

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 Pigs	
	No. 1	No. 2
No. of Lot	3	3
Supplement used	Tankage	Skim Milk
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.
Average daily gain per pig	.96 lbs.	1.05 lbs.
Total grain fed per lot	1,478 lbs.	1,478 lbs.
Total supplement fed per lot, skim milk or tankage	121.5 lbs.	2744 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.	428 lb., \$49.27	478 lb., \$54.97
Cost of gain made	\$26.71	\$31.91
Profits on gains over cost of feed	\$22.56	\$23.06

Oats 65c per bush.
Barley 60c per bush.
Middlings ... \$28 per ton

Red Dog flour \$40 per ton
Tankage \$50 per ton
Skim milk ... \$30 per cwt.

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 \$6.03 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 30 cents per hundredweight tankage would be worth \$77.84 per ton, at 25 cents per hundredweight, \$57.14, 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."

Poultry

Watch for the young cockerels that develop rapidly and grow 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 chicks 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.

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 curdy 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 the girl's unaided efforts, sufficient to keep her and her mother in comfort and free from any sort of 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, 15,841 women were 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 found the first night they can usually be broken up in about three days. If they waste time setting in the hot hen house they injure the eggs laid by the other hens, 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 or 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 it is quite time to begin making your plans for your corn roast, especially if you indulge your longing to ask every one of 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. D.

If you aren't sure that the guests all realize that it's an honest-to-goodness meal they are being bidden to, warn them. You will want every guest to display his very best appetite.

If your club or church needs money, you might turn your party into a regular midsummer money-making affair. You could advertise the event with big black and yellow posters worded just as the invitation is, but substituting your club name and adding a note about the cost of the supper.

Whether it's to make money or just for fun, there is nothing like a little planning to help the party to success. Probably you have a grove or hilltop near at hand at which to stage the party. Pick a spot that is rather rocky, so you will not have to carry your stones far for the pit; of course, you will want a roasting pit. Probably most of your guests will prefer the ground for sitting, but if you have some you are doubtful about you'd best provide some camp chairs. If you turn it in to a money-making affair, you may need to train some of your boys as waiters, and supply rough plank tables.

Whatever you do, make the pit the centre of operations. You will want to make its opening a regular cere-

mony. If you have a full moon, you will not need much extra light, but car lights make fine substitutes when daylight fades.

Your guests will want to be fed first, but after they have consumed uncounted ears of corn, rolls, baked potatoes, wieners, pickles, and cups of hot coffee, and, maybe, watermelon as dessert, they will need a bit of exercise. They may revolt at anything more strenuous than working their minds at first, so start them off with a request entertainment. Each guest is handed a rhymed request such as:

Misery loves company, they say;
We'd like to hear you tell to-day
(Don't hesitate, but now begin)
Of the worst scrape you ever were in.
Or, 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 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. Jesus was footsore and heartsore. 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." V. 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 last 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 cumbered about much serving; busy 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 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.

II. MARY DOES THE BEAUTIFUL THING, MARK 14: 3-9.

V. 3. Being in Bethany. This beautiful incident takes place in the last days of Jesus' ministry. The plot of the priests and scribes was gathering round him, and the shadow of the cross had fallen across his way. House of Simon the leper; who had been a leper and had been healed by Jesus. John tells us that Martha served at the meal and that Lazarus, whom Jesus had raised from the dead, was there. It was a feast of friends within a circle of hate. A woman. The Gospel of John says that it was Mary. An alabaster box; a flask. Of spikenard; genuine, pure anointing oil. Very precious. All the accounts of this incident stress the costliness of the ointment. John says that there was a pound of it. Brake the box. Mary did not simply break the seal, but broke the narrow neck of the flask itself, so that, instead of using a few precious drops of the odorous oil, she might lavish the whole on Jesus. On his head. In the ancient world, pagan and Jewish alike, it was a custom to refresh guests in such a way. John adds that the house was filled with the odor.

Vs. 4, 5. Some that had indignation. They were astonished at the costliness and lavishness of the act. Matthew says that the disciples were indignant, while John makes Judas the spokesman, and adds that Judas said this, not because he cared for the poor, but because he was a thief. If Mary had given this as a gift to the poor, he, as treasurer of the disciple band, might have enriched himself. The disciples misunderstood Mary's gift, as Martha had misunderstood her sitting at the feet of Jesus. The disciples say "Why this waste?" as Martha said, in effect, "Why this idleness?" To the poor. Some people are never mindful of home missions until the collection plate is passed round for foreign missions. Mary alone saw that the supreme need of Jesus at this crisis was love that made itself known.

Vs. 6-9. Let her alone . . . a good work. Jesus comes to Mary's defence, against the disciples, as against Martha. His first defence is that it was a "comely," "beautiful" act, inasmuch as it expressed love. The poor always . . . but me . . . not always. The second defence is its timeliness. Joseph and Nicodemus show love to the dead body of Jesus; Mary showed love for the Master while he yet lived to be helped by it. Done what she could. The third defence is its perfectness. Mary had done all she could do. She could not save him from the brutality of his foes, but she can show him the love of a friend. To the burying. The fourth defence is its "helpfulness." She had helped him for his stern ordeal of death and crucifixion. A memorial of her. What the disciples proclaimed a fault would be her glory for all time.

APPLICATION.

Hospitality is a virtue that is commended both in the Old Testament and the New, and there are many examples of it.—the delightful primitive story of Abraham and the Angel (Gen. 18: 1-8), and the beautiful pathetic account of the great woman of Shunem who constrained the prophet Elisha "to eat bread" (2 Kings 4: 8); and in the New Testament, Zaccheus, and Lydia, and the people of Melita, and Gaius, and as in our lesson, Martha who received Jesus into her house. Hospitality is a gracious form of unselfishness, it is evidence of a certain great-heartedness. This was one of Martha's excellences.

Did she fail to get a due sense of proportion? Was it that the work of providing bodily comfort for her guest crowded out the more gracious spiritual attentions of a hostess? It would seem that in her care to provide an elaborate menu, she had not leisure or spirit for that fellowship and interchange of thought for which

her capable mind so well fitted her. Did she worry? Did she fail 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, as 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 compassion, 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 stiffs were all of oak wood,
An apple was the prize.

Sing loud, sing long,
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 steech 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

Have Summer Heat This Winter

A Warm house and a cool cellar 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 that 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.

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