

# EFFICIENT FARMING

## TANKAGE AS A HOG FEED SUPPLEMENT

During the winter of 1922-23 the Department of Animal Husbandry at the Ontario Agricultural College conducted an experiment to determine the feeding value of tankage as a supplemental food for growing hogs as compared with skim milk. Six pigs of approximately equal weight were taken from one litter and divided into two pens for the test. The grain fed was the same, both as to nature and quantity. However, the skim milk lot required three days more in which to consume the grain.

The tankage used for the test contained upon analysis, 59.7 per cent. protein. At the commencement, tankage constituted 10 per cent. of the ration for the tankage-fed lot. It was observed that the pigs were not eating their food with a relish nor were they cleaning up a quantity which pigs of their age should do, consequently the tankage was reduced to 8 per cent., the proportion fed from that time on. The above mentioned factor in con-

junction with the factor that skim milk is a great deal closer approach in palatability to the milk of the sow no doubt accounts for a greater consumption of feed and consequent loss in gains during the first three weeks for the skim milk lot.

However, from the time when the tankage lot became accustomed to their food their gains were quite close to those of the skim milk lot (some weeks being equal) with the result that for the entire test the skim milk lot made a greater gain of 50 pounds. The fact that they made this extra gain does not tell the whole story, since the tankage lot developed into a slightly more even and uniform pen than did the others. That it is possible to balance a ration for growing pigs by the addition of tankage to home grown grains was clearly demonstrated since the tankage lot not only made persistent and economic gains once they got started but were quite firmly fleshed as well as being uniform as before mentioned.

The following table is a synopsis of the experiment:

Tankage vs. Skim Milk as a Supplemental Feed for Hogs.		
No. of Lot	No. 1	No. 2
Supplement used	Tankage	Skim Milk
No. of pigs	3	3
Length of feeding period	148 days	152 days
Average initial weight of pigs	40.6 lbs.	41.6 lbs.
Average final weight of pigs	183.3 lbs.	201.0 lbs.
Average total gains per pig	142.7 lbs.	159.4 lbs.
Total gain per pig	428.1 lbs.	478.2 lbs.
Total supplement fed per lot, skim milk or tankage	121.5 lbs.	274.4 lbs.
Total grain fed per hog per day	9.98 lbs.	9.72 lbs.
Total supplement fed per hog per day, skim milk or tankage	.82 lbs.	18.05 lbs.
Total grain fed per 100 lbs. gain	348 lbs.	309 lbs.
Cost of grain fed per 100 lbs. gain	\$5.57	\$4.94
Total supplement fed per 100 lbs. gain, tankage or skim milk	28 lbs.	574 lbs.
Cost of supplement fed per 100 lbs. gain, tankage or skim milk	\$0.70	\$1.72
Cost of 100 lbs. gain in weight	\$6.27	\$6.66
Value of gains made at \$11.50 per cwt.	\$26.71	\$31.91
Cost of gain made	\$22.58	\$23.06
Cost of Feed Fed.		
Oats	65c per bush.	Red Dog flour \$40 per ton
Barley	60c per bush.	Tankage
Middlings	32c per ton	Skim milk

A study of the table will reveal the fact that the cost of production was not as high in the case of the tankage fed lot as with the skim milk fed lot, due to the lower cost of supplemental feed per 100 lbs. gain. On the other hand, the quantity of grain required per 100 lbs. gain in the skim milk fed lot was not so large, which may be explained by the fact that they were receiving, according to analysis, five pounds more digestible protein in the supplement fed per 100 lbs. gain than were the tankage fed lot or, in terms of dollars and cents, the 39 pounds less of grain per 100 pounds gain with a value of 63 cents lowers the cost of the supplement for the skim milk lot to \$1.09 as compared with 70 cents for the tankage fed lot. However, the value of the extra 50 pounds in weight of the skim milk fed lot more than counterbalances the increased cost of production giving an increased profit of 50 cents over cost of feed in their favor.

Where skim milk is available at a lower price its superiority would be much more in evidence. For example, where it is available at 25 cents per hundredweight cost of production would be reduced to \$6.37, and at 20 cents per hundredweight to \$6.08 per 100 pounds gain as compared with \$6.27 for the tankage fed lot, and as a natural sequence profit on gains

over cost of feed would be increased accordingly.

