

market milk to our city markets because they must keep their stables in better condition than is usual and the milk must be cared for properly. This is one of the reasons why market milk is worth more than cheese milk. Dirty stables and cows mean that much dirt can find its way into the milk pail and dirty straw or manure abounds in the more injurious bacteria, we are told. One often notices the practice of cleaning the stable or bedding down the cows while the milking is being done and those who do it are either careless, or they do not realize that the air becomes heavy with dust, some of which inevitably finds its way into the milk pail. Do not leave the milk standing in the stable while the calves are fed or the last little chores are done about the barn. Take it out of the stable air as quickly as possible after it is drawn.

What is the use of having clean healthy cows and clean stables if we draw the fresh uncontaminated milk into dirty milk pails or dirty milking machines? The milk should be carefully strained immediately after milking through a fine, wire strainer or a clean cloth. The strainer requires special care and to keep it clean it requires to be rinsed and scalded after each milking. If cheese cloth is used to strain the milk it will pay to renew it frequently and boiling occasionally will help to keep it clean until it is renewed. The cans in which the milk is kept or taken to the factory must be just as clean as the milk pails because bacteria which cause the souring or the spoiling of milk would just as soon find their way into the milk by way of the milk cans as the milk pail. Much of the trouble from milking machines is due to the fact that they are not kept clean. It is just as possible to produce clean milk drawn through a milking machine as by hand, but sometimes, due to carelessness, such milk is not nearly as clean as that which is hand drawn. The statement that cleanliness is next to Godliness was never more true than in connection with the dairy industry. Eternal vigilance against the unclean in the price of clean milk and pure dairy foods.

And now for the dairyman himself. Must he wear a white apron—a clean one—and comb his hair and have a bath before each milking. Not by any means, although it might mean cleaner milk if he did—and less of it for the consumer. At least he can wash his hands and perhaps have a clean smock in the milk house that he can slip on when it comes time to milk. Clean earth even if eaten will not harm many people, but it is not the earth or the straw in the milk that spoils it but the injurious bacteria that cover it. The same is true of our hands. Even clean hands probably carry some bacteria, but if we could count the bacteria on even a moderately dirty hand we would probably be astounded. All bacteria are not harmful, even to milk which is so very susceptible, but the harmful kinds are so tiny and numerous that they are like the poor—they are always with us.

"Let us then be up and doing" and if it is not practicable for us to produce absolutely clean milk let us do the best we can. The spirit of cleanliness will produce marvellous results if we encourage it. Diseases and death to human beings follow in the wake of dirty milk.

### Holstein Sale at Unionville.

The weather on Tuesday, May 4, was too fine for the success of the Holstein sale, held at Unionville, comprising the herd of the late Frank Boyle. Many of the cows, too, had gone partly wrong in their udders from some cause or other, and this, of course, pulled down the average as well as the prices of those which were sound.

Some cattle were consigned by W. F. Elliott and these also sold well within their value, and the sale throughout may be said to have favored the buyers rather than the sellers. The total receipts for the sale were \$6,097, of which \$4,510 was paid for the Boyle herd. The cows, three-years-old and upwards, made an average of \$222, and calves under a year sold from \$50 up to \$135. Following is a list of the animals sold for \$100 or over, together with the names and addresses of their purchasers:

Dina Pontiac Galatia, A. W. Stephenson, Richmond Hill	\$235.00
Heifer Calf, J. W. Stewart, Lyn	105.00
Pietertje Sylvia, A. W. Churchill, Philipsville	325.00
Rivermead DeVries Sylvia, H. W. Emerson, Harlem	
Heifer Calf, F. C. Brown, Norval	200.00
Greenwood Princess, A. W. Churchill	120.00
Princess Sylvia Pontiac, G. C. Lockyer, Lansing	155.00
Heifer Calf, J. W. Stewart	225.00
Gipsy Wayne Pontiac, E. E. Muirhead, Clarkson	125.00
Queen Pontiac Ettie, Leslie Mason, Agincourt	330.00
Queen Buttercup, A. W. Stephenson	180.00
Heifer Calf, H. Adamson, Edenvale	260.00
Queen Pontiac Buttercup, G. C. Lockyer	130.00
National Echo Posch, A. W. Churchill	205.00
Pietertje Texal Bessie, Geo. Forester, Gormley	205.00
Sir Sylvia Texal, E. F. Ramsey, Sharon	100.00
Pontiac Sylvia Cornucopia, Carman Baker, Brighton	200.00
Verhelle De Kol Keyes, J. F. Elliott, Agincourt	390.00
Rivermead Sylvia Keyes, Carman Baker	150.00
Spotty Silva Echo, F. C. Hamilton, Kelvin Grove	350.00
Pauline Soot, J. Fitzgibbons, Scarboro Jet	120.00
Heifer Calf, H. W. Emerson	225.00
Hei Leo May, J. R. Green, Concord	135.00
Roseland Segis, W. W. Clubine, Kirkland Hill	200.00
Sir Echo Galatia, Wm. Sillen, Agincourt	250.00
Sylvia Posch Beets, H. W. McMillan, Philipsville	100.00

Rivermead Fanny Cornucopia, Wm. McKeen, Scarboro Jet	210.00
Lyndenwood Comet Ormsby, Geo. Forester	205.00
Mercena Hengerveld Korndyke, W. W. Clubine	240.00
Lora May Pontiac, F. C. Brown	145.00
Susie Korndyke Walker, H. Adamson	180.00
Neta Pontiac Sylvia, H. Adamson	175.00
Dorothy Hill, H. W. Emerson	232.50

## POULTRY.

The orchard is usually an ideal place to rear young poultry stock. They get plenty of shade, exercise and animal feed.

If the broody hens are allowed to occupy the nests, the hens that want to lay cannot do so and the egg yield is likely to be curtailed.

Put the chicks on new soil if possible and choose such soil as is not too heavy nor wet. For the first week or so they should not be given too much range.

Do not forget that with the advent of warm weather the laying flock needs plenty of exercise and green feed. Free range is excellent and reduces the amount of feed required, besides keeping the birds in good health.

It is very important to remember that when hens are used for hatching they must be dusted thoroughly with insect powder a few days before the hatch comes off, or a heavy mortality may result among the chicks.

A mixture of rolled oats or dry bread crumbs together with a small quantity of hard boiled eggs is recommended for the first feed of young chicks. Use one part of eggs to six parts of rolled oats or bread crumbs.

When the chicks hatch it is a good plan not to feed them anything for about three days because sufficient nourishment is provided within the egg to last the chick for this length of time. Bowel and digestive troubles may result from feeding too soon.



Where Both Chickens and Children Have Free Range and Plenty to Eat.

As yet there is not sufficient green feed and insects to give the birds all the feed they require on the range. At any rate it is not advisable to change the feed too suddenly and as the range gets better the grain that the hens have been used to should be gradually cut down.

If the flock is a good sized one and you are not sure that there will be sufficient of the right sort of green feed for the summer months it will be profitable to plant two or three small patches of such crops as peas and oats. A row of sunflowers is desirable also for shade.

What plans have been made so far for the co-operative marketing of eggs in your locality? We are now getting nearer the hot summer weather when the loss from spoiled and stale eggs is always very high. Co-operative marketing through egg circles or farmers' clubs should make it easier for everyone to get the most out of the product of the poultry yard.

Broody hens that are not required for hatching purposes should be looked after promptly. One of the best ways to break up a broody hen is to confine her to a slat bottomed coop for three to five days and feed her on a light ration of wheat with plenty of water. As all heating feeds away from her and do not let her frequent her natural nest. Some poultrymen confine broody hens in a swinging coop that tends to make her forget about her broodiness more quickly.

## Duckling Raising.

EDITOR "THE FARMER'S ADVOCATE":

In order to raise ducklings successfully, the eggs should be carefully selected and kept in a dry, cool place, and set in from ten to twelve days after being laid. The nest should be thoroughly cleaned and sod cut to fit the nest, then put chaff two or three inches deep on top of the sod. Hollow the sod in the centre so as to make it nest shape.

