to Pig Pens, to Prevent Pigs From Entering Trough Before the Food is All In.

(By W. B. GILBERT.) A mistake that we often make that we ween our pigs too young. believe in getting the little pigs started off to est at three or four weeks old, and there is nothing better than a little milk and shorts to get them started. Then feed them liberally and by the time you wean them at eight or ten weeks old, you have a big, strong, lusty pig.

Rogers,

Rogers, nander:

Junior E. W.

e Day;

tjutant:

Laura

struota.

UCA-

Mut-

Dracle;

I am satisfied that a great many of strong believer in raising the little you might happen to have. For the cream, 60 cents per gallon; 30 per cent must have shelter for them in storms and for feeding purposes, but let them have access to the earth; keep them on the ground and give them green food, and you will get them to develop bone and muscle and a strong

They are always on their feed and always at their feed. I like to have them out on a clover pasture or on peas and rape. For later pastures, raps gives satisfactory results. Of course, you must feed the pigs reasonably at the same time.

We all know that for economic production a mixture of several grains be absolutely necessary to keep the fud together will give better results | digestive organs in good condition. than any one grain fed alone.

EWES WITH LAMBS

othy-Mouldy or Sour Corn

Silage Is Dangerous.

CBy HOWARD HACKEDORN, Missourt

Experiment Station.)

Clover hay and grain is a better

Clover hay alone will maintain preg-

cidentally feeding moldy silage.

LIST OF BREEDING

HORSES IMPORTED

Names of Animals, Their Regis-

tration Number and Name of

Importer Is Included.

The bureau of animal industry has

fessed a list of horses imported for

issued by the federal department.

This list includes the names of ani-

ment number for the various breeds.

Sometimes drain tiles are set over

breeding purposes during 1914:

setland pony

orpughbred

Industry.

ration for breeding ewes than timothy

hay and grain.

grain is advisable.

utilizing sliage.

with grain.

of stillzing stover.

600D RATIONS FOR

very satisfactory, but if you get such a combination as high-priced oats it would be foolish to advocate them, es-

termine the relative market price per During the winter months in a root- pounds of butterfat or gallon of growing country I believe roots are a good food, and should compose a large proportion of the ration, and I be-

some grain. take the chill off the food, and always | would be worth 53 cents per gallon. see that the pigs clean the troughs up and so on. and do not leave any material in

be changed often.

In the winter months give them cents per pound of fat. wood ashes and charcoal and sod or of some kind. Earth seems to Milk is one of the best things for a I cannot lay down a hard and fast | pig. Nothing lengthens them out like rule. Some seasons cats might be milk, if properly handled.

ONE MAY PREVENT **BLOAT IN CATTLE**

Clover Hay Is Better Than Tim- Avoid Rank Grass and Wet Green Clover or Alfalfa-Some Precautions.

> (By DR. A. S. ALEXANDER, Wisconsin Experiment Station.) Rank grass and wet, green clover or alfalfa are likely to cause bloat in cattle. Bloat may be avoided if right precautions are taken. Here are a few of them:

nant breeding ewes up to lambing Gradually change cows frem winter time. After lambing, the addition of grain and hay rations to fresh pastures and meadows. Corn silage when fed with clover

Prevent indigestions, because indihay, with grain, and with both clover gestion is the direct cause of bloat. hay and grain, is slightly better rough-Feed cows their usual ration of dry age than corn stover fed with the hay and grain before turning them same combination of grain and clover out to pasture.

Keep cows off clover and alfalfa Moldy or extremely sour corn silage fields until dew or rain has dried off in a dangerous feed for sheep. Eleven and never turn them on such fields in ewes were lost in one week from acmoisture-laden, "muggy" days.

Give cattle access to a mixture of A ration of corn silage, clover hay and grain is the most efficient way of salt and slacked time.

Visit pastures frequently is early Feeding corn stover, clover hay and summer, and, if possible, take along grain is the most satisfactory method proper remedies and instruments for relieving bad cases of bloat.

Corn silage and stover are better roughages than timothy hay when fed NOTHING BUT CORN IS UNSATISFACTORY

Where Fed Exclusively to Hogs the Animals Become Fat and Do Not Develop.

