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### HOW CANADA COMPARES WITH OTHER COUNTRIES IN WHEAT PRODUCTION.

As the value of the wheat crop on the prairie is normally about fifty per cent. of the total value of the entire annual agricultural production of the prairie provinces, it is interesting to learn how the yields of this important crop in Canada compare with those in other countries. Briefly stated, Canada has a much higher average yield per acre than any other important wheat exporting country. Some countries which import wheat have a higher average yield per acre than Canada but there are only a few of these, such as the United Kingdom, Germany and Denmark, which have a yield considerably higher, while the total quantity produced by these countries is relatively very small. Moreover, the expense of producing wheat in these countries is extremely high. Even such an important wheat producing country as France has an average yield of only two bushels per acre higher than Canada, while both Italy and Rumania have lower yields per acre.

The average yield per acre of wheat, over a period of 23 years, for the following chief exporting countries of the world, is as follows: Canada, 17.8 bushels; United States 14.1, India 11.3, Argentina 10.6, and Australia 10.4. In Russia the average yield over a period of 15 years, was 9.4 bushels per acre. It will be seen, therefore, that Canada enjoys some considerable advantage over other exporting countries. This advantage is due in part to a natural adaptation of wheat to the soil and climate of this country, and, also, to improved methods of cultivation as well as to better varieties of wheat which have been introduced by scientific agriculture.

Nevertheless, in spite of this very favorable showing in average yield

per acre, Canada is unfortunate in having the greatest variation from year to year of any large exporting country in the world. This large variation exists not only between individual years but also between averages of two successive year periods and of five successive year periods. The lowest yield per acre ever secured in Canada as a whole, was 10.1 bushels in 1919, while the highest yield was 26.0 bushels in 1915. The five-year period, from 1917 to 1921, had an average yield of only 12.8 bushels per acre, while the five-year period, from 1901 to 1905, had an average yield of 21.2 bushels per acre. Australia, while having less variation than Canada in bushels per acre, has a larger variation in per cent. of the average yield. For example, in Australia in 1903 the average yield was only 2.5 bushels per acre, while in 1921, the highest yield on record, it was 16.0 bushels per acre.

The outstanding facts, then, in the Canadian production of wheat are that the average yield per acre is much better than in any other exporting country in the world, but that, unfortunately, the variation from year to year is also greater than in any other country. The reason for this great variation in yield is due predominantly to variation in rainfall. When the season is dry the yield is small. It is self evident, therefore, that experimental work is urgently required to try to improve this condition. It is the object of Experimental Farms to experiment in order to discover methods of farming which will reduce the injurious effects of dry years. The high average yield per acre, which Canada now enjoys in comparison with that of other countries, is due in quite a large part to the results of scientific agriculture. There remains yet the difficult task of reducing the losses suffered in dry years.

### POULTRY.

"Well, Mac," I said, "I suppose you're getting ready to mate up your breeders now, aren't you?"

Bruce MacDonald gave a hearty laugh. "You know right well I don't bother mating them; they just run around and mate themselves."

"Yes," I agreed, "maybe they do. By the way, where's that prize male bird of yours? Do you still have him?"

"Say, he's a dandy, do you know it? Yes, I still have him; he's around somewhere. I paid ten dollars for him."

"I suppose this good bird will mate with every bird on the farm," I said.

"Well, I don't know about that," he replied, "but I suppose likely he mates with a good many of them."

"Look here, Mac," I went on, "you have a few good birds. Well, why in the world don't you put these birds in a pen with this good male of yours and get something good from them, instead of letting them go to waste around the farm?"

The foregoing state of affairs seems to prevail on a number of farms. There may be one or two good males and a few head of standard-bred females; but they are running all over the farm, the good male mating with the scrub stock as well as with the good females, and the males of the scrub stock mating with the good females.

Nearly every farm flock has some real good birds that are worth breeding from. These should be selected from the rest of the flock and kept by themselves. If there is no real good male on the place one should be procured.

