WATER SUPPLIES—INFORMATION AND ADVICE FOR FARMERS

BY FRANK T. SHUTT, Dominion Chemist.

An abundant supply of pure water is a matter of first importance; there can be no guarantee of good health if the drinking water contains drainage matter of an excretal origin or is loaded with decomposing vegetable or animal organic matter. Excess of mineral matter in solution, as found in certain deep-seated waters, will also render a supply non-usable for drinking and household (laundry) purposes.

The salient features of the principal sources may be briefly considered as follows: Rain, the purest form of all natural waters as it descends, but collected and stored is often contaminated and is only useful for washing purposes. Dust on roofs and dirty, uncovered barrels or tanks are responsible for the unsanitary condition of stored rain water.

The degree of purity of the water of streams will depend on a number of factors and in the larger number of instances the safety of the supply for drinking and culinary uses can only be definitely ascertained by analysis. As a preliminary step there should be an inspection for some miles above the point of collection, to make sure there is no large amount of drainage matter of a polluting character entering them.

Large rivers and lakes are used as water supplies by cities, towns and villages. Unfortunately such sources are frequently polluted—it may be more or less locally—by drainage from other towns and this necessitates, to have a perfectly safe water, daily chlorination.

Shallow or dug wells should be distant, if possible at least 150 feet from house, barn, manure pile, septic tank or any other polluting source. When such distance proves impracticable it is imperative and in all cases advisable to protect the well by lining it with puddled clay or concrete to a depth of say 10 feet, continuing the concrete one foot above the ground's surface. By this device, the water entering the well must pass through at least 10 feet of earth and the absorptive power of the soil removes extraneous matter, affording a fair but not absolute protection against contamination.

Bored or driven wells, though at times yielding a water too saline for daily use, furnish as a rule water of a high degree of purity. Deep wells should be protected from the entrance of surface waters by adequate covers and furnished perfectly sound pipes and joints.

In conclusion, if the water is offensive to sight, smell or taste, it is in all probability unsafe—or at least highly objectionable—for domestic use, and a better, purer supply should be sought. If such is not available, protection may in a very large measure be obtained by boiling for a few minutes all the water required for drinking purposes. Another safeguard and one that can be highly recommended is as follows: Take a half teaspoonful of chloride of lime and rub it up with a little water to the consistency of cream and stir well into a barrel of the suspected water.

Simple Treatment for Packed Crop.

Packed crop is common in flocks kept in close confinement. Desire for green food, even when it is regularly supplied, leads some greedy individuals to overeat, with the result that their crops become stuffed with a hard mass that will not readily pass into the gizzard. Unless the birds are relieved, fermentation results, and in not a few cases causes death.

Last year I had a hen that had overeaten, and her crop was full and exceedingly hard. I did not want to open it with a knife, so I removed the hen to a brood coop, with a small attached run. The ground covered by the run was bare, so the hen could get nothing to eat except what was given her. I gave her a dish of water in which was dissolved a liberal quantity of Epsom salt, and for two days gave no food whatever. I thought by having her bowels emptied the hen might get some nourishment from the contents of her crop. At the end of two days the crop was smaller and the remaining contents had softened somewhat.

I then began feeding once a day a small quantity of soft food, consisting of stale bread soaked in sour milk and mixed with a little ground beef scrap. I still kept before her the water in which Epsom salt had been dissolved.

A few days of this treatment caused the crop to be emptied, and enabled me to increase gradually the amount and character of the feed. In a short time the hen was eating regular rations and resumed her laying.

Cleaning the Milking Machine.

The primal necessity of milking is cleanliness. Mr. A. G. Lockhead, Dominion Bacteriologist, writing on the subject of the milking machine points out that the sooner the cleaning of the machine is commenced after milking the more efficient it will be. Directly the cow is finished with, our authority advises that the teat-cups should be drawn through the unit, the cups being lifted up and down to allow the air as well as water to pass through. The cups and tubes should next be treated with hot water to which has been added a dairy cleansing powder. This can be done, says the Bacteriologist, in the most recent number of Seasonable Hints, with the suction on as before, or by removing from the machine and cleaning in a sink or suitable basin using brushes to clean the passages. Clean hot water should be used for the final rinsing and the whole system should be thoroughly flushed. Where there is danger of water getting into the air passages a wooden plug should be put in the open end after removal from the machine. Once a week the teat-cups and tubes should be taken completely apart and thoroughly brushed, a cleaning powder being used, and reassembled when dry.

Grow No. 104 Winter Wheat.

