal. She should have as much as she will clean up without waste when consumed with the grain and hay, is the advice given farmers by the United States Department of Agriculture. A good cow should be fed just short of the limit of her appetite. The smaller cows usually eat from 20 to 30 pounds of silage a day, and the larger animals 40 pounds or more.

The hay needed ordinarily ranges between 5 and 12 pounds per cow a day, or 0.8 pound per 100 pounds of live weight when fed in connection with silage. Silage should be fed in the proportion of about 2.5 to 3 pounds per 100 pounds of live weight. Concentrates should be fed according to size of animals and richness of milk. One pound is required for each 2 1/2 to 4 pounds of milk produced.

Although corn silage is one of the best feeds, particularly for dairy cows, there are some milk producers who use it too freely. It is not a complete feed; neither is it a food that will give best results with only leguminous hays as alfalfa or cowpeas.

Since cows cannot consume enough of these rough feeds to produce the best results under ordinary conditions, it is necessary to feed concentrates in addition, particularly when the price is not high, as is the case this year. Farmers' Bulletin 578, "The Making and Feeding of Silage," contains much helpful information on feeding when silage is the basis of the ration.

### WARM WATER FOR MILK COWS

Animals Will Not Drink Necessary Amount From Icy Tank—Heaters Can Be Provided.

Cold drinking water given to dairy cows will result in reduced quantity of milk. A cow which yields a large quantity of milk must drink lots of water; she won't drink much from an icy tank. Water tanks can be provided with heaters, or hot water can be poured into the tank.

### Winter Dairying Held Back.

Winter dairying has been held back for many years, largely through the failure of cow-keepers to provide comfortable barns properly equipped.

**Give Much More Butterfat.**  
Cows sired by purebred bulls give much more butterfat than those sired by scrubs.

**Ice Water Is Expensive.**  
Feed can never get cheap enough to make it profitable to give the cows ice water to drink.

## WALES HAS A NEW TITLE



MADEWOOD UNDERWOOD

### HAD FORGOTTEN HIS "LINES"

And Bridegroom's Explanation Only Added to the Ludicrousness of the Situation.

A widower in a Pennsylvania town, no longer a young man, gave the clergyman a good deal of trouble by his stupidity on the occasion of his second marriage. He seemed to be possessed by some spirit of contrariety.

When told to give his right hand he gave his left. When the minister said: "Say this after me," he immediately replied: "Say this after me." Then, when the words he was to repeat were given, he was stolidly silent.

At last he seemed to be aware that the minister was somewhat disturbed, and in the middle of the service he upset the reverend gentleman's gravity by volunteering this apology:

"You see, sir, it's so long since I was married before that you must excuse my getting these things mixed."

### Postponed Repentance.

There was a man out in Wisconsin who went to a revival meeting and was pressed to repent. He wavered for a time and finally arose and said, "Friends, I want to repent and tell how bad I have been, but I can't do it when the grand jury is in session."

"The Lord will forgive," the revivalist shouted.

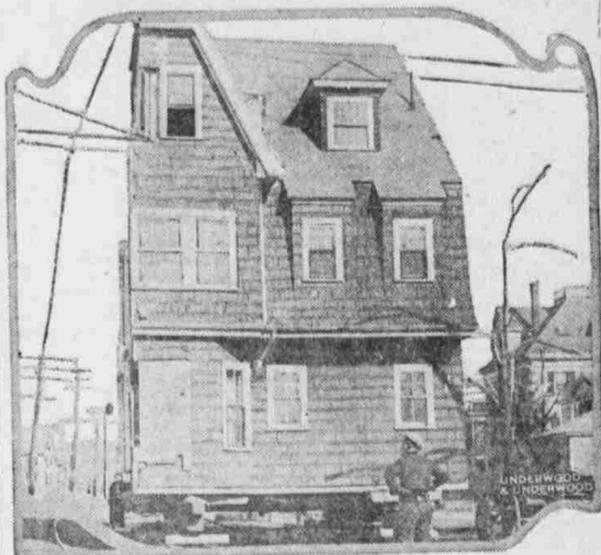
"Probably he will," answered the sinner, "but he ain't on that grand jury."—Boston Transcript.

**Ignorant.**  
Husband—Did you ever notice, my dear, that a loud talker is generally an ignorant person?  
Wife—Well, you needn't shout so. I'm not deaf.