The first thing to do is to select out the birds to be used as breeders, bearing in mind the purpose for which the birds are to be bred, which in most cases is egg production. Vigor above all is the first thing to consider. Health, erect carriage, prominent eye and pep all go to make and indicate vigor.

A good depth of body, as measured from the middle of the back to the front tip of the keel bone, and a broad back—one that does not cut in toward the tail—are indications of capacity, and birds showing such characters should be kept, as should birds that "handle well"—that is, have soft, pliable skin that is loose and velvety to the touch. Also a bird showing three or four fingers' capacity in the abdominal region is one that should be kept.

The birds that should be selected as breeders should be kept by themselves and not permitted to roam all over the farm. The number of males to use depends upon how many females there are in the pen. One male may be used to about twelve or thirteen females of the lighter breeds, and about one male to eight females of the heavier breeds.

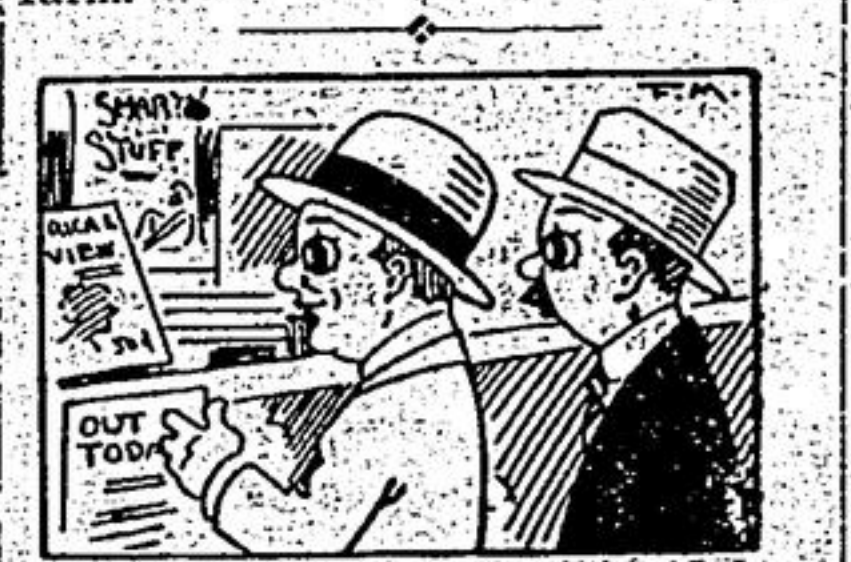
Where large flocks are used, however, say of about one hundred, this proportion may be increased, so that where a flock of this size is used, four males will answer.

Matings should be made during January at the latest. Preferably, however, during December. This seems pretty early to many poultry keepers to be thinking of mating birds,

especially since most chicks are not hatched before March or April.

There are reasons for this, though, one of which is that the actions of the male can be observed and if he does not show the necessary breeding qualities, he can be removed and another substituted before the actual breeding season arrives.

Further, sufficient time can elapse so that high fertility will result. In this connection, if it is at all possible to run through a preliminary hatch it should be done, so that there can be no question as to the value of the male as a breeder. Early mating also permits of selling hatching eggs in addition to hatching for the home farm.



"That magazine carries the best romance I've ever read."

"Yes; it's ads are particularly interesting, I think."

I provide greens for hens in winter, by putting about one peck of oats into a coarse-mesh sack, add an equal quantity of sand, and moisten well with hot water. Then I place sack and contents in a large split basket and set in a warm place where the sunlight can reach it sometime during the day. In a short time the oats will send out green shoots, pushing their way through the sack the same as if it were soil. The basket becomes filled with a mass of green, and is ready to set before the hens.

Crossing produces stamina, but it does damage by destroying the purity of the breed.

### Encourage the Birds.

It really needs no argument to say that birds are useful as well as ornamental. With a few exceptions, they serve a very important purpose in keeping the earth's vegetation from being almost entirely destroyed by insect pests. They do the double duty of protecting our food for us and fixing the air with music.