This variety has surpassed all other varieties in average yield of grain per acre, in the Experimental Union Co-operative tests and at the O.A.C. It is now widely grown and the seed is not hard to locate.

In six out of seven years it yielded better than Dawson's Golden Chaff, in the experiments conducted at the homes of the farmers. The O.A.C. 104 is a white wheat, with a white chaff and beardless head. It is hardy, vigorous and well suited to the Ontario climate.

Soap was made by the Gauls over 2,000 years ago. They made it of goat's fat and the ashes of beech trees.

The Age of a Horse.

To tell the age of any horse,
Inspect the lower jaw, of course;
The six front teeth the tale will tell,
And every doubt and fear dispel.

Two middle nippers you behold,
Before the colt is two weeks old;
Before eight weeks two more will come,
Eight months the corners cut the gum.

The outside grooves will disappear
From middle two in just one year,
In two years from the second pair—
In three years, "corners," too, are bare.

At two the middle "nippers" drop.
At three the second pair can't stop.
When four years old the third pair goes;
At five a full new set he shows.

The deep black spots will pass from view
At six years from the middle two,
The second pair at seven years;
At eight the spot each corner clears.

From middle 'nippers," upper jaw,
At nine the black spots will withdraw;
The second pair at ten are bright,
Eleven finds the corners light.

As time goes on the horsemen know,
The oval teeth three-sided grow.
They longer get—project before—
Till 20, when we know no more.

She Sells Kittens.

"Pussy Wants a Corner—in Your Heart." This and similar signs at our roadside stands have netted me higher returns the past year than my brother has earned from his pigs.

Most folks call it bad luck to have a black cat cross their path. Fortune smiles four ways every time one pussyfoots across mine. The lives of 365 song birds are saved, the heart of a city child is made glad, kitty is sure of a saucer of warm milk daily, and a dollar finds its way into my pocket. While attending school in the city last year an excited child invited me into the basement of an apartment home "to see him's kitty." From a soft lined box he rapturously brought forth a dead caterpillar which had been his pet for weeks. He stroked its fur with his baby fore-finger, cuddled and talked to it as if it really were the live pet he fancied it to be. On the spot I registered a vow, in tears, to provide something living and responsive for city children to love. Pigeons flew into my thoughts, rabbits hopped through my mind, white mice and guinea pigs. When I returned home for the week-end a nest of kittens opened the way. I started at once to house-break them in the "old loom room," an ancient edifice on the place. The heart-hungry apartment child received the first, gratis. Their next-door neighbor offered a dollar for the mate and within a few days all were sold at that price.

Black kittens and tigers sell best, but all colors go when displayed in a white chicken crate surmounted by the sign, Mouse Traps For Sale. A self-addressed postcard goes with pussy to its new home. Through them cat messages return to me along with new customers.—A. A.

Protection From Grease.

The sleeve of an old coat or worn-out pair of overalls is handy as a means of protecting the arm when doing a small job on the car that requires reaching into a greasy locality. It takes but a minute to slip on such a sleeve, right over the regular shirt and coat sleeve—and it saves a lot of laundering and cleaning.

A Farm in Paperland.

Kathleen and John each had a pair of blunt scissors of their own. There was a large room in the attic which they called Paperland, where they played with the pictures that they cut from magazines with their blunt scissors.

One morning they decided to have a farm in Paperland. Kathleen was to cut out pictures for the garden and the house, while John was to cut out the pictures of fields, stables, garages and of whatever would be of interest to a boy.

First they built a wall of blocks, which they played were stone, to separate the house and garden from the rest of the farm.

Kathleen found a picture of a large white house having green shutters and wide porches. In front of it were some fine big trees. She cut the picture out and set it up against a shallow cardboard box. Then she covered the floor in front of the picture with green paper for grass. She made walks of ordinary wrapping paper and laid one between the house and the road, and another around the house to the back.

She found some lovely flower-beds, which she put first in one place, then in another, till she found just the right place for them. The front garden was almost finished, but Kathleen wanted one more thing. So she looked through ever so many magazines till at last she found it. And what do you guess it was? A lily pond. Yes, a beautiful lily pond with a fountain in the centre. Then she put a hedge of green paper between the lawn and the road and set up a few trees along the road.

There were still the vegetable garden and the inside of the house to make, but it was almost time for luncheon, so she stopped to see what John had been making.

He had divided his part of the floor into several compounds or lots by placing thin sticks along the floor. Against the wall of the attic at the back of the farm, he had put a picture of woods wih deer and birds. There was another picture with mountains in the background. Farther on was a picture of the sea.