If one chooses to consider cost of production only, the table would indicate that with skim milk at 20 cents per hundredweight tankage would be worth \$7.84 per ton, at 25 cents per hundredweight, \$5.74, and at 20 cents per hundredweight \$36.43 per ton.

All factors considered in this particular test, there is a decided indication that where skim milk is not available throughout the year in a more or less constant quantity that tankage ranks very high as a substitute feed for skim milk to balance a ration for the growing hog in Canadian pork production.

It is also evident from several years' work with tankage that care should be taken in feeding. It does not require 15 per cent. tankage to balance a ration composed of barley and oats. Pigs do not eat it readily if the proportion is too large. It has been found that from 8 to 10 per cent. is sufficient in a ration composed of home grown grains other than corn. Feeders also should be careful in starting pigs on tankage to make the change gradually. These precautions taken, tankage should give good results.

"Henry and Morrison's 'Feeds and Feeding'."

and cheaper than sprouted oats. Fine chopped mangels will be a fine source of succulent green feed for the baby chicks in the brooder houses next spring.

All the green feed we can raise for the poultry will prove useful because health and vigor are just as essential to hens as concentrated rations to force egg production. The bulky green feed helps to prevent digestive disorders and enables the flock to produce more hatchable eggs for early spring incubation.

### Sell Old Hens as They Are.

Old hens of the heavy breeds are in great demand at this season for Sunday dinners. A good six-pound hen makes a family dinner, with portions left for Monday. I do not think that such hens need any fattening. Often they become too fat to be appetizing. Most people like to buy a plump, healthy, smooth chicken, but not one that is rolling in lumps of fat.

Sprinkle clothes with warm water; they iron sooner and smoother.

Why imprison rosy-cheeked boys and girls in unsanitary school buildings?

## A Successful Dairy Woman

The success of another unaided woman on a Western Canadian farm, shrouded in modesty, has recently been revealed quite by accident, and the name of Miss Mary Anderson should be added to those of the several valorous women who have, unaided, achieved success on the expanse of Western Canada. Farming a half section of Saskatchewan land alone, Miss Anderson has proved how a woman can make a successful pursuit of dairying.

Miss Anderson came from Sweden in 1912 with her mother to join her father, who had preceded them and taken a homestead in the Battleford district. Her knowledge of farm life was nil. She had spent her entire life in a small city, but possessed an inherent love for animals which had never had opportunity of satisfaction or development. Consequently when her father purchased a few cows she naturally adopted them as her own charge, cared for them herself and undertook the work of milking.

She naturally came to make a study of dairying in its various phases and rapidly became convinced that better things could be accomplished with finer-bred cattle and with superior feed. She induced her father to purchase some grade Holstein cows and also to plant an area of his farm to sunflowers and corn for silo. Preparations had just been commenced for this better farming when the father died, and the girl was left with the entire operation of the farm, including the grain crop and the care of the dairy cattle.

The girl determined to continue the operation of the farm herself, staking her chance of prosperity on the little herd of seven grade Holsteins. Each cow gets the attention of a world

champion, with a carefully prepared ration, and the extensive use of the curry comb. When a cow-testing centre was formed in the district where she lived she joined it immediately, and two of her cows were speedily placed on the honor roll. Careful record of individual production is maintained and the foundation laid of a very successful and prosperous dairy establishment.

During the winter of 1920-21 her seven cows brought her in about fifty dollars a month, and throughout last winter seventy-one per month. Together with the other produce of the farm this makes a substantial little income through which she is able to live in comfort and free from any mother in financial worry. Yet this is only the commencement the girl has made in the direction of scientific dairy production in Western Canada.

Though farming in Western Canada must be considered in the main a man-sized job and general conditions are such as to discourage the entry of women into the pursuit of any large scale, there are continually to be encountered cases of women making undoubted successes against great odds all over the country. At the 1911 census there were 15,341 women declared to be operating farms in Canada. Of these 15,094 were owners or managers; 255 were florists or nurserymen; 104 fruit growers; 284 gardeners and 104 ranchers and stock raisers.

In the movement amongst women towards the land which has characterized the post-war period there is no doubt but that the figures of the 1921 census will show that a substantial increment has been added to the list of Canadian farm-women.

### Broody Hens Need Care.

At this season it pays to inspect the nest every night at sundown and confine all the brooder hens. If the first night they can usually be broken up in about three days. If they waste time setting in the hot hen house, and also become reduced in flesh and vigor so their return to laying condition is delayed.

