

three per cent. milk. For each pound of 3.5 per cent. milk .316 and .049 must be added respectively, and for 4 per cent. milk, .346 pounds and .054 pounds. This would make the total nutrients required by a cow giving 50 pounds of 3.5 per cent. milk, 23.72 pounds. A rule followed by some dairymen is to feed about one pound of concentrates per day for each pound of butter-fat given during the week. Thus a cow making 14 pounds of butter a week would be fed 14 pounds of concentrates daily in addition to the roughage she requires. When whole milk is marketed, a rule is to feed one pound of concentrates per day for each four pounds of milk produced. According to this a cow giving 50 pounds of milk per day would require 12½ pounds of concentrates, made up of grains and mill feeds, to balance the ration. These rules are only approximate. Keeping records of feed and milk and doing a little experimenting is the preferable method. Each dairyman must study the individual cows in his herd. The feed which gives best results with one cow may not prove so satisfactory with another. Balanced rations containing the proper proportions of the different nutrients can be made up from a great variety of feeds. Therefore, the dairyman should first consider what he is growing on the farm and if necessary purchase those concentrates which furnish most protein. When grain is scarce brewers' grains, linseed meal, cottonseed meal, etc., or an increased amount of clover and alfalfa hay may be used. With grains plentiful, but shortage of hay, silage and straw could form the bulk of the roughage and the proportion of grain increased. In certain districts dairymen are getting very good results this fall feeding silage and alfalfa hay. Of course their cows might do better if fed some concentrates, but, in order to be profitable, the milk yield would have to increase sufficiently to pay for the extra feed, which would have to be purchased on the open market. Silage 30 lbs., roots 40 lbs., straw 5 lbs., clover hay 8 lbs., brewers' grain 3 lbs., bran 4 lbs., makes a fairly good ration but a trifle short on the dry matter. Roots are not always available and the home-grown grains may be plentiful. Therefore a ration with a nutritive ratio of 1:5.2 is made with silage 40 lbs., clover hay 5 lbs., oat chop 2 lbs., barley 1 lb., bran 1 lb., and oil cake 2 lbs. For a cow giving 40 lbs. of milk per day the following gives fairly good satisfaction: silage 40 lbs., hay 10 lbs., oat straw 4 lbs., cottonseed meal, or oil cake meal 2 lbs., bran 4 lbs., oats 3 lbs. and barley 2 lbs. A ration with a nutritive ratio of about 1:5.8 is compiled with silage 30 lbs., alfalfa hay 12 lbs., mangels 20 lbs., oat chop 5 lbs., barley meal 3 lbs. For heavy production about a pound of oil cake per day might profitably be added.

Feeding a balanced ration is not in itself sufficient for profitable production. The cow must be made comfortable, which will require that she be housed in a well ventilated stable, during the winter, where the temperature will range around fifty degrees F. The stable must be kept clean and the feeds kept as clean as possible and prepared in such a way that they will be palatable. The cow in milk requires a large quantity of water daily. Salt in the ration is also essential. Some feed twice a day, others three times a day, with about equal results. Feeding and milking should be done at a stated time each day, as the cow soon forms the habit of wanting her feed at a certain time whether it is two or three times a day and if the regular hours are not adhered to the dairyman suffers by a decrease in the production. Combined with good feed and attention must go kindly treatment. The cow that is treated roughly will not give the same quantity of milk as she would were she handled in a gentle manner.

POULTRY.

The Coming Chick Crop.

EDITOR "THE FARMER'S ADVOCATE":

The time to work for a better chick crop is right now. We cannot expect to put it off until it is time to put the eggs under the hen or in the incubator and then realize our dreams. Now is the time. What can we do at this early date to secure not only a good hatch but a better flock of chicks?

First, pick out the finest hens for breeding purposes. These will be the hens that are not too old, those which are thrifty and well formed, and good layers. Birds that are neither too young nor too old should be chosen for this important work. What applies to the hens may be said of the male birds, so far as age, thriftiness and perfect form are concerned. The most handsome bird of the flock ought to be mated with females of a like degree of beauty and efficiency. For it is not a fact that like produces like. Like produces either something better or something worse. So it pays well to begin with the choicest stock for breeding purposes. And then feed for the very top notch of efficiency. from now until it is time to select the eggs for hatching. The hens may be fed cracked corn, wheat and oats, as a grain feed with a mash of wheat middlings, wheat bran, cornmeal and a little beef scrap. This fed dry. Watch that your birds do not get too fleshy. That is the way to infertile eggs.

One of the best things of all is to mate a small number of hens with a single male. Too often we find twenty five or thirty hens in a pen with a single male. Too many by at least one half. For the best results a dozen hens are all that should ever be mated with one male.

These points carefully followed should give both

extra good hatches and superior birds. Keep this up and success must come.