Investigators have proved what good feeders already know that corn | the goods." -good corn-is a good feed for any animal, and that there is no need of withholding it from any animal needing food. At the same time, it is shown breeding purposes in 1914 for which that corn alone is not nearly so good certificates of pure breeding have been or so profitable a feed as corn supplemented by some protein food, such as tankage, linseed meal or soy mals, their registration number, the

name of the importer, and the depart-In hogs fed exclusively on corn the animals become very fat and chubby, The following table shows the numand do not develop properly; the ber of certificated horses imported for bones are brittle and easily broken. Sixty-five hogs were used in a re-Stallions. Marca, Total. cent experiment and they were divided into lots of five each. Twelve different rations were used, with corn

> alone in two of them and corn with some other feed in the others. The hogs' fed on corn and linseed neal and those fed on tankage gained the most; those receiving corn alone were most unsatisfactory.

it is that it does not insure the fer-

The list referred to can be obtained on application to the Bureau of Animal Prevent Files From Breeding. Powdered hellebore mixed with water and aprinkled over manure will prevent flies from breeding and be an Blanching Celery. Celery may be blanched (whitened) extremely effective means for their control. It is inexpensive and the by leaving dirt up around the stalks thing of special importance regarding or by placing boards along the rows.

tilizing value of the manure, as do each plant to advantage. There are most materials used in controlling also several kinds of patent paper or wood bleachers. Double the Corn Crop. Pige Need Protein. Growing piga need more protein The greater the variety and the richer the feeds given cows, the more and than they can get from corn and pasbetter manure can be had from the ture. Skim milk is fine for them and

herd. With dairy manure alone on the so is meat meal or tankage. farm, the corn crop can be doubled ery in it. within two or three years. Late-Hatched Birds. The late-barched chicks will pay Plew Under Clever.

for their keep and then some if given Plowing under some clover in neces the right kind of care and feed. mary to increase the soil nitrogen of

Many Dalryman Are at Leas to Know Which is Most Profitable Way to Dispose of Product,

(By G. L. MARTIN, Montana Experiment

The rapid development of the ice cream business within the past few years and the increased call from city trade, hotels and restaurants has created a large demand for sweet cream. For these trades it is desirable that the cream should test about 20 per cerd, but often the test may vary up to 40 per cent, depending greatly upon the method of operating the hand separator. When selling cream to creameries, the price is quoted per pound of butterfat, but for ice cream and hotel purposes it is customary to pay by the gallon. As a consequence many dairymen are at a loss to know which is the most profitable way to dispose of their cream. The followpecially when we have to purchase ing general rules may serve to de-

To find the value of a gallon of cream when butterfat is a certain lieve in boiling the roots and feeding price per pound, multiply the percentage of fat by 8 (the number of pounds Do not load them up with a great in a gallon) and the product by the our farmers lose all the profit in the lot of water; feed the roots in rather | price per pound. At 30 cents per pound business by the way they handle the a thick batter, and mix in your shorts for fat, 20 per cent cream would be miss at the weaning time. I am a and middlings and whatever grain worth 48 cents per gallon; 25 per cent plus out in the open. Of course you larger pigs pulp the roots and feed the cream, 72 cents per gallon; 40 per cent meal sprinkled on. In a section cream, 96 cents per gallon, At 35 cents where winters are cold, it is well to per pound for fat, 20 per cent cream

> To find the price per pound for butterfat when the price per gallon of A great many people make the mis- cream is known, divide the price per take of having food left in the troughs. gallon by eight times the per cent of Pay particular attention to cleanli- fat. At 40 cents per gallon, 20 per ness, have dry beds and give them dry | cent cream would be worth 25 cents straw to lie on. The bedding should per pound of fat. At \$1 per gallon, 40 per cent cream would be worth 31%

CONVENIENT AS MILK STOOL

Lard Tub or Large Candy Pail Can Easily Be Converted Into Handy Device for Dairy Barn,

(By G. A. RANDALL.) The cut shows a handy milk stoo and one very easily made. From a lard tub or large candy pail, with a key hole saw cut out the wood at the top. as shown. One may thus make three or more legs, as desired. I find four



A Convenient Milk Stool,

are best. The top hoop must be removed to do this. Remove the side handles or ball and cut in the center of the bottom two semicircular openings to fit the hands as desired, these for a handle. This stool is stout, light and the right height for an ordinary

Most Profitable Cow.

The dairy farmer realizes that the comfortable cow is the most profitable cow and that induces him to look after the comfort of all his stock. Naturally and dirty nests. he gets better returns from them

Cleaning Dairy Pails,

In cleaning the dairy pails, special attention must be given the ears and seams, else dirt and milk will be lodged there, souring and tainting the milk as soon as drawn.

Unprofitable Cow.

There is no longer an excuse for the unprofitable cow, the Babcock test and a pair of scales, and it is easy to ascertain whether or not she is "delivering

DAIRY NOTES The same of the sa

To have your cows milk long, milk them clean.

