



P. H. Kieffer, Strawberry Point, Ia., read a paper at the meeting of the National Creamery Butter Makers' association, in which he told what he learned in the six months' educational test. He said:

I have learned that in order to make butter that possesses the required keeping qualities it is necessary that one pay particular attention to the milk when it is received at the creamery and reject all poor milk. It has been my experience that that is the best way of improving the quality of milk. The creamery and dairy papers have done a great deal for us in this respect, and I am satisfied that the milk received at the creameries nowadays is much better than it was a few years ago. The starter should be carefully watched and never allowed to become overripe and then use from 10 to 25 per cent in the cream. The cream should be ripened to the required acidity according to the amount of butter fat in cream and churned at a temperature of from 50 to 55 degrees according to the season. When the butter is taken out of the churn, it should have a mild, clean flavor, which you will find to improve in four or five days after the butter is made.

I also learned that in order for one to improve in butter making it is necessary to accept of the experts' criticisms on the butter in a good spirit and endeavor to overcome the faults and get the butter in as high a grade as possible.

#### From Grain to Grass.

Every owner of a cow welcomes the time when the animal can be turned out to pasture. In changing from dry feed to grass it is well to go somewhat slowly, especially if the flow of milk is large, says Dairy and Creamery. The young, immature grass, especially in early spring, as is well known, contains a large amount of water, a condition commonly called "washy." Wheat and rye pastures are of the same nature. The dry feed ration should therefore be continued and be gradually reduced for two weeks or more after the grass is large enough for feeding.

#### A Dairy Fable.

They organized and built a creamery, hired an expert, made fine butter, sold all they could make and were making money. The son of the principal stockholder got the idea that he would like to be a boss butter maker. He knew nothing about making butter, and his idea was based on his ignorance. Influence was used, the expert was "resigned," and pa's boy took his place. At once things went. Purchasers returned the alleged, not "gilt edged," butter and wrote, "When we want axle grease we will let you know." In a month pa's boy's butter had ruined the reputation of the creamery. The other stockholders then kicked pa and his boy out, hired the expert back, and prosperity returned with him. Moral.—The "pull" may generally be depended upon to sprain the business that is subjected to it.—New York Farmer.

#### Accounted For.

From time to time during the past winter complaints have been made that

the butter from the northwest dairy districts was of poor flavor, even bitter in many cases. The manufacturers have intimated that the cause was the poor quality of the corn, both fodder and grain. A lot of butter of pronounced bitter flavor was received by a Chicago South Water street firm. They notified the butter maker. He at once came to examine the butter. After examining he stated that the corn and fodder fed the cows from whose milk the butter was made were bad and actually had the flavor found in this butter. As this condition in the corn exists throughout a large portion of the northwest dairy district it may account for the large amount of off butter that has been produced.—Dairy and Creamery.

#### Clean the Stables.

Where cows are kept up a good part of the time the stable should be cleaned at least twice a day. Cows are the neatest animals in the world if they have a chance to be. They do not enjoy the bad odors from unclean stables and will contract disease if compelled habitually to inhale them.

#### English Butter Laws.

The Mark Lane Express reviews the various measures adopted or brought before the English parliament to do away with fraudulent practices in the butter business. The latest measure under consideration is sweeping. One of the most difficult matters which the English board of agriculture has to deal with is the so called "blended" butter, made by working in large quantities of moisture, which of course the consumer pays for at butter rates. The new bill makes it unlawful to make, sell or import any butter or butter mixture containing more than 20 per cent of moisture under penalties of \$100 for first offense, \$250 for second, \$500 for third. Anything but pure butter must be marked plainly on every package in letters at least half an inch long with the designation "Margarine" or "Adulterated Butter," as the case may be. None of the marks previously used, such as "milk blended butter," will be allowed. This is a hard blow, as it is not likely that many buyers will care to use a product plainly marked adulterated.

#### Corn Ensilage as Milk Food.

Corn as ensilage or dry cured is not by itself a perfect food for dairy cows. It does not contain enough protein, and more protein they must have if we are to get a good flow of milk.

#### Astorian Snakes.

More poisonous snakes are found in Arizona than in any other part of the United States.