"It looks as if your farm was all scenery," said Kathleen.

"You just wait and you will see something besides scenery," said John, as he picked up some pictures he had cut out. "Did you ever see any finer live stock than that?"

In one of the lots he put some black and white cows. In another he put sheep and in still another chickens and turkeys and geese. In a fourth he put horses.

Then he set up some stables and barns and a garage. Near by he placed a windmill. There were pictures of fields of wheat, of corn, of oats and of barley. Each was placed in a lot by itself. Then there were plows and cultivators and tractors and all sorts of farming implements. He had automobiles of every kind. The grandest ones you ever saw.

Ding-a-ling-ling! went the luncheon bell.

So Kathleen and John could not finish the farm, but you might finish it for them. You could plant an orchard and a garden and furnish the house. You will find pictures of everything you could possibly need among the advertisements in magazines. And you must remember that farm houses have telephones, radios, mailboxes, and nearly everything that is to be found in town houses.

Be sure to keep the pictures that you cut out for the farm, for you can use them again to make other things. You might keep them in large envelopes labeled: houses, animals, flowers, men, women, children, etc.

The Fun of the Fair.

A GAME.

This jolly wet day game can be made at home; all that you need is a dice, and some animal pictures cut cut from any old papers.

Cut out pictures of single horses, cows, sheep and pigs and paste each on a small slip of cardboard—color them also if you like.

If you want to play this game before you have collected enough pictures write the names of the animals on separate slips of paper—this will do for a makeshift.

The animals are placed in rows on the fair ground—the table—then the dice is shaken and the game begins. According to the number you turn up so you "buy" from the fair.

For six, you buy a horse; four, a sheep; three, a cow; two, a pig. For one, however, you lose your turn and if you are unfortunate enough to turn upa five, then you lose all your animals for they must be returned to the Fair Ground. This is where the uncertainty and the fun come in.

When all the animals have disappeared and the Fair Ground is empty the player who has "bought" the largest number of animals wins the game.

A Canadian-owned Ayrshire cow, Nellie Osborne of Elmshade the 16th, owned by W. C. Wylie, of Howick, Que., has displaced an American-owned Ayrshire for the world's record milk and butter production for this breed. In a 306-day official test she produced 21,241 lbs. of milk and 900 lbs of butterfat. The previous record, held by Douglas Hall Dandy, was for a production of 18,266 lbs. and 739 lbs. of butterfat.

Sardine oil is extensively used in making paints and soap.

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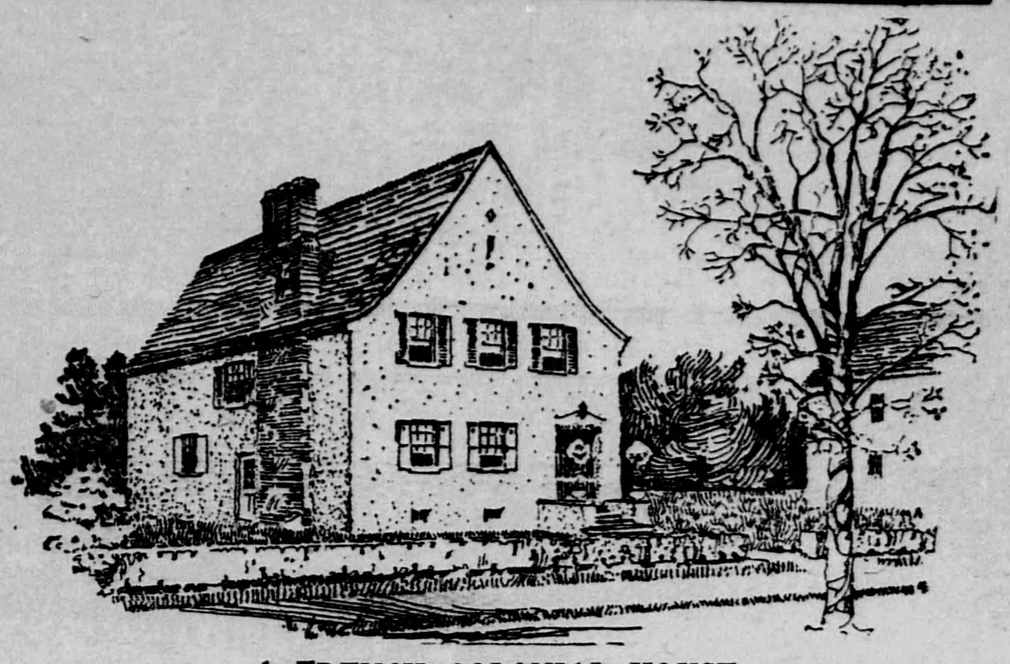


A FRENCH COLONIAL HOUSE

By Lawson & Little, Architects.

