

## "OFF" BUTTER FLAVORS

BY DON P. SHANNON.

Succulent feeds in the ration of dairy cows have come to have such importance that many crops not grown primarily for this purpose may enter into the ration. Cabbage and potatoes, though not generally grown for dairy feeds, are often fed to dairy cows as a means of supplying succulence and disposing economically of products that are otherwise unmarketable.

Like other succulent feeds, cabbage and potatoes may have a tendency to impart undesirable flavors and odors to the milk if fed under certain conditions. Tests have been conducted to determine the extent to which these crops affect the flavor of milk and how they may be fed and the milk handled so as to minimize such effect.

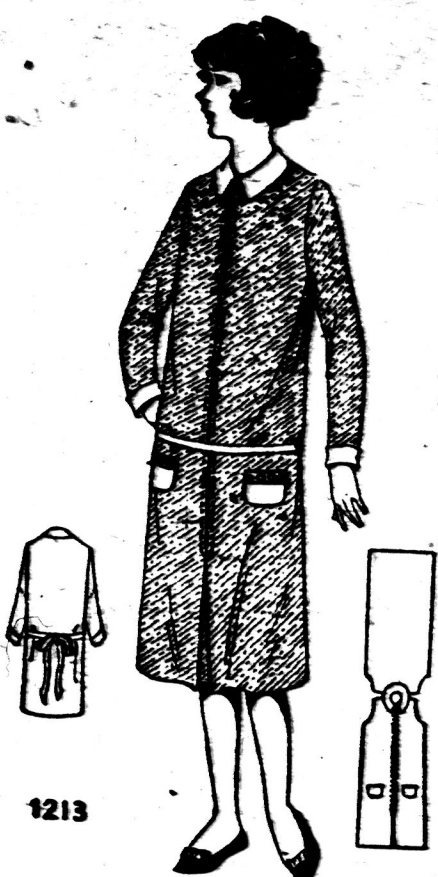
It was found that on the average when dairy cows consume as much as 14.3 pounds of cabbage within one hour before milking time, abnormal and objectionable flavors are produced in the milk. An increase in the amount of cabbage fed intensifies these flavors. An average of 25 pounds of cabbage may be consumed immediately after milking, however, without any objectionable flavors in the milk becoming noticeable. Some of these flavors may be eliminated by proper separation of the milk, and others greatly reduced.

The feeding of 14.3 pounds of potatoes an hour before milking may favor the milk to a slight extent, but

hardly enough to be detected by the average consumer. Increasing this amount of potatoes does not increase abnormal flavors and odors produced in the milk. Dairy cows may be fed as much as 28 pounds of potatoes immediately after milking, with no resultant "off" flavors in the milk.

It is shown that green alfalfa produces much more pronounced "off" flavors and odors than does green corn. Even when 25 pounds of green corn is fed one hour before milking, the milk is only slightly tainted, probably not to a sufficient extent to be detected by the average consumer; if fed after milking, nothing undesirable is noticeable. Feeding 30 pounds of green alfalfa one hour before milking, or as little as 15 pounds, produced objectionable flavors and odors. Increasing the time to three hours reduced the intensity, but did not eliminate the taints. However, when the time before milking was increased to five hours the "off" flavors and odors were practically eliminated. It was found also that 30 pounds could be fed immediately after milking without any bad effect. The conclusion is that green alfalfa as a soiling crop should be fed immediately after milking, and that when it is used as pasture the cattle should be taken off four or five hours before milking.

Aeration will help to remove slight "off" odors and flavors. Green corn, at least up to 25 pounds at a feed, may be fed at any time.



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All of us become tired of our morning cereals. Shavings of fresh maple sugar spread over it will make it a very appetizing dish. Children all love maple-sugar.

To make glue that will resist the action of water, soak ordinary glue in water until it softens; remove it before it has lost its original form, and dissolve it in linseed oil over a slow fire until it is of the consistency of a jelly. It can be used for joining any kind of material.

## THE CHIEFTAIN'S DAUGHTER

BY EDWIN H. NEVIN.

The Bechuans of South Africa are divided into many tribes. Two of these tribes carried on war for some years, each side trying to kill every man, woman and child of the other side, and practicing the most fiendish cruelties. The names of these two warring tribes were Barolong and Bakueni.

One day the daughter of the chief of the Bakueni was gathering berries by the river's side. She was alone and far removed from her father's village. She did not imagine that any enemy was near, but a wicked old warrior of the Barolong tribe was just at that time creeping along the borders as a spy, and he saw her.

She had never done him any harm, but he hated her because she was one of the Bakueni. He crept like a coward upon his hands and knees, and when he was within a short distance of her, he sprang upon her like a tiger, and, with his assegai, cut off both her hands above the wrists. He looked at her sufferings, and tauntingly asked in his native dialect:

"U tia 'mponga kai? Rume! (Where shall you see me again? I salute you.)"