#### Precious Stones as Bullets.

Bullets made of precious stones are not often employed in warfare, but during some fighting on the Kashmir frontier the natives used bullets of garnets incased in lead.

#### Marine Insurance.

Marine insurance is very old. The earliest voyagers, the Phoenicians, practiced a kind of insurance. The master, before sending his small bark to the edge of the earth, mortgaged her against her return. If she came back, he returned the loan, with a heavy premium.

#### The Biggest Atlas.

The British museum has an atlas seven feet high of the fifteenth century. It is supposed to be the largest book in the world.

#### Ham Hash.

Take equal parts of cold boiled potatoes, cold boiled or fried ham chopped fine and fine bread crumbs. Season with pepper, a very little salt, and fry in butter or drippings for ten minutes.

**Wherein the Banana Excels Wheat.**  
The banana possesses all the essentials to the sustenance of life. Of wheat alone, or potatoes alone, this cannot be said. When taken as a steady diet the banana is cooked—baked dry in the green state, pulped and boiled in water as a soup or cut in slices and fried.

#### Pompeii.

At the present rate of excavation Pompeii will not be entirely uncovered before the year 1970.

#### English Executioners.

The public executioner in England as a rule executes £10 every time he exercises his function, and in the case of a reprieve he is given £5, provided that he has been retained.



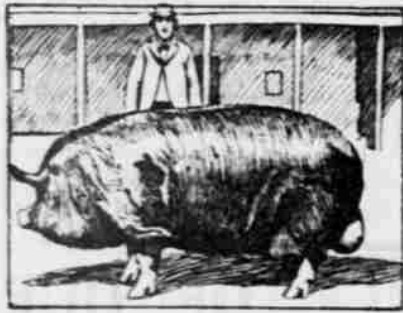
Some time ago I had quite a heavy hog I wished to take to market. I backed my sleigh up to the hogpen door and tried to load the hog, first by coaxing, then by compelling, but neither one availed. Strength on my part was getting exhausted, and, seeing a neighbor passing, I called for help. "Give me a pull," said he, "and we'll have that hog on the sleigh in no time. Get her head in the opposite direction from what you want her to go, then you take a stick and steer, and I will hold the pull over her nose." Well, it didn't take a minute for that hog to back on to the sleigh.—Cor. Hoard's Dairyman.

#### Rape For Hogs.

There is more inquiry for rape seed and the methods for seeding and feeding it than ever before, and it begins to look as if it were to become a universal farm crop. The swine growers are beginning to find that there is nothing like rape for forcing the growth of young pigs while they are with the brood mother and in fact up to the hard corn feeding period.

#### A Prize Winning Berkshire.

The animal represented in the illustration is the four-year-old Berkshire boar King Marvie, a prize winner at many fairs and an especially large and



KING MARVIE.

strong animal. He is owned by Etzler & Moses of Ohio and Indiana. Concerning the development of their boars, Mr. Moses says to American Agriculturist:

In raising our boars we feed middlings, bran and chopped feeds which are rich in protein in order to build up a strong muscular body. Milk is one of the best things any one could possibly get, as is also a clover pasture during the summer. Chopped clover hay soaked and warmed is most excellent for a winter diet when no green food can be had. We consider corn a poor feed if used very extensively for the building of a large frame, so we feed it sparingly.

The boar pigs should not be allowed to run together after reaching the age of five months, as they begin to fret and worry one another and will not develop properly. They should be put in an isolated place with no other hogs. While feeding a fine young boar his toes should be kept trimmed close in order to aid him in standing erect and firmly on his feet.

#### Halt in the Wool Market.

Some weeks ago we called attention to some of the obstacles to higher prices for wool and ventured to suggest that the limit of the advance was not far away, says Stockman and Farmer. Subsequent events have verified this. Recently the trade has been rather dull, but the prices have been well sustained. The market has received a check, but not a setback. While it will be hard to put prices much higher than the current level, there is little reason to anticipate a serious break. The world's supplies are not excessive, though the attractive prices have drawn wool from all corners. The new clip will come to market this year with little of the old in the country, the supply mostly in sight at market points, and the buyer can operate with more confidence than usual in view of this fact.

#### Elephant Collectors.

An elephant takes up the collection in some of the Hindoo temples. It goes round with a basket extended from its trunk.