Birds are diligent in their consumption of those insignificant things which cause man so much trouble. But, we wonder if man is as diligent in reciprocating.

With the deforestation of the land, which the hands of man have wrought, the harbors and hiding places for birds have been largely destroyed. Their food supply has also been tampered with, so that at times their search for food avails them nothing.

Note what is being done in the matter in the United States. To show an appreciation of birds and what they are doing for us, the city of Fort Collins, Colorado, has been officially declared a bird sanctuary where more birds can seek refuge from the rigors of the winter and be provided with food and water at times when they are scarce. The children are being especially interested, and they are being urged to feed the birds so that they will come to the windows to seek crumbs.

Is this not a worthy thought for rural schools, and even rural homes? The children are benefited by their acquaintance with birds, as there is something esthetic in an interest in bird lore. Furthermore, the children's interest in nature, and the beauties around them, become enlarged and they get interested in the conservation of nature.

Would not the last ice storm have offered a great opportunity of relieving suffering among bird friends and at the same time afforded an interesting pastime?

### A Word About Driving Cars.

It takes four qualities to be a good driver of an automobile—even the cheapest. You must be able to—

Drive safely; Drive fast—not all the time, but when it is necessary—fast but still safely;

Be easy on your passengers—partly a matter of sprigs, but much more a matter of skill;

Be easy on your engine and car; any fool can abuse a good machine. We know, and no doubt you know, many drivers who have two of these qualities, and some who have three. The ones who have all four are rare indeed. Repair shops, hospitals, and police courts seldom see them.

## ZZZZZZ and \$\$\$\$\$\$

BY PETE GELLERT

When winter comes we are reminded of two things—blizzards and the old wood-saw. The two invariably go hand-in-hand, just like Santa Claus and Christmas.

Perhaps it is just a memory chord striking a note of joy and sorrow experienced way back in boyhood days. Just a few weeks ago we heard the Holiday Bells. But once more, the old rip-saw's scream and snort told us that dad was out at work and was expecting us to pull on the boots and join him.

Folks "sawed their own" then as now. Only they could cut and saw what came nearest to the ax while now they must use a good deal of forethought and be careful which tree they cut. Many of them do, while a good many do not. On the whole, however, most of us realize that timber must be regarded as a crop, just like oats, wheat, corn and potatoes.

The boys in Europe, with the C.E.F., could never help admiring the way in which the French and Germans took care of their trees and forests. It was a common sight to see old folks and young walking along the road with a bundle of twigs and small branches on their backs. And in winter one could see farmers coming from the woods with their two-wheeled carts loaded down with the same kind of fuel. It was a lesson for any Canadian to see these people spend half a day gathering what we burn up in bon-fires or allow to rot, thus stealing from the timber supply which really belongs to a future generation.

Conservation in Canada has been preached for quite a few years. But preaching and practice don't always work like twin cylinders. Coming right down to facts, the first question any farmer will ask, when approached on the subject of forest conservation and economical home use of the wood on the farm is: "What will it save for me?" One answer is: "It will save waste of time."

If we consider it right and figure that many essentials are secondary and that there are only a few primary ones to success, there is no doubt but that the greatest waste on the farm is waste of time.

There are some farms where folks work all day long the year around. But on the majority of farms the winter-time is a period of lighter work and less hurry; November to March are usually considered the slack months on the farm. And no one wants to sit and listen to the radio both day and evening.

If you have a hired man, don't over-work him, but keep him busy. And if you have boys, teach them that the art of wood-craft is likely to become much more profitable than the pastime of trapping, or, rather, trying to trap skunks.

Perhaps you have only five acres

of timber; maybe you have 40. In either case you have enough of a timber crop to spend a number of days in winter going through the woods, cutting dead lower branches, cutting out gnarly, crooked trees, pruning those trees which are getting too-bottom-heavy, and weeding out those which prevent the development of better ones.

