

HORSES PIGS and CATTLE

CALVES INTENDED FOR BEEF

Necessary to Give Young Animals Grain While on Milk Diet—First Winter of Importance.

When you are feeding calves intended for beef animals you have two methods which may be followed. You can let the calf run with the cow or you can remove the calf and feed him skim milk and grains instead of giving him the whole milk, writes L. Hunt of Kansas in Farm Progress. In these days of dairying the calf that is not weaned is likely to become a skim milk calf. The youngster that runs with his mother usually ends his first summer in excellent flesh, while the skim milk calf is not so plump, but usually has a larger frame.

If you are going to make beef out of either of these calves it is necessary to give them grain while on a milk diet, if it is plain that they need this extra ration. In handling the skim milk calf give him a little oil meal while the change from the whole to the skim milk is under way and keep it up as he grows older and bigger. Keep him on the pasture and at the same time keep up the feed of skim milk and oil meal



Baby Beef.

twice daily, and along with this there ought to be some cracked corn, bran and ground oats.

There is not much use in feeding the calf that is running with the cow. If on the pasture he is getting about all that he needs. As a general thing it will pay, though, to teach him to eat, for he will have to go through the weaning period. If fed cracked grains and kept on a good pasture the calf will learn to eat before weaning time and will not lose much flesh when separated from the cow.

The first winter is an important period to the calf that is being grown as a beef animal. The calf will have to be given shelter that is more comfortable than the open sheds that are being provided nowadays for the big steers. The rations ought to be such as to keep up a rapid growth if these calves are to be made into "baby beef." Steers sold somewhere under eighteen months of age are rated as "baby beef."

SPRAYING KEEPS FLIES AWAY

Relief Afforded Live Stock by Mixture of Three Parts Fish Oil and One Part Kerosene.

Relief from attacks by flies may be brought to live stock on the farm by the use of sprays. The following spray is suggested in extensor bulletin No. 43 on "Flies and Their Control," by F. L. Washburn, entomologist of the Minnesota college of agriculture.

Three parts of fish oil and one part kerosene.

The spraying is best done with a knapsack sprayer, and it takes only two or three minutes to spray a steer or horse. The spray appears to keep off all flies for two days.

REMEDY FOR PAWING HORSES

Annoying Habit May Be Cured by Fastening Chain to Animal's Leg—Acts as Chain Switch.

A horse that has the habit of pawing, especially at night, is most annoying. It is also bad for the horse's feet if he is pawing all the time. To stop this, take a strong strap with a buckle on it, also 8 or 10 inches of heavy chain. Put the strap around the horse's leg above the knee so the chain will hang down in front of the knee.

This device acts as a chain switch and will cure the horse of the pawing habit. It also keeps a horse from running in rough pastures.—Farm and Fireside.

Sow Becomes Cross.

A brood sow which does not secure sufficient exercise becomes cross and may eat what pigs she does farrow. Improper care and feeding also come in as contributory causes of small

LOVE IN A FOG

By FRANK M. BICKNELL.

Judson Maxwell always gave something to the blind match seller at the corner—for luck, he said. And Barney O'Keefe, that husky, cheery beggar, always wished his honor good and plenty, and then a power more of it atop of that. Maxwell was lucky in being well born, in having his share of good looks, and in being able to spare from his prosperous business enough leisure to follow Prudence Hale across the Atlantic. But he had not yet been lucky enough to persuade her to be his wife.

In the person of Albert Pierce, Maxwell had a formidable rival. As a fair-minded man Maxwell would have freely admitted that Pierce was quite as desirable a match for Prudence as he himself was; but as the young lady had steadily refrained from showing a preference for either suitor the two were now in London for the purpose of further urging their respective suits. All efforts at a viva voce declaration having been adroitly baffled by the still noncommittal fair one, they had finally come to the following gentleman's agreement:

Each was to lay his heart, hand and fortune at Prudence's feet by letter and the two sealed proposals were to be mailed in the same box at the same time, namely, nine o'clock p. m. Monday, November 25.