The painful cries of the poor, bleeding girl soon brought around her her friends from the village, but the wicked old spy had run away with the greatest possible speed and was out of their reach.

There was no surgeon at hand to dress the wounds of the poor, suffering girl. She was carried home and treated as tenderly as could be expected in that dark part of the world. At length both tribes suffered so dreadfully from war and famine that they wished to make peace. They killed some cattle and sat down to eat together, and thus made a treaty of peace.

Next season, the Bakueni had an abundant crop of corn, but the Barolong were in great distress. Swarms of locusts ate up the produce of their fields and gardens, and they were obliged to beg for food from the people they once attempted to destroy. Among others, the old warrior who suffered extremely, and he set out on

## S.S. LESSON

November 1, Week's Temperance Study. The Fight Against Strong Drink. Ephesians 6: 1-20. Golden Text—Be strong in the Lord and in the power of his might—Eph. 6: 10.

### ANALYSIS.

I. SPIRITUAL DANGERS, 10-12.  
II. THE NEED FOR SPIRITUAL ARMOUR, 13-20.

**INTRODUCTION.**—Our lesson to-day comes from the closing section of the Epistle to the Ephesians. The apostle has reached sublime heights in this letter with his doctrine of the spiritual unity of Jew and Gentile in Jesus the Redeemer. He portrays the captivating vision of one Church throughout the world, deriving its life from Christ as head, and filled with all the fulness of God. Then he passes to the consecration required of Christians in the various walks and relationship of life, those of parents and children, husbands and wives, masters and servants.

Finally, he shows how, in face of the invisible and desperately subtle powers of evil in the world, every Christian must serve like a soldier, his post, wearing his spiritual armor, not carelessly throwing it aside as we are tempted to do. He describes what that armor is, and so we have the familiar and beloved picture of the Christian soldier, unit of the Church militant, watching at his post. The reader will remember how Gideon of old was commanded to select for service only those soldiers who were vigilant, and who kept grasping their armor, Judges ch. 7. The apostle's thought is, that in a world full of spiritual temptations the Christian ought always to be at his best.

I. SPIRITUAL DANGERS, 10-12.

V. 10. As Joshua in the ancient days was called to be strong and of good courage Josh. 1:6-9, so the Christian is called to be strong, not, indeed, in his own strength, but in the mighty strength of his Lord. The apostle knows that all power has been given to Christ, and that he must yet reign over all the forces of darkness, 1 Cor. 15:25-27. This thought is to give the Christian moral and spiritual courage to stand his ground unflinchingly.

V. 11. The reason for vigilance is that Satan is continually using "wiles" or stratagems to take the Christian off his guard.

V. 12. For it is not as if we had to fight only against visible opponents of "flesh and blood." Sometimes governments and peoples take up an attitude of hostility to Christianity, but then we know what we are up against. The really terrible, relentless, and unsleeping foes of Christ are invisible. They are not human "flesh and blood," but spirits and demons. The apostle believes that the fallen angels and other agents of Satan dominate the present evil world, and keep up an incessant fight against the people of God. These angels and Satanic spirits are the "principalities and powers and rulers of this dark world," of which he bids us beware.

II. THE NEED FOR SPIRITUAL ARMOUR, 13-20.

V. 13. Consequently, the Christian would need to grasp and to wear the whole armor of God, all the means that is, his divine religion provides for our spiritual defence and efficiency. It is not enough to have a helmet, if we have not also a shield and a sword. Some Christians are natu-

## SHORT CUTS TO YOUR CHICKEN CANNING

BY IMA EIGHT LINDMAN.

This is the time in the year when the progressive farm woman calls her poultry to save the expense of feeding the surplus cockles and the non-laying hens.

With a pressure cooker, the cooking can be done in an hour. This utensil is recommended for meat canning. Those who are not provided with this useful household appliance can use the hot water bath method, the water completely covering the jars. The contents should boil four hours.

1. Remove feet, wings and thigh; sever drumstick from thigh at second joint.  
2. From the wing joint cut open skin on neck.  
3. Insert fingers into above opening and pull out crop without severing it completely from body.

4. Halfway down the back insert knife close to backbone; find and cut under the shoulder blades, breaking and removing them at the joints.  
5. Find the cartilages on the ribs; cut through cartilages.  
6. Extend the cut to and around pelvic bone.

7. Insert hand into body cavity and carefully loosen entrails, including the two lungs, from the body walls.  
8. Cut around the intestines freeing them completely from carcass.  
9. Hold carcass firmly with one hand and with the other hand gently

pull out all entrails, pulling towards the head.  
10. Remove head from body if chicken was not banded when killed.