N. Y.

E. L. VINCENT.

Egg-laying Competition.

The Philadelphia, North American International Egg-laying Competition which is operated on the grounds of Delaware College, Newark, Del., completed the fifty-second week of the fifth year. One hundred pens, of five birds each, were entered, and birds in a large number of pens were persistent layers during the entire year. A pen of White Wyandottes, entered by Tom Barron, Catforth, England, produced the highest number of eggs. Their total for the year was 1,305 eggs, or 261 per bird. The second highest was a pen of White Leghorns with a total of 1,151 eggs, entered by E. A. Ballard, Chestnut Hill, Pa. A close third was Barron's White Leghorns, which produced 1,147 eggs. Many pens have a record of over 1,000 eggs for the year which puts them in a class far above the average. One pen of Barred Rocks laid 1,000 eggs, pen of White Rocks 1,033, and pen Columbian Rocks 1,015. The best pen of Reds reached 966 eggs.

HORTICULTURE.

Don't Follow the Crowd.

During the last few years there has been a widespread feeling in North America that the apple-growing business is being overdone. This sentiment prevails here and there, where apples are produced, from the Atlantic to the Pacific, and from the northern latitudes away down into the Southern States. All growers do not entertain such ideas about the enterprise, but those prominent in educative and administrative circles have done considerable figuring to reveal the markets that may consume the enormous production when the visible plantings come into bearing. Following the boom of several years ago many trees were set, not only in Nova Scotia, Ontario, or British Columbia, but in the Western States as well as East and South throughout the Republic. Had they been properly cared for and brought to fruition the result would have been manifest by the present time, but as it is many plantations have already gone under and thousands are going as quickly as neglect will propel them along. This is particularly true in case of absentee ownership, where the would-be fruit grower has still clung to his profession, whatever it might be, and has attempted to develop his holding until such time as the luscious fruit, clinging to the branches in his orchards and vineyards, would insure him a substantial income and would warrant him leaving his profession for the seeming romantic life in the country. One cannot derive the same profit from labor employed on the land as in manufacturing pursuits. Some of the most brilliant industrial managers have learned this. Men who can employ thousands and use their labor to enhance business and savings fail to make a farm pay. Thus it has been with the young fruit plantations. The income from the first has not been up to expectations; unthought-of difficulties have arisen; interest has waned, and the end is in sight. Year after year sees a decrease in the area that will probably factor in the fruit crop within the next five to seven years. Conditions will gradually right themselves, and he who adopts modern methods and "sticks" will, we believe, be on the inside when the next period of prosperity comes.

Ontario growers have had considerable to contend with during the last five years, yet there are those who have made money in spite of the ill winds. In suitable locations and under favorable conditions it appears that the present is as good a time to plant trees as there has been for a long period. If one follows the crowd in the fruit business, the spoils must be divided amongst so many that each one will receive a small portion. A modest expansion now may mean an opportunity to share some of the good things that periodically come about.

Experience is demonstrating year after year that profitable fruit growing will eventually get down to a basis where the small farm orchards, other than enough to supply the home, will become extinct, and the great quantity of fruit to supply home and foreign markets will be produced on large plantations that will be managed as extensive commercial fruit-growing enterprises. The late Alex. McNeil, when Fruit Commissioner for Canada, saw this coming several years before his death, and as years go by his prediction is gradually coming true.

FARM BULLETIN.

A Wet Day.

BY PETER MCARTHUR.

It is so long since I have been kept to the house by a rainy day that I hardly know what to do with myself. Of course I am glad that it is raining for rain is sorely needed throughout the whole district. Rainwater cisterns have gone dry and I know from experience that bringing home a barrelful and a churnful of water every washday from the nearest artesian well that yields soft water is not the kind of chore that a fellow cares to look forward to as a regular thing. As I write I can hear the water gurgling into the cistern from the flowing caves and I know that I shall not have to haul home a stone-boat load of water for the next few weeks anyway.

That is a cheerful thought and I am making the most of it but I can't spread it over a whole, dreary, wet day. Occasionally I reflect that this is a fine, warm rain and that if it doesn't turn cold after it we may yet get a good feed of mushrooms. They have simply tantalized us this season. Never did the most patient search by the whole family result in getting more than a taste. But even thinking about mushrooms cannot be made to take up so very much time. Of course there is a load of books to be read—two new books on the tariff, one for and one against—Lionel Curtis' Round Table "Problem of the Commonwealth,"—and a lot of lighter books, but I am not in the humor for reading when everything looks so gloomy. On a bright, sunny day I could sit by a window and read from morning till night but to-day I feel that I need exercise and that I'd like to be pottering around doing something or walking to the village. I guess the whole trouble is that I know I am a prisoner in the house for the day and something in my system rebels. There is a great deal of truth in a story I heard when a boy. It is about a man who lived in one of the old walled cities. As he grew to be an old man he used to boast that he had never been outside the walls of the city, and every year he grew more proud of the fact and more boastful about it. At last the king of the country heard about this man and humorously exercising his royal power he issued orders that under no condition was this man to be allowed to go outside of the city. As soon as the poor man heard of the decree he immediately began to pine and fret to go out, until at last he became so miserable that he petitioned the king to revoke the decree and let him go out of the city. All of which shows that this human nature of ours is a peculiar thing if we would only allow ourselves to confess it. Although I know there is no real reason why I should go to the village to-day I feel in my bones that before the day is over I shall go slopping to the post-office to see if there are some more letters there that I don't expect to get.