#### Wonders in Eyes and Muscles.

The microscope has revealed many wonders, among others that the common caterpillar has 4,000 muscles in his body, that the drone bee's eyes each contain 1,300 mirrors and that the large, prominent eyes of the brilliant dragon flies are each furnished with 28,000 polished lenses.

#### Whitewash.

A good paint brush makes a good whitewash brush and does not spatter so much. Bolling whitewash or the lime if a little old makes it smooth like paint.

#### Bulgarian Moslems.

But 2 1/2 per cent of the people of Bulgaria are Moslems.

#### Greek Silk Culture.

The Greek government annually imports silkworm eggs from foreign countries, distributes them gratuitously and has experiments made in its agricultural stations to learn the best methods of silk culture for the kingdom.

## FATTENING STEERS.

### Grain and Roughage Fed Mixed and No Hogs to Follow.

With the old methods of feeding the steer was fed half a bushel of corn daily and a limited amount of whatever roughness was convenient; the chief and often the only profit in fattening steers came from the gain made by the hogs that picked up the droppings. In many places in the west hogs cannot be kept with fattening steers on account of losses from hog cholera. Where these conditions prevail it is necessary to adopt some method of feeding by which the steers will digest a greater proportion of the grain eaten than they did when fed the old way. An experiment was undertaken at the Kansas agricultural station to test the value for this purpose of grinding feed and cutting hay and feeding roughage and grain together in fattening steers. The first thing that a practical feeder notices when he goes to a feed lot where steers are fed grain and roughage mixed is the absence of scouring. One of the writers of this bulletin has just inspected 270 head of year old calves that were being forced for baby beef. These calves were eating three pounds of cottonseed meal each per day in addition to a heavy ration of cornmeal. The grain was thoroughly mixed with cut alfalfa hay when put in the feed boxes. Not a single calf was found that showed any signs of looseness and the droppings were of the most desirable character. An inspection of 1,800 head of fattening steers that were being rapidly forced for 100 days' feeding showed the same condition of bowels—no scouring, and normal condition of the droppings.

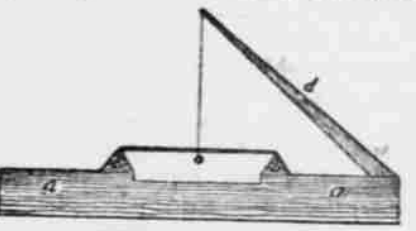
### How the Combination Acts.

Mixing the grain with the roughage compels the steer to spend more time in chewing his ration than when the grain is fed alone. The mixed grain and roughage are held in the paunch, where most of the water drunk by the steer is stored, and the water thoroughly softens the mixed feed. The lengthening of the time needed to chew the feed and the holding in the stomach gives the saliva a longer time in which to change starch to sugar. After the mixed feed has become soft it is returned to the mouth as the cud, and the chewing of the cud grinds the grain to greater fineness, putting it in such shape that the digestive juices of the stomach and intestines can better act on it. The result is that a larger portion of the grain is made of use in building up the body of the steer; a less portion of the grain is undigested. The steer gains more for each bushel of grain eaten, better digestion keeps his body in better health, and scouring is avoided. The result is shown in this experiment, where, with the most thorough method of mixing grain and roughage tried, 100 pounds of gain were made with 680 pounds of grain, as against 1,245 pounds of gain required for 100 pounds of gain at this station when ear corn was fed separately from the roughage. It is obvious that the best results will be obtained where the feed is so well mixed that every mouthful which the steer takes is part grain and part roughage.—Kansas Agricultural Experiment Station.

## GETTING THE GRADE.

### A Device to Assist in the Digging of Ditches and Drains.

A device for assisting in getting the grade while digging drains is described by a correspondent of American Agriculturist. "I took a piece of board, a, a, 8 feet long, 7 inches wide and nailed on two three cornered pieces, b, b, cutting out the section of the board



APPARATUS FOR GRADING.

between them as shown in the illustration. Then I nailed a piece of lath across the tops of the three cornered pieces. A piece of clapboard, d, three feet long, was sharpened nearly to a point on the thin side and nailed diagonally to the side of the eight foot board, this edge down, so that the point of the clapboard would be about twenty inches above the center of the lath. If the lower edge of the board is straight and placed in a level position the line will hang at right angles with it. Have the edge of the lath planed. Take a sharp pencil and mark each side of the line and cut a notch on the lath. To illustrate the use of the device, when the board is level, if a two inch block is put under one end and a notch cut behind the line, the plumb line will indicate the grade and the operator will get a two inch fall for every eight feet, eight feet being the length of the board."