Now as a matter of fact Miss Prudence was honestly in doubt as to whether she cared more for Maxwell than she did for Pierce. She rather thought—indeed, she felt reasonably sure—she would eventually find her life's happiness in becoming the wife of one of them, but which? Twice, thrice, she re-read each letter and strove heroically with her indecision—quite in vain. By and by, however, as the fog without thickened, there came to her—curiously enough—the glimmering of an idea.

The Hales had taken apartments in Sackville street. Maxwell was staying at a big new hostelry in Northumberland avenue and Pierce at a famous old one in Brook street. It thus happened that the routes the two young men would have to traverse in reaching her from their hotels were about equally long and also about equally devious. In pursuance of her idea—an idea which might or might not lead to satisfactory results—she called up Maxwell on the telephone.

"I have your letter, Jud," she told him, "yours and Bert's. Listen carefully. You will please leave your hotel this afternoon at three o'clock precisely, and start for this house on foot. Walk the entire distance. I shall telephone similar instructions to Bert. You are to find your way to me through the fog, and the one who arrives first—well, I won't promise anything now, but leave that for this afternoon—if you don't both get lost in the fog."

The fog had thickened to a "peasoup" consistency, and vehicular traffic was practically at a standstill when at 3:27 p. m., the Hale's parlor maid brought Prudence a card, and announced:

"A gentleman to see you, miss."

Prudence drew a long breath and her heart began to beat with rather more than normal rapidity as she took the card and glanced at its inscription. Was she glad or sorry to read the name of Judson Maxwell? Strange though it may seem, she was not yet sure of herself. She was conscious, however, of wondering that he had been able to get to her so early, through a fog of almost midnight darkness, and also of dimly fancying that his greater love had served him as a guide.

"Prudence!" He appeared at the door evidently in a fever of suspense, then, seeing her alone, he came forward eagerly and took her hands in his. "Prudence," he repeated, "I am first!"

"Yes," she replied, "you are first; and now her unruly heart certainly was thumping at a scandalous rate. Out of the dark fog light seemed suddenly to have broken.

"Are you—aren't you—glad?" he asked breathlessly.

"I—I think—perhaps—I am," she answered rather haltingly.

"Aren't you sure?" he demanded reproachfully.

Gently she withdrew her hands from his clasp, and raising them, put them about his neck, then shyly drew his face down toward her own, now crimsoning with a color that appeared to him of divine loveliness. She didn't say she was sure, but—she didn't need to.

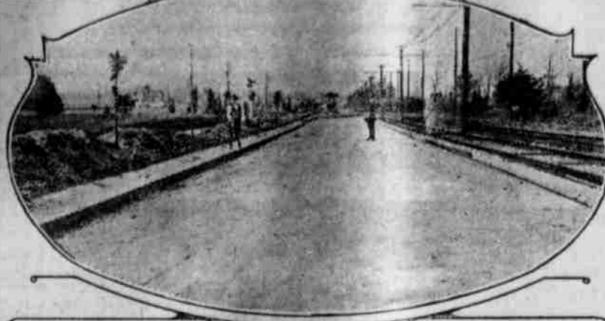
Pierce came about two hours later—he had gone badly astray in the fog—but he arrived in time to offer his congratulations, and to add, handsomely, that as the best man had won the bride he hoped to be "best man" at the wedding.

"Well, Barney, you brought me the best kind of luck; you were a friend in need that time if ever there was one."

"Sure, yer honor, 'tis proud an' glad I am I could help ye, though 'twas nothing at all I done worth mention. With me goin' over the route an' right past the young leddy's house twice a day, gettin' here an' back ag'in to me own home, 'twas as easy as winkin'."

Yes, Maxwell always gave something to the blind match-seller for luck and long had Barney reason to remember the most profitable match he had ever had anything to do with

CHIEF ADVANTAGES OF CONCRETE ROADS



Construction of Concrete Road—Sand and Gravel Piled on Subgrade Ready for Use—Subgrade Prepared for Concrete Pavement—Road After Nearly Two Years' Service.