This house, about twenty-five by thirty, contains seven rooms and a bathroom. The hall, which is in the centre of the house, is approached through a verandah porch and vestibule, off the latter is an ample coat cupboard. Both the living room and dining room are of ample size, the former having a large fireplace, and the latter conveniently connected to the kitchen for easy service.

A side and cellar entrance, and a separate kitchen entrance are provided. As the stairs land in the centre hall on the first floor direct entrance is given to the four bed rooms, and bath room, without any loss of floor space. In fact, the plan shows commendable study in this respect. Besides a cupboard in each room, the master bed room is provided with a fireplace.

The exterior shows a dignified rendering in the French Colonial style, the uninterrupted lines of the eaves and cornices being artistically broken by the vertical lines of the group flued chimney.

The house has been erected of concrete and concrete blocks—the walls being finished in plaster—stucco roughcast. The roof is slated with Asbestos-slate, of guaranteed quality.

The interior woodwork is of oak throughout the ground floor, and pine for painting elsewhere. The floors are of hardwood, except in the kitchen.

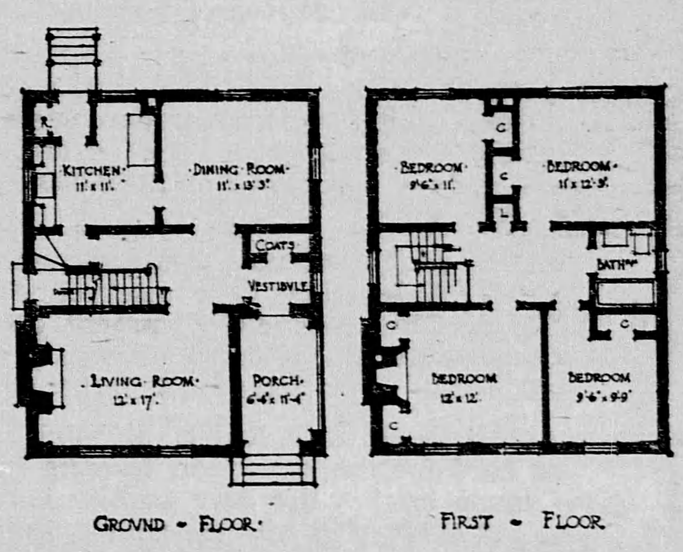
The heating is by hot water to each room, from a Standard type hot water boiler in the basement. Plumbing fixtures of modern design and type have been installed.

This house on a forty foot lot would cost about ten thousand dollars.

Readers desiring further information regarding the plans and specifications of this house should communicate with the architect direct. Address Lawson & Little, 273 Beaver Hall Square, Montreal, Que.

Question: The plans for ous house call for brick walls with lintels and sills. My contractor objects to these and advises using stone or cement. As there is considerable difference in cost what would you advise?

Unquestionably the architect who designed your house used brick lintels and sills because he thought they would be better appearing. We advise you to use them. If the contractor puts them up properly the construction will be sound.



Some Good Recipes.

Spiced grapes can be made by an old recipe which calls for 7 pounds of grapes (stemmed and washed), 5 pounds of sugar, 3 teaspoonfuls of cinnamon, 1½ teaspoonfuls of allspice and cloves (mixed), ⅞ of a pint of good vinegar. Squeeze pulp from skins, rub through a colander to remove seeds. Cook skins in a little water until tender, then add to the strained pulp. Add sugar, vinegar and spices and cook for one hour, or until thick and clear. Pour into sterilized glasses and seal with paraffin.

Tomato jam is made with 4 pounds ripe tomatoes (peeled and sliced), 2 pounds of sugar, 1 pint of vinegar, 1 tablespoonful of salt, 1½ teaspoonfuls of cinnamon, ½ teaspoonful of cloves. Cook slowly for three hours. Pour into sterilized glasses and seal with paraffin.

For peach cottage-pudding, stir sliced peaches into a batter made of ½ cupful of sugar, 3 tablespoonfuls of butter, 1 beaten egg, 1 cupful of milk, 1 pint of flour, 1½ teaspoonfuls of baking-powder. Bake in a loaf and serve with hard sauce.