### Animal Interests.

The Maltose milk goat is the latest candidate as a money maker.

To grade as baby beef steers should be choice or prime, between one and two years of age and weigh from 800 to 1,000 pounds.

Breeding pigs should be fed largely on a vegetable and bulky diet rather than on a concentrated grain diet.

It is said that a grain ration that is suited for a cow serves very well for hens supplemented, of course, with grit—oyster shells, bones, etc.

"Contentment is fat," and every little thing that adds to the comfort of the steer or makes him more contented increases the gains which he makes from each bushel of grain.

Where animals have not had free access to salt it is best to work them up to it gradually, as they are apt to sverral and produce scurvy.

## HAVE A CLEAN KNIFE.

### How a Little Carelessness May Prove Costly to the Farmer.

It is the common practice of farmers in this locality and probably in all localities to themselves attend to the castrating of their young animals, writes W. E. Craig of Ohio in Stockman and Farmer. Sometimes the young thing dies, and it is said that the operation was performed at the "wrong time of the moon." There is no doubt that often the bungling unskillfulness of the operation is the cause of death, yet we have known instances where the unclean condition of the knife used was the cause, and we think this is frequently the cause of trouble that is unjustly laid to the moon.

Two years ago a neighbor castrated forty young lambs and one calf for us. We had employed him for years and knew him to be skillful, yet in two days after the operation fourteen lambs were dead and the rest were stunted for life. There was much discussion in the neighborhood as to the cause of the trouble, but when it was found that the "sign was in the heart" that settled it. We were not satisfied with this explanation, and it took us two weeks to remember that the knife that had been used in the operation had been in contact with a small but virulent sore found on the first lamb caught. Blood poisoning killed the lambs, and the small amount of virus that remained on the knife from the sore had done the business.

The knife had been thoroughly wiped, but wiping does not answer. Always before any instrument is used surgically on an animal it should be held in the flame of a lighted match. This is a simple and convenient means of cleansing the knife or instrument, and doing so may save considerable loss many times.

## A Matter of Official Ethics.

The refusal of Circuit Attorney Folk to accept a \$15,000 house tendered to him by certain citizens of St. Louis in the nature of a reward or recognition for his vigor and determination in prosecuting corrupt officials in that city raises a debatable question in official ethics. In declining the gift Mr. Folk stated that the salary of his office and the consciousness of duty performed were the only rewards he could receive.

Mr. Folk had, of course, the right to declare that he will receive no emolument other than the salary of his office, but since his declaration is praised abroad as "an infernal rebuke" and the offer represented as part of "the moral obliquity of St. Louis" it is worth while to consider whether there is any obliquity or even impropriety in a voluntary movement to testify public appreciation of energetic and honest service by a valuable gift.

There was evidently no intent on the part of the donors of the gift to exert an influence detrimental to the cause of justice, but rather to express appreciation of signal and praiseworthy public service, and there would seem to have been no impropriety in Mr. Folk's acceptance of the gift. Gifts of houses have been made to Generals Grant, Sherman and Sheridan and to Admiral Dewey, but no one believes that they were prompted by ulterior motives or made to influence the subsequent action of the recipients. They were merely in appreciation of past services, and so was the gift tendered to Circuit Attorney Folk. His acceptance or rejection of it was purely a matter of his own election.

In view of the fact that the interests that seek to influence official action against the performance of public duty are liberal with their gifts, cloaked or uncloaked, it is refreshing to note the existence of public sentiment which would substantially reward the conscientious and efficient performance of public service. If there were more public gifts offered in admiration of virtue in enforcing the law public servants might be more apt to conclude that the rewards of public integrity are tangible as well as abstract.

### Short People.

The Lapps, whose height, about five feet, other races do inhabit different parts. Quite 14 per cent of the Sicily and Sardinia does 'treat 11 inches in height.

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