Uneven salting and working make streaky butter

Good cows are the first essential of

profitable dairying It pays to please and satisfy a cow.

A happy cow is a profitable cow.

Use the curry comb and brush on the dairy cow every day. It pays.

To feed economically, cows should be fed as individuals, not as a herd.

Cream that is being ripened should

be strained several times before it is ready for churning. There is more money in feeding a

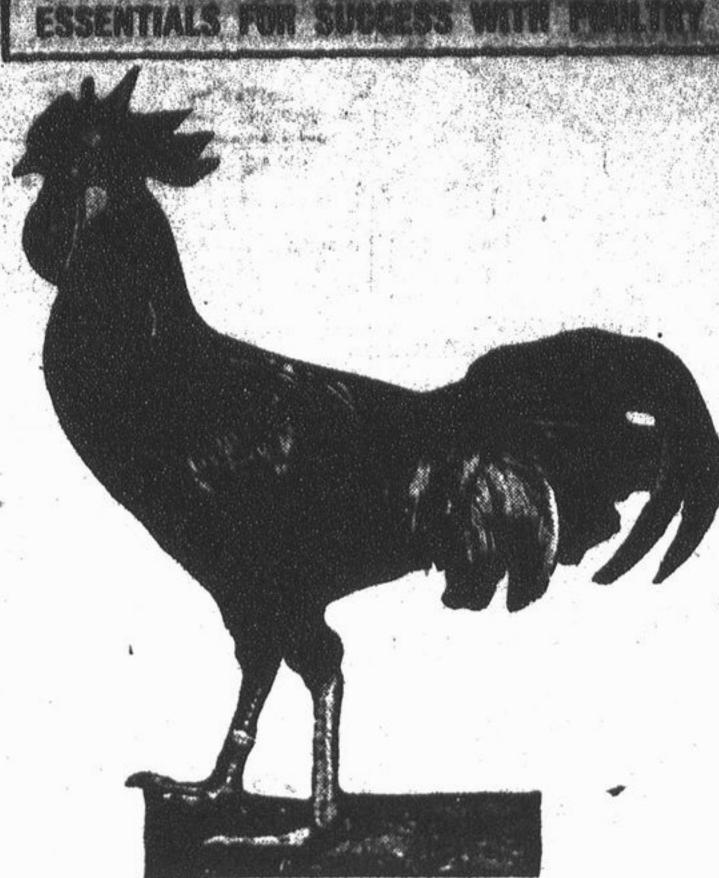
steer than in feeding a poor dairy cow, and much less work. . . . Protect the cream and milk from be-

keeping the cans covered. Skimming milk at the right time pre-

ing contaminated by stable air by

vents rancid butter. dairying usually sees the most drudge | wide enough for the chickens to rest | kept cut short

And, mind this: If you want your mitter to present an attractive appearance, market it early in the day.



Black Minorca Cockerel.

Select Good Foundation Stock. 2. Feed Meat and Egg Produc-

Cull Out the Loafers. 4. Keep the Flock Clean. 5. Make the Flock Comfortable.

ing Rations.

6. Fight Poultry Pests. 7, Take Pride in Their Work.

8. Sell to Good Advantage.

By J. G. HALPIN, Secretary of W. consin Poultry Association.) 1. Select Good Foundation Stock-Use only mature, good laying bens and mate with strong, vigorous males. If egg production is desired, secure stock from a high-producing strain If market fowls are desired, secure stock of a good market type. For dual purposes, select males of a medium breed and from high-producing fe-

males with well-meated breasts. 2. Feed Meat and Egg Producing Rations,-For egg production feed clean, wholesome grain in a deep litter of straw. Feed a mash of finely ground grains. If fed wet, feed once a day in troughs of sufficient length to allow ample room for each bird. If fed dry, allow birds to est at will Feed succulent feed once per day. Provide fresh water and, if possible, skim or soor milk for drink; oyster shell and grit. For meat production confine birds and finish off with a fattening mixture of finely ground grains. high in cornmeal, and mix to a batter with sour milk.