If you haven't tried it before, try it this year. And you will be surprised to find that probably there are enough dead and waste branches and trees to supply your home with wood for the winter, if not a good deal more. This may mean a saving of from \$50 to \$100.

"How so?" some one who has a large tract of woods may ask. In this way: By leaving the good, ripe timber, which you would otherwise have used, for sale to a local market or perhaps a sawmill. If you have ripe timber to cut, you have or can get reasonably a cord-wood saw and use this and your time as well as that of the boys, sawing the wood for your customers.

Some people complain that it is hard to find a local market. One farmer has solved this handicap by having his brother-in-law in a small town farther south take orders; then he ships his year's crop of wood down in carload lots.

Where one man runs a farm alone he might join with his neighbors in cutting, hauling out and marketing these trees. Without going to the trouble of forming an association according to law, you can still unite your efforts, so that all timber on the various farms may be taken care of and turned into cash. Each farmer should keep accurate account of his logs, so that the proceeds can be divided equitably.

Let no tree be cut without good reason, and permit a tree to stand and grow wherever there is room for one. Have every tree that is cut, worked up into sled or wagon length at once, and pile the wood so that it can not freeze down nor be snowed under. Have it of a length that will cut into sticks for use with the least sawing.

When drawing and delivering, put all dry, decayed and soft wood into a pile by itself for use during warm weather. The hard wood is invaluable, for it does away with frequent feeding of the fire and much littering of the floor. Let these two assortments be kept separate when sawing. Give the housewife the feeling that for cold weather or special baking days, she has a store of wood that is dependable and as clean as coal. Saw the wood to one standard length, not too long nor too short. Any crooked or dirty wood discard for the time being. Have all the fuel piled neatly under cover where the air can circulate through it.

## Home Education

The Child's First School is the Family—Froebel.

### Your Child's Idea of Thrift—By Edith Lochridge Reid

When you give your child his school allowance on Monday morning, does he have an idea where it came from? When you take your daughter downtown to buy her a new coat, does she think that the "Charge it, please," settles the account?

Just recently Richard wanted to buy a second-hand bicycle which a chum had to sell, but his father told him he didn't have the money to spare. "Well, give me a cheque," said Richard, and when Daddy explained that there wasn't any more money in the bank, Richard insisted, "Why there is, too. I saw my teacher come out of there this noon with some dollars they had given her."

Now Richard doesn't belong to an illiterate family, nor to a poverty-stricken one, either. His father makes a deposit in the savings bank each time he receives his salary cheque, although he may run low on his chequeing account the last of the month. But Richard, although past nine years old, still thinks that banks exist in the community to pass out money per order by cheque.

Teaching thrift is not only a parental duty, but it is a civic obligation which the family owes to the community. To be sure, it takes more time and patience to divide up the savings account into respective accounts for each member of the family, but any moral training takes effort. Why not give five-year-old son his ten or twenty cents a week and then take him down to the bank and show him where to put half of it or a fourth for safe keeping? If he spends the remainder for candy on the way home, let him learn the consequences of such

a procedure by going without luxuries of that sort the rest of the week. Good habits are so much easier taught when the child is still in the home or at least in his very early school years, because then he has fewer distractions and temptations, and his mind is most impressionable. If we can succeed in getting the child to follow a safe and sane schedule while directly under home influence, there is a pretty good chance of his keeping to it.

The mother who hands out to her children pennies and nickles without restriction during their babyhood, will find them demanding dollars in latter years with no appreciation whatever and with no idea of their value except as they translate it into terms of ice cream soda and frills.

Thrift involves more than the mere putting of money into the bank from a stated allowance. It is moral training in self-denial, promptness, reasoning, and a right attitude toward the family finances and home comforts. Children taught to save intelligently make better men and women; they are usually successful in business and are self-reliant and contented.

Take your boy to the savings bank next week when he gets his allowance, get him a deposit book like "big folks" and watch his eyes shine.