### CUTTING FOR PACKING.

1. Cut carcass into two parts, cutting through cartilages on the other side.  
2. Remove off one at end of back; cut back in half, cutting between second and third ribs.  
3. Cut off white meat on each side of the "keel" or breast bone.

4. Remove heart, liver and gizzard from entrails.  
5. Spread out the pieces on tray or cutting board, to pack quickly into clean hot jars.

**PACKING THE CHICKENS.**  
1. First place in a drumstick.

2. Place a thigh next to drumstick.  
3. Place two wings next to the thigh, fitting the elbow of one wing into the other.  
4. Place the neck portion in centre of jar with rib-end down. This acts as a support for the remaining pieces and also allows heat quickly to penetrate centre of jar.

5. Cover the neck piece with back.  
6. Spread white meat on top of back.  
7. Fit in remaining pieces completely to fill jar.  
8. Add two level teaspoonfuls of salt to each quart jar.  
9. Place jar ring; partially seal jar; sterilize.

**Feeding Bees for Winter.**  
To winter a colony successfully, they should have 60 lbs. of food in the hive when put away for winter. This would make a ten frame Langstroth hive-body with ten frames and inner cover weigh approximately 70 lbs. To feed sugar syrup for winter, invert ten lb. honey pails with fine perforations in the covers are the best feeders to use. If these are not available, however, Mason fruit jars with screw tops and two thicknesses of cheese-cloth used in place of the solid top will answer the purpose. These feeders are placed inside an empty hive-body and are inverted directly on top of the brood frames with a bag or quilt over the feeders to retain the heat while they are on the colony. The feeding is best done in the evening and the entrance of the colony should be reduced by at least one-half. The best time to feed is any time after Oct. 15th and a good colony will take down 30 to 40 lbs. of syrup in one night, if so much is needed. The syrup is best made of any white granulated sugar, two parts of sugar to one of water, by measure or weight. If these proportions are fairly exact and every granule of sugar thoroughly dissolved by placing it in hot water and constant stirring, there will be little granulation of the syrup afterwards. If the above directions are followed, the colony will not only be in good shape for winter but should not require any more attention, so far as the food is concerned, until May of next year.

### Factors in Milk Contamination.

In the report of the comparatively recently organized division of Bacteriology of the Dominion Experimental Farms, covering the year 1921 it is shown that the factors that stand out prominently in the contamination of milk are, first, carelessly cleaned pails, and, secondly, the health and cleanliness of the animal itself. Pails should be carefully cleaned and well dried. Care should also be taken to see that no dried manure particles get into the pail during milking.

Dr. A. Grant Lochhead, the Dominion Agricultural Bacteriologist, who is responsible for the report, which can be had at no cost on application to the Publications Branch of the Agricultural Dept., Ottawa, deals with other factors that are apt to cause milk contamination. Tests have been made at the Central Experimental Farm to ascertain how the milk is affected and statistical tables are supplied showing to what degree milk may be contaminated by unsanitary conditions pertaining to the milker, beast, stable and utensils. A clean pail, a covered pail, and a clean animal, marks the doctor, are the big things in producing clean milk. A study of the addition given of bacteria producing a bitter flavor in milk, of the microbiology of frozen milk, and of the retting. Cleanliness is next to godliness in agriculture the same as in other things.

### Good Milking Stool.

To make a milking-stool, use a piece of two-inch plank for seat, use legs about two inches in diameter (dressed down to one inch to fit in one-inch holes in the bottom of the seat), and a band of strap iron one inch wide to hold the pail. There is no hard and fast rule as to length of legs, for one man may like a high stool, another a stool not so high.

If you wish, you can put a cushion on the seat. This can be made of some pieces of burlap held in place with tacks or shingle nails. Or let the edges go over the seat and fasten under the strap iron.

When a cream separator is running the bowl should spin like a top with no vibration. If the bowl vibrates, see if the bearings are worn or loose.

### Disposal of Surplus Corn.

This year a large number of farmers will have considerable corn left over after filling or even re-filling their silos. The disposal of this will have an important bearing upon the control of the corn borer. If it is not handled in some way by which the borers will be killed it will serve as a dangerous source of these insects next year, so says Prof. L. Casar, Provincial Entomologist. We should advise that all such corn be cut low and either stooked and then when the stooks have dried out burned, or else that it be hauled out of the field from time to time and fed to the cattle before using the corn that was in the silo or to supplement this, and that whatever uneaten remnants there are to be gathered together and burned when dry. Another method is to run all through a shredder or cutting box, feed as much of this as is wanted, throw the rest into the manure early so that it will all be rotted by spring and then next spring let it be plowed down.