3. Cull Out the Leafers.-Cull ou slow-growing chicks, overfat and nonproducing bens, hens that lay small or ill-shaped eggs, and, if possible cull out or separate from the flock bens that lay eggs with weak germs; I. e., at time of incubation a large percentage die in the shell. viduals susceptible to diseases should be isolated from the flock as soon as

ping boards during the winter and clean same frequently. Keep the for the poultry flocks. feeding floor well bedded with clean. dry straw. Keep nests well littered with short straw, fine hay or shavings. Drinking dishes should be clean and well filled with fresh water. During wet weather confine birds to the house; muddy yards cause dirty eggs

5. Make the Flock Comfortable.-Have special henhouse where hens can eat, exercise and sleep during had weather. The house must be wind and storm proof, must furnish plenty of fresh a'r and sunfight, be clean and free from draughts, dampness and sudden changes of temperature. Special pains should be taken to keep the birds free from lice and especially mites

6. Fight Poultry Pests.-The most troublesome pests are mites, lice and intestinal worms. Mites live in cracks and crevices, especially near the roosts and nests. Spray the house frequently and thoroughly, especially during spring and summer.

Lice live and multiply on the hen's body. Keep dirt baths always available. Dust hens with insect powder or grease with bive ointment.

Intestinal worms may be avoided by raising chicks on clean, fresh ground and by giving epsom salts occasionally in the mash

7. Take Pride in Their Work .--Avoid frightening the birds. Know the best individuals and be constantly on lookout for sick or injured fowls. Take one or two good poultrys papers | feeding it is made a part of a bran and keep up to date. Improve the mash, scalding water bringing out all flock by rigid selection of males and its greenness and natural flavor, which females. Toe punch every chick and promote egg production in winter.

Feed in Dry Place.

Feed for Goslings.

Grass should be the main part of the

diet. Rightly cared for, geese are

Best Roosts for Fowls.

Den't use round poles for the chick-

it is from four to six weeks old. stock

no place in the diet of a gosling until enlarged market for his breeding

management we know of.

very easily raised.

band the producers. Enter the birds at the county fair and welcome honest competition.

the demands of the market and alm roundheaded. figtheaded and and fit the show birds. Separate the most promising cockerels and hold for breeding purposes. Market the balance to suit the demands. Market only strictly fresh eggs, selecting for size and color, averaging from twenty-four to twenty-six ounces per dozen. Use a trade-mark and guarantee quality and satisfaction.

FURNISH SHADE FOR POULTRY

Fowls Will Not Thrive Unless Given Cool, Shady Quarters-Cornfield is Excellent Place.

By H. L. KEMPSTER, Missouri Bu Poultry cannot thrive in summer unless it is provided with cool, shady quarters. The young stock will not make economical growth, and there will be a larger number of deaths among them if their quarters are not shaded. With mature stock the egg production will be cut down quite largely because of excessive heat.

Ducks are especially susceptible to the direct rays of the hot sun, and one should never attempt to raise them unless they have shade. Poultry houses set on blocks so that the chicks can go underneath,or orchards, patches of corn, etc., are measures which can easily employed. Farmers will find that a cornfield will make one of the most satisfactory places for raising the young as soon as they do not require the close attention necessary during their early life.

Patches of sunflowers planted now will be of great value later on, and the better growth the chicks will make and the increased egg produc-4. Keep the Flock Clean.—Use drop. tion will repay well any efforts made to provide more comfortable quarters

POULTRY AND GARDEN STUDY

Several Most Eszential Points Neces sary to Raising and Keeping Chickens-Keep Coops Clean.

At one of the agricultural normal school short courses in agriculture. student gave the following answers to the question: "What objects are to be obtained in the study of poultry and garden?"

Some of the most essential points necessary to raising and keeping chickens are:

1. Have good healthy fowls to be

2. Of a suitable age, not too old. 3. Keep the coops clean and free of

4. Give plenty of dust for dust 5. Have good food and measured rations.

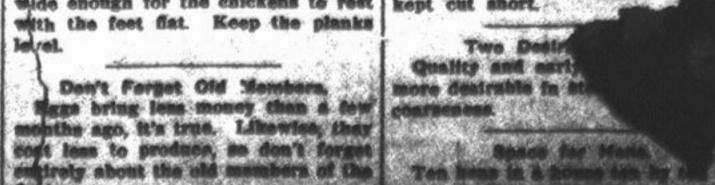
6. Dry mash must be given. 7. Have two-thirds of the food green vegetables or grass. 8. Have plenty of room for the

9. Keep coops free of cold drafts.

Good Winter Feeding, Lawn clippings may be cured and stored away for winter feeding in the poultry yard. After it is thoroughly cured, pack in bags, barrels or boxes. In

Improving Poultry Stock. The local poultry association, espe Take pains to provide a dry place cially if it holds an annual show, is to store cracked corn or cornmeal for chick feeding. If not kept dry, a potent force for improving the poulthe grain molds, and feeding moldy try stock kept in a community. Every food is about the worst piece of chick | raiser of poultry should encourage the formation of these associations, as through them he may secure information of direct value to him as well as receiving the indirect benefits of an Meal and cracked corn should have