Buckingham corn stew will please. To make, dice 6 carrots, 6 onions, 6 green sweet peppers. Let these cook (just covered with boiling water) while scalding, peeling and cutting up ½ bushel of tomatoes. Put all together and cook until the vegetables are tender—about two hours—then add the corn cut from two dozen ears (first scoring down the middle of kernels) and cook just ten minutes. Season highly to taste with salt, pepper and sugar when the corn is added. This makes a meal in itself, and is one of the most delectable stews made. As the recipe makes a large amount, can what is left in quart jars for winter use, using the open-kettle method; it keeps perfectly. Add sliced okra if you raise this vegetable.

Canned tomato soup calls for 1 peck of ripe tomatoes, 4 large onions, 2 red sweet peppers (seeds of one), 25 whole cloves, 2 quarts of boiling water. Cook together until soft (about half an hour) and press through a fine sieve or colander. Add to the pulp 1 cupful of brown sugar and 2 tablespoonfuls of salt. Boil 15 minutes and seal hot. Celery seed or fresh parsley can be added before straining. Thicken with flour and butter (or salt pork fat) before serving.

A COLOR SCHEME IS AN ECONOMY IN SEASON'S WARDROBE

Simplicity, harmony of color, and good lines characterize the well-dressed woman. These essentials may be secured on a modest income or dress allowance. To be expensively dressed is not necessarily synonymous with being well-dressed, and vice versa.

One woman, while shopping, saw a charming spring coat of a beautiful shade of terra-cotta. She tried it on and found it most becoming. After making her purchase, however, she discovered that the color clashed with almost everything she possessed. She couldn't wear it with any of her hats, so had to buy a new one. Even then she was not satisfied, for her dresses being off-color, her appearance lacked the charm of a well-planned toilette. Eventually she had the coat dyed. She was a poor shopper.

Another woman who cannot afford a varied wardrobe but who has the reputation of being a well-dressed woman, attributes her success in this direction to the fact that each year she decides on a definite color scheme for an entire season. For example, this spring she selected orange as her basic color. Hats, gloves, and stockings were chosen to harmonize. A tailor-made tan cloth dress with a woven pattern of orange, makes a charming frock for chilly days. For warmer days were chosen an orange-colored silk with an all-over pattern of tan; a buff-colored linen with touches of blue and orange, and a shantung silk dress. A white lace frock completed this simple but tasteful wardrobe, which, being based on one scale of color, enabled the wearer to use the same accessories with each frock and to have them always in harmony. Had she wanted to elaborate her outfit a little further, a black dress could have been effectively introduced, and she could have gone yet farther afield into certain blues and greens.

Cucumber loaf is a pleasing company dish to be served with hot or cold roast meats. It is made thus: Into 2 cupfuls of boiling water turn 6 peppercorns, 1 blade of mace, ½ of a bay leaf, ½ teaspoonful of celery salt and 1 slice of onion; steep 20 minutes, drain and add to the liquid ¾ of a box of gelatin dissolved in a little cold water; strain, add 4 tablespoonfuls of vinegar. Cover the bottom of a mold to the depth of half an inch with the mixture, add a layer of thinly sliced cucumbers and repeat the layers until the dish is full. Stand in a cold place to harden and serve very cold on a bed of watercress.

For a seasonable dinner, remove the seeds from firm ripe tomatoes. Fill the cavities with cold cooked meat and stale bread cut into small pieces. Season with salt and pepper and sprinkle the tops with grated cheese. Bake for 30 minutes, then place in the centre of a platter with a ridge of mashed potatoes around them, then a row of peas or beans that have been cooked and seasoned. Cook the juice of the tomatoes, thicken to a sauce; pour it over the tomatoes, and garnish the platter with watercress or parsley.

Breakfast Room Furniture.

For the sum of $5 the furniture and hangings for a really charming breakfast room were evolved in one home. The varnish was first removed from an old oak chiffonier and four dining room chairs, the preparation sold for this purpose being used according to directions. These pieces, together with a drop-leaf side table which had been used in the kitchen, were then given a coat of flat white paint, followed by two coats of a lovely soft shade of pale green enamel. A stencil in white with a touch of pink and black in the design added an individual note. Cream scrim curtains were given a border of fast-color green chambray. A green glass fruit dish was set between two tall brass candlesticks on the chiffonier and a Canton China bowl holds always a bouquet of mixed flowers in shades that harmonize with the soft colorings of the room. That is for the summer time. In winter a growing plant or greenery is used.

The population of the earth doubles itself in 250 years.