(Prepared by the United States Department of Agriculture.)

Concrete roads have shown a marked increase in popularity during the past five years, according to the road-building specialists of the U. S. department of agriculture. In 1909 there were 364,000 square yards of such roads in the United States, while for 1914, the amount is estimated as 19,200,000 square yards.

The durability of concrete roads has not been proved by actual practice because there are no very old pavements as yet in existence, but from the condition of those which have undergone several years' service, it seems probable that they will be found to wear well.

The principal advantages of concrete pavements which have led to their increased popularity are:

Durability under ordinary traffic conditions.

A smooth, even surface offering little resistance.

Absence of dust and ease with which it may be cleaned.

Comparatively small cost of maintenance until renewals are necessary.

Availability as a base for another type of surface if desirable.

Attractive appearance.

On the other hand, concrete as a road surface is noisy under horse hoofs, and has a tendency to crack. Unless these cracks are cared for at once, they lead to rapid deterioration of the adjacent pavement and finally require difficult repair work.

In the past efforts have frequently been made to overcome these objections to a certain degree by covering the concrete pavement with a bituminous wearing surface. At the present time, the specialists in the department of agriculture hold that this cannot be economically justified, although it is possible that future investigation may change the situation in this respect.

In the present state of road science, however, it seems that where traffic conditions are such that a bituminous surface on a concrete road is practicable, a bituminous surface macadam road would be equally practicable and certainly cheaper. Where traffic which is too heavy for macadam road uses a bituminous concrete road, the bituminous surface is likely to give way and the uneven manner in which it falls tends to produce excessive wear on portions of the concrete. For a successful concrete road, hardness, toughness, and uniformity are the most essential qualities.

These can be secured to a great extent by care in the selection of the constituent materials and the proportions in which they are mixed. Sample specifications are included in the bulletin, No. 249, Portland Cement Pavements for Country Roads. These specifications are believed to typify the best engineering practice as it has been developed up to this time. They cover such points as materials, grading, subgrade and construction.

The cement, it is said, should always conform to some standard specifications for Portland cement, such as those issued by the United States Bureau of Standards or the American Society for Testing Materials. The sand should not contain more than 3 per cent of foreign material, and with more coarse than fine grains is to be preferred. The coarse aggregate may consist of either crushed stone or gravel. In either case it is

very desirable that the coarse aggregate be well graded in size between proper limits.

The proportion of cement to the sand and coarse aggregate combined should not be less than about 1 to 5, and the proportion of sand to coarse aggregate not less than 1 1/2 to 3, nor greater than 2 to 3. A useful formula when gravel is used as coarse aggregate is 1 part of cement to 1 1/2 parts of sand to 3 parts of gravel. When crushed stone is used, 1 1/2 parts of sand may be substituted in place of 1 1/2 parts.

Ordinarily from 1-3 to 1/2 of the total cost of constructing a concrete pavement is for labor after the materials are delivered. This emphasizes the importance of efficient organization and proper equipment. Failure to take those factors into consideration frequently results in adding from 10 to 20 per cent to the cost of a concrete pavement.

The most economical method is to have the work of mixing and placing the concrete as nearly continuous as practicable. The work should be planned with a primary view of keeping the mixer going full time. The drainage structures, the grading, and the subgrade should, therefore, be completed well in advance of the mixer and provision made for obtaining all of the necessary materials without delay. A common error is the failure to make adequate provision for delivering water on the work, and the amount which a given stream is capable of supplying is frequently overestimated.

ENSILING THE GREEN CROPS

Extensive Investigation Carried on by Nebraska Experiment Station—Six Small Silos Used.

The department of agricultural chemistry of the experiment station and college of agriculture of Nebraska has been carrying on an extensive investigation during the last year on the chemistry of the processes which take place during the ensiling of various green crops. Special attention has been given to silage made from mixtures of alfalfa and sweet sorghum.

Six small silos holding about one ton each were filled in September, 1914, with various mixtures. Two of these silos were opened during the second week of August, 1915, and the silage in each was found to be in perfect condition. The first silo contained a mixture of one part sweet sorghum and one part alfalfa, while the second contained a mixture of one part sweet sorghum and two parts alfalfa.