Experiments prove that good treatment of broody hens is the most profitable. Starving and frightening them is not good management. They need plenty of fresh cool water and about the same feed they would have for heavy laying. A broody coop with a slatted bottom will break up hens quicker than a brood coop or a shipping coop where the broody hen is often able to build some resemblance to a nest on the ground. The slatted broody coop can be suspended in the cool shade of a tree if the poultry house is too hot in summer.

It is cruel to keep a mother hen in a brood coop with black roofing paper on top if the coop is without shade during the heat of the day. These small brood coops become very hot and too often the hens are neglected or given drinking water in small dishes that are promptly tipped over, leaving the hen to go thirsty the remainder of the day. Metal brood coops are regular bake ovens when left in the sun.

It seems that the moult can be delayed with many hens if they are

given a cool ventilated hen house and plenty of shade on the range. The open front house with the door open during the day is usually cool enough. But houses covered with black roofing paper must have considerable circulation of air have the hens are devitalized. Plenty of shade on the range can be supplied with fruit trees, corn, sunflowers or an evergreen hedge. Colony houses raised from the ground will furnish a few square feet of cool earth where young birds can dust.

—Kirby.

### Waterproofing a Tent.

Of all the various ways of waterproofing a tent, the one most successful in my camping experiences was the one we used last year before we started on our trip to Ottawa. The tent we were to use had served our camping purposes for a number of seasons, and we decided something must be done to it if it were to see us through another trip.

I purchased one pound each of sugar of lead and alum. After thoroughly mixing them, I dissolved them in about one gallon of tepid water. In this solution, the tent was soaked for about an hour and then hung up to dry. This process will make a tent thoroughly waterproof, mildew-proof, and even to a certain extent fireproof.

—F. L.

To spray with a long hose from the ground gets aphid better than shooting from the top of the spray tank, New York scientists say.

## A Corn-Roast Supper Party

### That Can be Turned Into a Money-Making Social.

BY MARGARET M. SCOTT.

When your sweet corn has tasseled out it is quite time to begin making your plans for your corn roast, especially if you intend to invite your friends. Your invitations, on ear-shaped pieces of yellow paper, might read as follows:

Corn-Roast Supper  
Where?  
On Potato Patch Hill  
When?  
Wednesday evening, Aug. 15, 6 p.m.  
Mr. and Mrs. B. T. Brennell  
Bring your fingers  
and wear old clothes.

r. s. v. p.  
We'd like to hear you tell to-day (Don't hesitate, but now begin)  
Or the worst scrape you ever were in.  
Of, it might be:  
Your talent gives us much delight,  
We'll be right pleased when you recite.

If anyone hesitates more than three minutes by the clock, demand a forfeit and make him redeem it with a more difficult stunt. By the time all the stunts have been given, the whole crowd will be ready for some active exercise. You might start off with a potato race, and award to the fleetest footed a bright-colored bag of new potatoes. There are many new quirks which may be introduced into this old-time race to make it more interesting.

If you have room enough, maybe some of the older guests will teach you some old-time games and dances. Clapping and whistling make a splendid accompaniment for the Sir Richard de Coverley or Farmer in the Dell.

Just before the party breaks up it might be well to have a bit of lung exercise. Announce a Running High Squeal. Mark off a seven-foot distance, explain that the one making the most noise while running seven feet will be acclaimed victorious, and let the winner be chosen by a verbal vote. A small ham makes a splendid gift.

## The Sunday School Lesson

AUGUST 12.

Martha and Mary, Luke 10: 38-42; John 11: 1 to 12: 8; Mark 14: 3-9. Golden Text — Mary hath chosen the good part, which shall not be taken away from her.—Luke 10: 42.

LESSON SETTING—Our lesson this week brings us to the village of Bethany, on the eastern slope of the Mount of Olives, not far from Jerusalem. Here lived Martha and Mary with their brother Lazarus.

I. MARY CHOOSES THE BETTER PART, LUKE 10: 38-42.

V. 38. As they went, Jesus is on his way to Jerusalem for the Feast of Tabernacles, in the third year of his ministry. A certain village, Bethany. It was Jesus' last journey to Jerusalem. He needed refreshment for soul, as well as body. A certain woman named Martha. She was the elder sister, and the head of the house. Received him. Received seems a cold word. Moffat translates it "welcomed."