Put the hen on the nest for a day or so, so as to get her used to the nest before setting. Slats should be put in front of the hen so as to prevent other hens breaking the eggs. The hen should be fed and watered twice a day.

If the eggs should happen to get broken in the nest while sitting, they should be washed in lukewarm water and then fresh chaff put in the nest. As soon as the ducklings start to pick the shells, dip the eggs in lukewarm water every four or five hours. When ducklings begin to hatch out take them from the nest and put in a basket, with a woolen cloth over them, and put in the basket in the house where it is warm until all are hatched.

When starting to feed the ducklings give them sweet milk after they are twenty-four hours old. Ducklings should be given to the hen and kept in for a few days, then let out in the middle of the day. Do not let them out in wet grass until they are three or four weeks old. Feed them on bread and milk for two or three weeks, and then start them on a mash of sour milk and shorts. Mix the mash four hours before feeding.

A yard should be built for ducklings and it is best to have a shelter in one corner so they can run under it, to prevent the hot sun and winds from striking them. They should have fresh water in front of them all the time. A trough should be put in front of them about seven inches deep, so as to prevent drowning. Young ducks can be raised on shorts and cornmeal. Mix one-third cornmeal and two-thirds shorts and feed three times a day. Ducklings can be kept on this until ready for market.

Leeds Co.

WALTER MANHARD.

## Handling Young Chicks.

In handling young chicks, whether hatched by the natural or artificial method, that is to say, with a hen or with an incubator, many make the mistake of feeding

too soon after hatching. At the time it leaves the shell the young chick has a substantial amount of yolk attached to its digestive tract which is sufficient to provide it with all the feed it needs for five or six days. Feeding before the greater part of this yolk is absorbed into the system is very likely to cause digestive troubles. After the chick has been hatched about three days, some feed should be given in small amounts and at frequent intervals. Feeding frequently is much better for the chicks than feeding larger amounts less frequently. It has been discovered that for the first ten days or two weeks it is a good plan to feed at two or three-hour intervals, giving five feeds per day, especially for early spring, while as the hours of daylight lengthen so that it is still light at 7 or 7.30 p.m., another feed should be given. Probably these feeds could be equalized best throughout the day as suggested by Professor W. R. Graham, O. A. C., Guelph, in the following: The first feed, 7 a.m.; second, 9 a.m.; third, 11.30 a.m.; fourth, 2.30 p.m.; fifth, 5.30 p.m., and where a sixth feed is given, 7.15 or 7.30 p.m. It will be noticed that the two first feeds are only two hours apart, which is due to the fact that in the morning the chicks are hungry, and two fairly light feeds close together at this time will have a tendency to avoid overfeeding.

We have already mentioned in these columns a mixture of rolled oats or stale bread crumbs, mixed with hard-boiled eggs for very young chicks. The eggs should be boiled for thirty minutes and fed in proportion of six parts of rolled oats or bread crumbs

to one part of egg including the shell. Two or three days after hatching commercial or hatched chick feed can be given. 35 parts; granular corn, 30 parts; always make some form. So very young chicks have a limited experience of one time soon, and this of equal parts of meal will make a that are being fed be fed separately of equal parts of is used for the eliminated during wheat may be s chicks grow large the hen is much artificial, principally look after the flock considerable extent.

Both underfeeding tests have about one ounce proper amount increase should or fifth day. We are told that of an ounce per the chicks are a to use some kind ration, and for to a crumbly c middlings, will stale bread mo factorily, and al add some bone per cent, or less powdered charc orders.

Some poultry to the chickens t advises the use day, and after buttermilk for is likely to over to the tenth da Green feed also or sprouted gra fed to supplie of them. If fe it should be sc pen, because al work away at get the necessa

Frequent fo chicks are fou artificially. A be reduced to daily. When daily, the ratio corn fed in the a mash feed of