Although the mail carrier brought the papers as usual they only helped to unsettle me. Yesterday they brought the news that Hughes was elected President in the United States and to-day they say that Wilson has probably been elected, but they are not sure about it. The news they bring is about as uncertain and inconclusive as if it had passed through the hands of a censor. Possibly if I went to the village I could find out at the telegraph office which one was finally declared elected. To make matters worse, I had written an article about the election of Hughes before the papers came and now I have to throw it away and write this article instead. Do you wonder that the rainy day has proven a nuisance to me, even though I have been wishing for rain for weeks—ever since the cistern went dry. The election of Hughes gave me a splendid subject for an article, for the election was really a wartime election, and if it had resulted in a change of government the change would have been full of lessons for us. Although the United States are not at war we would have had a chance to see how their interests would be affected, and could judge whether it would be safe for us to have a war-time election, no matter whether it caused a change of government or not. You know it is beginning to look as if we might have an election during the war after all, though I doubt if many people would consider such a move to be wise. If either party could force an election and place all the blame for it on the other fellows they would bring it on with a whoop—all of which tends to convince one that we should not have the election.

Although I have been opposed to a war-time election ever since it was first spoken of as a possibility, I am beginning to change my mind and the reason for the change has nothing whatever to do with the conduct of the war or to any preference I might have in the way of having one party or the other win. If it could be conducted peacefully and without disturbing the country in its attempt to prosecute the war to a successful finish I should like to have an election held just because I should like to have the soldiers' vote counted. For some time past ill-advised persons have been raising the question of loyalty, as if one political party were more loyal than the other. Piffle! I have never known a political party that was loyal to anything except to the interests that supplied it with campaign funds. True loyalty is a personal matter and can be found only in individuals. There are many instances in history where the man who opposed both king and government turned out to be rendering them the best service and to be most thoroughly loyal. Some of the finest expressions of loyalty I have heard since the outbreak of the war have been by men who have been getting rich from the needs created by the war. They reminded me of a remark made by Vice President (or perhaps ex-Vice President) Marshall of the United States, in a recent interview. He said, "We all mourn better if we are mentioned in the will." Men who are getting unexpected profits, are like Artemus Ward, who didn't care if the war lasted "as long as his wife had any relatives left to send to the front." Loyalty is a dangerous and irritating question to discuss but I do not think anyone will doubt the loyalty of the men who have enlisted. I am of the opinion that if a war election is held it will be found that the boys at the front will be about equally divided between the two political parties. Although it seems impossible to get exact figures about the soldier vote in the recent election in British Columbia, it must have been pretty fairly divided because it made no real change in the results. The defeated Prime Minister was elected by the soldier vote and I understand that one defeated Liberal was elected in the same way. This would make an even break and no one in British Columbia need say that both parties are not well represented at the front. I feel sure that a Dominion-wide election would give a similar result and for that reason

NOVEM

alone I
forever t
But that
election.

P. S.
and I h
am going
I see thr

Recor
A

During
number
Aberdeen
was keen
prices w
ported Sh
week for
\$159,000
Wisconsin

On N
Anoka Fa
which br
calf sales
averaged
The sale
which br
Loyal St
Augustus
Bandmas
Regal Sul
Some hig
Clipper 3
Clipper 4
Lovely A
Victoria 2
for \$1,000

The C
stock at
event. B
for securi
Britain by
head. At
There was
some of An
\$53,835,
were offer
Corporal I
Proud Bo
Hean Mar
Rosewood
Carnation
Highfield
ing Bride
Woodend
\$1,225; H
2nd, \$1,200

The sa
J. W. McI
Wapello, I
gratifying
demand fo
Marshall
\$1,825. C
land Victo
of \$850, a
thousand
a good bu
highest-pri
brought \$
\$1,300; Vi
\$1,050.

Herr F
last of the
their own
prices. Th
Future Sul
bull respec
Rock and
Eight hund
female. T

Toro

Receipts
Yards, We
13, were 2
calves, 891
horses. M
Good butch
ners and cu
cents high
higher. M
Calves firm
and 15 ce
at noon, p

The total
City and
past week v