**Or Who's Who.**  
The man whose answer to the Edison questionnaire was graded AA must certainly know watts watt—Life.

"Science is nothing but trained and organized common sense."—Thomas Huxley.

## House Cut in Half for Moving



This half of a three-story house was photographed while being moved along Commonwealth avenue, Newton, Mass. The section, weighing approximately 40 tons, was being moved from the residential section of Newton to a site one-quarter of a mile from its original spot.

## Good Stores Sell Them!

There's a man in this town who sells KEY OVERALLS. Ask him to show you a suit. Extra quality. Better workmanship. Costs less per day to wear them. Buy them. If they don't give full satisfaction, take them back and get your money back or a new pair free!



### HAD TO GO WITHOUT GAP STIRRED UP THE COMMUNITY

Mr. Johnson Really Had Good Excuse for Not Joining Posse on Hunt for Robbers.

"Paw," excitedly exclaimed young Runt, "Zeke Yawkey and a passel of fellers are out in front. They say the bank at Tumlinville has been robbed, and they want you to grab your gun and go with 'em to hunt the robbers!"

"Tell 'em I'm much obliged and powerful sorry," replied Gap Johnson of Rumpus Ridge, "but I ain't in no shape to j'ine 'em. Gabe Gosnell dropped in a spell ago and lowed that as he was going to be married this afternoon to the Widder McCorkendale he'd like to borrow my best britches to wear during the anecdote, and as I felt I'd just about as soon sleep today as not I let him have 'em. And your man is just sewing up the gable end of my old ones whur the roan cow hooked me by mistake for her calf or something. So you tell the gents, Runt, that if 'twas any other time I'd be tickled to go with 'em, but just at present I'll have to lay out."—Kansas City Star.

**Poor Henry.**  
Heck—"Do you play any instrument?" Peck (saddy)—"Second fiddle at home."—Boston Transcript.

**A Word for Himself.**  
Betty—"Jack won't take no for an answer. What shall I do?" Tom—"Say 'yes' to some other fellow."

Too many people do not even think they are thinking.

Gap Johnson's Good Reasons for Thinking Confessions Can Be a Little Too Public.

"They've been carrying on a revival over tuther side of Mount Pizgy for quite a spell," related Gap Johnson of Rumpus Ridge, "and a pleasant time was had till the converts took to confessing in meeting. A sister riz up and let it be known that she and a certain brother had been figgering on eloping, and two or three brothers foiled with remarks about the sins of themselves and other gents. Next day the lady's husband hunted up the feller she said she'd been going to elope with, and although he swore he'd never even heard of the plan, whipped him to a custard. And quite a passel of gents left in the next few days, claiming that if everybody was going to tell everything they knowed they didn't feel like waiting till the grand jury set. Religion is all right, but I sorter 'low it ort to be a private matter—every feller that feels like he'd got to confess go ahead and do so, but leave other folks out of it."—Kansas City Star.

**Well Informed.**  
"Grace is very versatile."  
"Yes. She knows the business of all her friends."—Judge.

It is better to take pains in preventing accidents than to suffer pains as a result of them.

The hands soon tire when the heart is weak.

## Mr. Jenkins Took a Cracked Club To Tame Lions



The exhibition ended rather badly. It very nearly was a big day for the lions and a sad day for Mr. Jenkins—all for want of proper care in getting ready.

Many a man who has business to do and a living to make and a job to fill is as careless how he feeds his body as Mr. Jenkins was in picking out a club.

Some foods are too heavy, some are too starchy, many lack necessary elements and so starve the body—and many load the system down with fermentation and auto-intoxication.

Grape-Nuts helps build health and strength. It contains the full richness of wheat and malted barley, including the vital mineral elements, without which the body cannot be fully sustained. Grape-

Nuts digests quickly and wholesomely. Served with cream or good milk, it is a complete food—crisp and delicious.

Grape-Nuts is just the food for those who care to meet life's situations well prepared in health. Order Grape-Nuts from your grocer today. Try it with cream or milk for breakfast or lunch, or made into a delightful pudding for dinner.

## Grape-Nuts—the Body Builder

"There's a Reason"

Made by Postum Cereal Co., Inc., Battle Creek, Mich.