Domesticating Wild Turkeys, The young from wild turkeys, the eggs of which are hatched by hena. will stay with their mothers, but are always into mischief. When one to roost on. They cannot rest on grown they incline to run away, but The man who knows the least about | round poles. Use boards or planks | are not so sure to if their wings are





APPLE TREE INSECT

Bomething of its Habits and Vulnerable Points Must Se Learned Se fore Combating Insect Past

(By E. M. PATCH.) Before it is nossible to comba insect post intelligently we must learn something of its habits and of its valnerable points. When these are known proper remedial measures may then be taken for its repression or extermination. In the United States alone more than four hundred species of insects are known to affect in greater or less degree the apple tree or its fruit.

For convenience in dealing with the species of insects which damage apple trees, they have been classified, in accordance with the character of the injury they cause, into three primary groups.

A. Injuring root, trunk or branch; borers and any feeders. AA. Injuring the foliage; biting sucking insects.

AAA. Injuring the fruit; maggots,

caterpillars, bugs and beetles. In the class of those injuring root, 8. Sell to Good Advantage. Study trunk or branch, are the borersto satisfy. Fatten the market stock borer-which are destructive to the wood; the scale insects and plant lice, which include the oyster shell and San Jose scale and the woolly aphis.

In the second class-those injuring foliage—are the plant lice, small



Mottled Fruit Caterpillar,

greenish, blackish or reddish lice, like sucking insects, such as the green apple aphis, and rosy aphis. Insects feeding upon the leaves without a nest and not concealed within, leaf or bud -cankerworms, several species of enterpillars, brown tail, gypay tussock moths; caterpillars living in web nests in spring or summer, or coticealed in folded leaf or bud; fall web worm, tent caterpillar, bud moth, leaf sewer, and cigar case bearer; conspicuous winter stages several moths, such as orchard and; Gest tent caterpillars, eecropia col , brown tail moth nest, antique and white marked tussock moths.

The third classification: insects injufing the fruit; caterpillars, lesser appleworms, codling moth and the mottled fruit caterpillar, legiess maggots or grubs, railroad worm and curculio; mature insects with wings and legs, plum curculio, rore chafor, tar-

nished plant bug. The mottled fruit caterpillar is a very familiar apple insect. The eggs are laid in a mass attached flatly to the leaf. The larva is a smooth, hair and began filling the sides. For less caterpillar, one and a half inches long when grown. Its head is shiny yellow with one dark blotch on each lobe. Its body is mottled grayish brown above and pale grayish green underneath. This caterpillar feeds upon the foliage and the fruit. The pupal stage is passed in the ground, a glistening brown object, about threequarters of an inch long. This caterpillar is readily dislodged, jarring the tree and killing the insect on the ground is a convenient combatative

MAN MUST PROTECT ORCHARD

All Dead Grass, Weeds and Brush Where Insects May Harbor During Winter Should Be Burned.

The man who expects to harvest any fruit must protect his orchard from the ravages of insects and animais. All dead grass, weeds and piles of brush where insects may harbor during the winter should hauled out and burned.

insects deposit their eggs in the summer and fall in the grass and weeds and brush piles. These batch out in the spring and make their attack upon the trees to the destruction of much fruit. Of course, in season the spraying should be carefully

A good deal of fruit may be harrested without spraying, but most of it will be defective.

Pruning la Profitable. An orchard survey in an lows county showed that it paid to prune trees every year; that the orchards pruned annually gave average net returns of more than \$125 am acre. whereas orchards prused occasionally or not at all gave a return of alightly less than \$55 an acre.

Keep Windfalls Picked Up. Keep the windfalls in the plum

5. By stock cars, stock ya

6. By infected water or ham homes from hi

Germs will ordinarily die out in months in lot condi ouring and packing process as on in the big pe they have once found lodge the hog there is no remely therefore take every pr that germs do not an by any of the foregoing me

MAKE CONCRETE STOC

Directions for Making and th

of a concrete stock tank Ejust recently. I made the forms

The bottom is sight

like to have the on



After the bottom had we used a richer comcrete.

The whole tank in reshown in the sketch, with a wire, No. 9, with stays twisted half-inch steel so

After two days I took o Then I mixed coment and the thickness of cream a whitewash brush I pe tank two or three tim holes and uneven spots

SWINE ON ALFALFA

Desirable to Have Flat Into Sultable Areas to From. One to J

(By G. W. BARNER such quarters are ke produce pork more they have plenty of a pasture fenced off into so that the hoge can only provide fresh

give an opportunity help keep your