Unless it is first shredded or run through the cutting box do not let it get into the barnyard or manure because numerous borers will live in the stalks lying around the barnyard even when on the manure pile. It is only in those which are buried in the manure for a long time at least ten inches deep and which have heated and rotted that the borers are destroyed. Remember that borers will live for months in stalks lying in ice pools in the barnyard. Cold and wet alone will not kill them. It requires heat enough to cause the stalks to rot and to become slimy and uninhabitable to bring about their destruction.

Every farmer should keep in mind that the way to control the borers is to leave no part of the corn crop except the grain itself above the ground after June 1st. The watchwords are: feed, burn and plow.

### Sweet Clover as An Improver of Soils.

Its ability to extract nitrogen from the air makes sweet clover very valuable as an improver of soils which have become deficient in organic matter through continuous grain growing. This quality of the plant is emphasized in a new bulletin, distributed by the Publications Branch, Dept. of Agriculture, Ottawa. Sweet clover thrives on poor soils, and produces an abundance of large, fleshy roots in which nitrogen from the air has been incorporated. In decaying, these roots supply organic matter to the soil. In one experiment it was found that a yield of 2.43 tons of water-free sweet clover tops, taken in the spring, contained as much nitrogen as twenty tons of average farm manure and that the nitrogen content of the roots, at that time of the year, could not be much less than that of the tops.

### Sweet Clover as a Pasture.

As a pasture sweet clover has a carrying capacity unequalled by most crops. Cattle have been pastured on this crop at the Brandon Experimental Farm with no apparent ill effects. The condition of the animals was in no way affected and the milk supply was maintained. According to a new bulletin on sweet clover distributed by the Publications Branch, Dept. of Agriculture, Ottawa, sweet clover makes a very soft feed when used alone and it is advisable to give the animals access to some form of dry roughage. In order to keep the crop from becoming rank and coarse it should be kept well pastured down. It withstands the effect of pasturing very well and it is possible to use even the first year's crop. Hogs may be turned on when the plants are 8 or 9 inches high, with good results.

### Health of Our Live Stock.

There is much of a comforting nature in the report for 1924-25 of the Health of Animals Branch of the Dept. of Agriculture at Ottawa. The Veterinary Director General, Dr. George Hilton, in reviewing the contagious disease situation in Canada shows that the animal diseases that a few years ago were troublesome have been banished from the country. Rabies has not been detected in any part of Canada for years. No outbreaks of dourine have been reported among breeding horses for five years and there is every reason to believe that infection does not exist in this country. Only one outbreak of anthrax was reported in the year, and that was in British Columbia and was brought speedily under control. The malady is extremely rare in Canada. By vigorous action hog cholera has been practically eradicated. Suspected glands not being promptly reported in unprogressive settlements of Alberta and Saskatchewan, action has been necessary and has proved effective, but close supervision is being kept to prevent recurrence. Eastern Canada and Manitoba are free of the disease. Prince Edward Island, New Brunswick, Quebec and British Columbia are free from mange, but isolated cases are reported in Nova Scotia and Ontario. Manitoba, Saskatchewan and Alberta have had to have energetic attention, especially in the last-named province near the International boundary. All Canada has been practically free from sheep scab for many years.

Good progress is being made in the control of bovine tuberculosis. Live stock breeders, says Dr. Hilton, are now commencing to realize that it is poor business to maintain diseased herds and to purchase animals from questionable sources. When the report was published there were 1,675 fully accredited tuberculosis herds in Canada and 2,100 undergoing the process of accreditation.

There is also a tuberculosis free area in the Carman district in Manitoba, which is being dealt with under the Restricted Area Plan. All cattle in an area comprising the Counties of Huntingdon, Chateauguay, and Beauharnois in the Province of Quebec have also been tested by veterinary inspectors and reactors destroyed. There is every reason to believe that this area will be a tuberculosis free area by the time the next annual report is issued.

### Give the Sheep Some Comfort.

If one bedding can stampede a human family, what must a sheep feel like if you permit a thousand ticks to worry her all winter? Who feeds the ticks? If the sheep is yours, you do, as they eat up what might have been profit.

All farm flocks should be dipped or treated with a tick destroyer during the early autumn. Fix up the dipping vat, get the chemicals ready, and wait for a bright day in mid-October, and then make a thorough job of the dipping.

Proprietary dips are very useful for small flocks and give efficient results if directions as to their use are followed. They are made from coal tar nicotine or creosol preparations. The young tick emerges from its sack in 19 to 24 days after birth; this makes it necessary to dip twice at 24 to 28 days interval if both old and young are to be destroyed. One dip for the sheep gives but short relief. Do it twice for complete eradication and see that sheep keep out of their winter quarters for at least two months before being brought in from the autumn pastures. This is necessary to prevent reinfestation.

Husbands, lend us your ears. Buy your good wives vacuum cleaners and save many of their burdens. You will be good.

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