Vs. 39, 40. Mary... heard his word. Mary's sitting at his feet was not the seeking of a position of ease. Much had happened since they met, and Mary was eager to hear all, and Jesus had much to say that he could say only to a loving listener. Martha was numbered about much serving; bustled and worried with the duties of a hostess and friend for her guest. Come to him... dost thou not care? Martha's word is for Jesus, not Mary. "Is it all one to you," she says. She draws the guest into the family quarrel. Her practical nature misjudges both Jesus and Mary.

Vs. 41, 42. Martha, Martha; said in gentle tones. Careful and troubled about many things. Jesus recognizes, first of all, that Martha is really hard-pressed, and, secondly, that all this business springs from loving hospitality. Martha's fault is in failing to see that Mary, in her own way, is refreshing the soul of Jesus. One thing is needed... Mary has chosen that good part. Jesus had more to give to him. And Mary, in her soul-hunger, had sought the priceless gifts that Jesus had to bestow.

her capable mind so well fitted her. Did she worry? Did she fall of the duty of happiness? Our Lord's gentle remonstrance indicates that she was too anxious and troubled.

If mysticism is a passion for intimacy with God, "that strange, mysterious life behind the brain that cries out for the living God," then Mary in her deep longing for communion with the Lord Christ was one of the first Christian mystics. She "sat at the Lord's feet, and heard his word." The Master said she had "chosen the good part." This element of the Christian life does not seem to be so much valued to-day as formerly. This lesson gives Christ's approval of time spent in spiritual fellowship. Prayer, as communion with God, is the desire for the "friendship of God himself," and not as the desire "to beg things from God" is akin to the spirit of Mary as she sat at the feet of the Lord.

Doubtless the anointing was a token of gratitude. Reading the first three verses of the twelfth chapter of John, one feels that both the supper and the anointing were heartfelt expressions of appreciation. The generous, uncalculating tribute of devotion, "ointment of spikenard, very costly," witnessed to their great happiness in the restoration of Lazarus. But Christ saw in it more than grateful recognition of his miracle of command. It was an anointing beforehand for his burying. The love that instinctively impelled to the act taught a greater wisdom than she knew.

The two sisters represent two types of character. There are differences of temperament, and this makes for the interest of human relationships. It gives an agreeable tang to friendship. A symmetrical, harmonious character is to be desired. Here Christ praises the spirit of devotion, and the spiritual was always to him the primary thing. But he believed in "doers," too.

### Down on Ferny Farm

BY NANCY BYRD TURNER.

Once there was a still race  
Down on Ferny Farm.  
The sky was blue as indigo,  
The weather very warm.  
Peter Pig and Pat Pig  
And Pucker, stout of heart,  
And Wag and Wig and Fatty Pig,  
They all took part.  
Sam Sheep made the music  
(To everyone's surprise);  
The stilt was all of oak wood,  
An apple was the prize.

Sing loud, sing low,  
And then a little more!  
The pigs and lambs all hopped so high  
They made their muscles sore!

Pucker Pig was poky,  
Fatty had a fall;  
Wig was most ungraceful,  
And Wag was worst of all.  
But Pat and Pete were splendid;  
They finished in high feather.  
With squeals and cries they grabbed the prize  
And gobbled it together.

The audience was tickled;  
They cheered with such good will  
That almost, if you listened,  
You'd hear them cheering still.

Sing high, sing low,  
Sing with all your might!  
The pigs and lambs were, oh, so stiff  
They couldn't sleep that night!  
—YOUTH'S COMPANION.

There are two ways to get thin to music: exercising to its rhythm and attempting to play an accordion.

For years, when making butter from only a cow or two, instead of using a churn, I skim my cream carefully, being sure to get no milk in, and several times a day stir it thoroughly with an egg spoon, and the next day five minutes' stirring will bring the butter.

### KELSEY Healthy HEAT

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A Warm house and a cool cooler day and night the winter through. And a saving in your coal bills of from \$10.00 to \$20.00

A KELSEY WARM AIR GENERATOR in your cellar will ensure this. The Kelsey is the most efficient and economical system of home heating ever devised and will heat the smallest cottage or the largest mansion properly and healthfully. We send you KATALOGUE

CANADA FOUNDRIES & FORINGS LIMITED  
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## Truth-Telling Medicine.

Some of us have been perturbed, or late, about a medicine that has been administered to certain prisoners, a "truth serum," given with the thought that under its influence the prisoners would tell the truth about the crimes with which they were charged.