Alfalfa alone will not make silage, because the plant does not contain enough sugar to insure the production of sufficient acid to preserve the silage. The acid produced from the sugar in the green plant by bacterial action preserves the silage. By mixing sweet sorghum with the alfalfa the necessary sugar is supplied.

Weaning Time.

Weaning time is from six to twelve weeks. If the sows are to be rebred at once, the pigs should be weaned at eight or nine weeks of age. If one litter per year only is planned, the pigs may be allowed to run with the sow until twelve or fourteen weeks of age.

HIS BIG STORY

By JANE OSBORN.

"Get a good story at any cost," the city editor had told Tom Ordway, crack reporter on the Morning Star, when he sent him out to "cover" the Morris-Norris wedding. "Get away from the stereotyped society dope. The Morrises are always doing something sensational and the Norrises have controlling ownership in the tin trust that we have been fighting. Go as far as you like; don't hesitate to offend any one, but at any cost get a first page story."

A half hour later Tom was part of the gay assemblage of the city's richest and most exclusive set that had gathered at the palatial Morris residence to witness the most elaborately planned wedding of the season.

During the strains of the wedding march Tom watched intently. He had the names of the bridesmaids beforehand and there was nothing in their conventional prettiness and studied gait to attract his attention. But with the approach of the maid of honor—the famous society belle, Doris Dabney, who seemed to advance like a goddess in an aura of blues and mauve—Tom shared in the general wave of admiration.

Tom looked closely, studying the beautiful features of the young woman as she passed near him to the bower of roses set up at one end of the Morris ballroom. He paused, almost staggering with the impression that suddenly came to him.

"It's Jane," he said half aloud, and as the strains of the wedding march continued and the Morris pedigree and the Norris millions were united in that famous marriage Tom stood as one in a daze. How had Jane Lane, the girl he had loved in his boyhood, whom he had not seen for five years, to be sure, but whom, in his heart of hearts, he loved still—how had this country girl been transported to this scene of wealth and elegance? She had been as poor as he in the days when they went to school together, and there she was, dazzling in a gown that must have cost more than he earned in three months and wearing jewels worth a king's ransom.

What of Doris Dabney, the society beauty who had been expected to act as maid of honor? Could Jane be Doris? Was he dreaming?

The story. It was as good as written. Every one had expected Doris Dabney to act as maid of honor. Doris resembled Jane amazingly, for no one apparently realized that Doris had not appeared. He would talk to Jane and get the whole story.

When Tom had made his way so Jane had noticed that she seemed intent on avoiding conversation. But he was insistent, and "Jane" uttered in a whisper banished her reserve. Tom rushed from expressions of joy at seeing her to a volley of questions, and Jane enthusiastically told him the whole secret. She was serving as governess in the Morris family. Her resemblance to Doris Dabney had often been remarked.

Then the very day of the wedding Doris Dabney disappeared. It was a scandal, of course. She had eloped with her father's good-looking Danish chauffeur. If the news leaked out it would spoil everything. So Jane had been called to the rescue to play the part of Doris, to wear her gown and to appear with the priceless Dabney pearls and sapphires for the wedding.

Tom's elation was divided between delight at having found Jane and joy at having found his "big story." He was hurrying away when Jane, following him, put a hand on his arm.

"How did you happen to be here?" she asked. "You don't travel in the Morris set. Tell me, Tom"—there was anxious appeal in her voice—"are you still with the Morning Star?"

Then Tom, now more intent on his story than on his revived love for Jane, and Jane, herself afraid of being discovered, departed hurriedly as some guests came toward them.

It was nearly midnight, and Tom was pounding the keys of his typewriter in the stifling atmosphere of the city room of the Morning Star. He was just hammering out the last paragraph of his "big story," a real "scoop" for the Morning Star, for none of the other papers could possibly have got wind of the scandalous elopement of the beautiful Doris.