Recently our Elinor opened a savings account and a few days afterwards when a new little neighbor came over to get acquainted, Elinor said, "Don't you want to trade at my bank?"

So the thrift habit and its influence may easily spread. The time spent in teaching the child to save is a good investment and will always bring its own reward.

### THE CHILDREN'S HOUR

#### SOME ICE GAMES.

A smooth expanse of ice always prompts the question, "What can we play?" True, sharp skates and strong legs give perhaps more fun than any other single thing; still, after awhile the interest dies down and it is then that the skaters would like to try something else.

The three games or contests mentioned in this article all fall under the head of amusements. Yet any contest requires some skill and practice. Perhaps there will be one or more of these stunts you will want to try.

#### THE BOTTLE GAME.

In this game, each contestant is provided with a hockey stick and a pop bottle. The hockey sticks can vary in style and shape but the bottles must be all alike.

Two lines are drawn parallel on the ice, 100, 200 or 500 feet apart. Upon one line the bottles are placed three feet apart.

At a given signal each contestant commences to move his bottle across the ice toward the other line, and the one who first crosses it with his bottle in an upright position wins. Any contestant who, in his eagerness to get ahead of the rest of the racers, upsets his bottle, is taken from the race. So you see one must exercise patience and a very steady hand as well as perseverance.

#### BOWLING ON THE ICE.

Materials required for this game are ten blocks of wood, each four inches square, and two pieces of wood six inches square and one inch thick.

The blocks of wood are set up on the surface of a triangle. There are four blocks across each side and one in the centre of the triangle. There is a clearance of four inches between blocks.

One hundred feet from the blocks a line is drawn across the ice and the contestants are stationed behind this line. Each contestant, using a hockey stick, has two chances and a score of 100 is marked down if all the blocks are moved with the two slabs or "balls" driven from the line. Should the contestant be fortunate enough

to move all of the blocks with the first "ball" he will be credited with 200. If five or more are moved, only 50 is credited and if less than five are moved, the score is five. One man should be stationed near the blocks to retrieve the "balls" and also to act as umpire on close decisions. The score can run to 500. You'll enjoy this game.

#### FLIPPING THE SKIPPER.

An old watch-case is required, first of all. The case should be one worthless for its original purpose, but free from dents, and should be of the hunting-case type. The stem is cut or filed off, leaving a perfectly round object.

The interior is filled with lead and held in a flame, with a pair of tongs, until the lead has all melted. Usually a little solder should be added to the lead so that the melted metal will solder the two sides tightly together. If this step is a success, the case when finished is a single round object, smooth to the touch and quite heavy.

This done, it is carried to the ice. A line is marked on the ice for the starting point. Two skaters are dispatched in the other direction to return the skipper and also to mark the record distance. For this is a distance contest to see who can send the skipper the farthest.

If you have ever flipped a dollar or other silver piece over the ice you will know that any flat object can be thrown a great distance. The skipper, however, has but a very small spot on the under side which comes in contact with the ice and, therefore, is more efficient than an ordinary coin.

Overhand throws are barred. The skipper must be thrown with an underhand flip, though it can be either rolled or thrown with the flat side next to the ice.

The trick of throwing this a great distance lies in bringing the hand close to the ice as it is released. One of these skipper has been sent across the ice, under favorable conditions, more than one-quarter of a mile. If the metal is polished it will catch the sun's rays and reflect them a great distance, so it is almost impossible to lose the piece.

#### Life.

A crust of bread and a corner to sleep in,  
A minute to smile and an hour to weep in,  
A pint of joy to a peck of trouble,  
And never a laugh but the moans come double,  
And that is life!

A crust and a corner that love makes precious,  
With the smile to warm and the tears to refresh us,  
And joy seems sweeter when cares come after,  
And a moan is the finest of tolls for laughter,  
And that is life!