This is of unusual interest, even to those who do not for a single moment contemplate a career of crime. If there is a drug which may be given to us, under the influence of which we shall yield up our most secret thoughts, we must be looking for defence or an alibi. We might be led to tell where we keep all of our money; what we really think of the lady next door; what we would do if we ever had our own way; and other incriminating things. The subject clamors for attention.

The drug with which the marvels were supposed to be wrought is called Scopolamin. It is the same substance that is used to drug the patient into a condition in which pain is not felt in the celebrated "Twilight sleep." Its action is such that although the patient remains able to respond to questions, she no longer exercises conscious control of her functions. It was therefore supposed that a criminal might give truthful answers to such questions as might be asked, when under its influence, failing to realize that serious consequences might come as a result of his involuntary self-betrayal.

However, set your mind at rest. There is nothing to it. The instinct of self-preservation lies very strongly rooted in the human breast. Under the influence of the drug you might give correct answers to immaterial questions, but as soon as the questioner began to "get warm" around the secrets of your innermost soul you would close up as tight as the proverbial clam. Your dulled mind would awaken to danger and you would tell things with only such accuracy as you chose to exhibit.

The principle is much the same as the one involved in hypnotism. The willingness of the victim to be used goes only so far as it is in accord with his general habits and methods of life. When the hypnotizer tries to influence his subject to do things that would be contrary to the well established principles of his regular life he balks. Even when the human frame is only acting automatically it still preserves the lines of balance that would be found in conscious effort.

## New Treatment for Worms in Livestock.

The one per cent. solution of bluestone (sulphate of copper), made by dissolving four ounces of the drug in a pint of hot water and then adding three gallons of cold water, has given splendid results in the destruction of stomach-worms of sheep and lambs and has also proved fairly effective for the tapeworms of these animals.

The dose of the solution is one and one-half ounces for a lamb, and from that up to three and one-half ounces or a trifle more for an adult sheep. The doses should be proportioned to the age and size of the animal to be treated and the severity of the case. Feed is withheld for twenty-four hours before treatment, unless in the case of a very weak lamb, and the treatment is repeated in ten days and perhaps two or three times during the grazing season.

An improvement in this treatment is the addition of snuff to make the copper-sulphate solution even more deadly to the worms. The bluestone-snuff solution is prepared as follows: Dissolve eight ounces of sulphate of copper in two gallons of hot water. Soak eight ounces of snuff or finely powdered tobacco leaves for twelve hours in one-half gallon or more of hot water. Strain the snuff decoction, and then mix the two solutions together and add enough water to bring the entire amount up to five gallons. The doses are the same as for the straight bluestone solution. The snuff mixture must, however, be well shaken before each dose is withdrawn for use.

The present wholesale price of snantonin, the sovereign remedy for worms of hogs, being almost prohibitive, oil of chenopodium (American wormseed) is being recommended in its place and is giving good results. The dose of oil of chenopodium (pronounced kenopodium) is two cubic centimeters (thirty drops), for every fifty pounds of body weight of pig and it is given in half an ounce of castor-oil. The treatment should be given after withholding feed for twenty-four hours and it to be repeated in two weeks.

Oil of chenopodium is also the new treatment for worms of the horse and may be given to a pregnant mare with impunity, which was not the case with some of the drugs previously prescribed. The dose for an adult horse is fifteen to twenty cubic centimeters and the drug is given in gelatine capsules. Immediately after the capsules have been administered the veterinarian should give the horse from one to one and one-half quarts of pure raw linseed-oil. The dose may be repeated in two weeks if necessary. The dose for colts has to be proportioned to the age and weight of the animals, but is comparatively large, as much as ten or fifteen cubic centimeters having been given to a colt of two or three years.

## Poultry

Watch for the young cockerels that develop rapidly and crow at an early age. They feather rapidly and show all the marks of vigor. Such birds will help in producing early-maturing pullets next year, and they are the type of pullets that produce fall and winter eggs.

It pays to breed from rapidly feathering birds as it saves brooder fuel in the spring. I find that chickens can stand quite a little cold when they are about feathered out. The slow feathering members of a flock are easily chilled and stunted and make it necessary to keep the brooder fires going for a long time.

If the hens are in yards or on a dried-up range they need green food the same as in winter. A row of Swiss chard on well fertilized soil will produce an abundance of large succulent leaves. It takes only a minute to gather a bushel of this green feed and it will help in stimulating egg production.

Weeding and thinning the mangels is profitable work for a poultryman. They are fine for laying hens in winter.