Tom felt a pressure on his arm and a sweet voice at his side. It was Jane, Jane shorn of her jewels and with a simple street suit in place of Doris' finery.

"Is it too late?" she asked breathlessly. "I came as soon as I could. I know when I ask you that you won't make use of the story I gave you. I told you because you are a friend."

Ten minutes later, Tom's story of the Morris-Norris nuptials, shorn of all its sensation, having gone to press, Tom and Jane left the office of the Morning Star. It was in a deserted surface car that led to the Morris home that Jane pressed Tom's hand to thank him for what he had done.

"It was hard," admitted Tom, "and I wouldn't have done it for anyone else in the world. But I've always loved you, Jane, and for you I would give up the biggest story I ever trapped down. And now I've found you, little Jane, I am not going to let you go." And something in Jane's smile assured Tom that he had not made his sacrifice in vain.

POULTRY

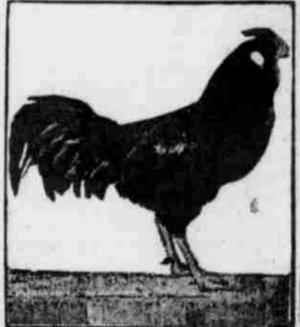


BREEDING HENS FOR LAYERS

Bringing Up a Laying Strain Requires Much Patience and Worry of Several Kinds.

In breeding for layers you will start with, we will say, a dozen hens, and they should be of a laying breed and purebred if you would make a success of it. You trap-nest these and must keep the record closely for that season, and even if purebred and you are breeding for a 150-egg record for the year, you may possibly come out with three or four only of the twelve that come up to the number of eggs wanted, and unless you have marked the eggs from each one of the trap-nested hens you are likely to not know one chick hatched from these hens that are to form the start for the laying strain, but if you do know the chicks from these hens' eggs—a difficult matter—then you will have a larger number to start with in next year's trial.

You start in next year with your four hens and any of their progeny you know to put with them. Now, whether there were but four hens or more, for not all start with as low as a dozen, some of these hens will



Black Minorca.

not come up to the record in the second year, and will not do to carry further, and so must be sent back to the general flock, or sold. And thus the man or woman who builds a strain goes on year after year working to get a flock that will come up to the number of eggs a year he has set for it to produce and bring forth progeny dependable in the same line. Bring up a laying strain means much work and worry of several kinds.

HINTS FOR FEEDING POULTRY

Young Chickens and Poults Relish Onions Chopped Fine—Milk is Excellent for Fowls.

(By W. R. GILBERT.)

Young onions chopped fine is a first rate diet for young chickens and turkey poults. When possible, a little should be shredded in all the meals until the birds are six weeks old.

Milk spreads itself over all the good feeding qualities, but like turnips and potatoes, it has a very high percentage of water and a low one of organic matter. However, it is the best digestive of all the foods and the best for ailing fowls.

I have come to the conclusion, after a fairly long experience, that there is no grain so profitable for night feeding as corn (whole). It keeps the crop full and the heat of the body up during the long winter better than other foods. If it is crushed it is digested too fast.

TO DESTROY LICE ON FOWLS

Several Kinds of Powder Manufactured for Purpose—Whitewash Inside of Poultry House.

There are several kinds of good powders manufactured and sold to kill the lice in the plumage of fowls.

The fowl to be treated should be held by the shanks, with its head down and the powder worked into its plumage with the fingers until the plumage is full of it. If applied when the fowls are on the roost and they are carefully put back after being dusted, the powder will be more effective.

To get rid of the little mites, all the roosts and nearby woodwork should be frequently dusted with lice-killing powder. The inside of the house should be cleaned and whitewashed.

The fowls should be dusted with the powder several times during the summer season.

Keep on Culling Out.

Continue the selection and culling out processes with the early pullets, so that none but the very best of the flocks will go into the laying houses. It is often the case that pullets which at three months old looked to be first class will at five months look like entirely different fowls.

Pullets for Layers.

The best-looking pullets should be selected for layers at once, the undesirable ones being sold early, while the price is high.