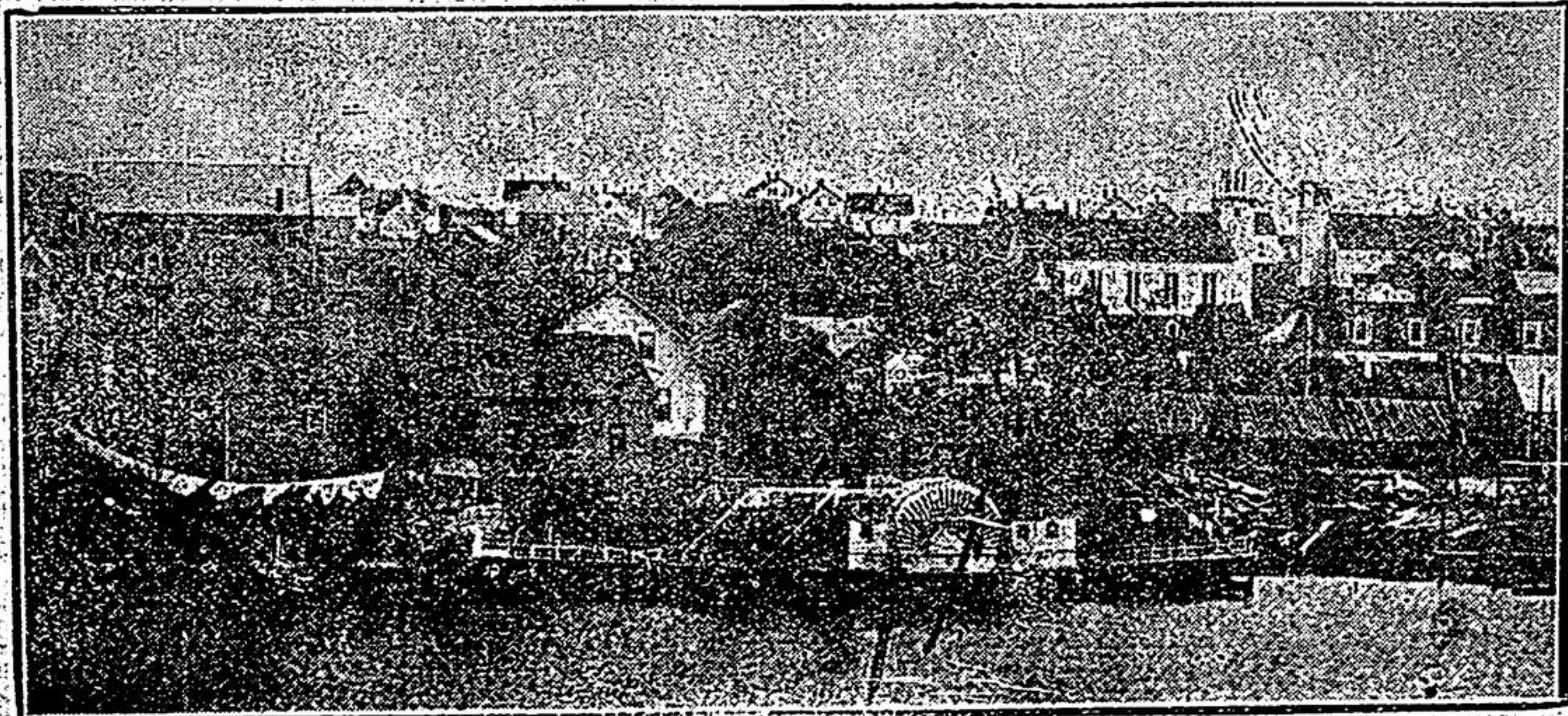
—Paul Laurence Dunbar.

The greatest music in the world is the laughter of a child.

Happy, contented, singing hens are found in congenial environment. They are in the best of health and profit.

Successful poultrymen aim to have something for sale each day of the year, always catering to the demands of the season.

Breeding stock should be purchased early, so the fowls will become accustomed to their new home before the hatching season arrives.



Residents of the now thriving city of New Glasgow, Nova Scotia, can hardly believe that this photograph shows their town as it was in 1870.