

Soils and Crops

Address communications to Agronomist, 73 Adelaide St. West, Toronto

The Advantages and Disadvantages of the Fall Breeding of Mares.

The breeding of mares in the fall is looked upon by many as a last opportunity to get the mare in foal, where for one reason or another she was not bred nor could not be settled earlier in the season. This is but a superficial consideration of the case. There are decided advantages in the regular practice of fall breeding.

The Advantages.

More work for the mare. Much of the dual capacity of the mare for work and increasing her species is lost when she foals in May or June. Under ideal conditions for the foal, she should spend several weeks or the better part of the summer on pasture. On the average farm then, where horse power is limited, the in-foal mare cannot be heavily worked for a short time before she foals or worked at all for some months after. Where, however, she does not foal until late fall, her services are available when they are in urgent demand and she is exerting the other side of her dual capacity, foal rearing, in the winter, when on most farms she would be idle or comparatively idle in any case. An animal that can work at two such fundamentally necessary jobs as the above and accommodate her work to the seasonal demands so effectively is indeed almost a perfect power plant.

Stronger foals at birth. What, in general, is the fundamental cause of weak foals? Invariably lack of exercise or the too heavy feeding of grain to the mare in the winter. In this connection, "exercise" does not necessarily mean standing outside on the lee side of a straw stack. Exercise of the best kind is derived from work judiciously given, where plenty of fresh air not only is, but must be, not only drawn but forced through the lungs and where the scavenging or cleansing organs of the body function at highest efficiency; and the foetus being an integral part of the mare is similarly benefited by this insured cleansing.

The foregoing explains the fact that there is a higher percentage of strong foals in fall. Undoubtedly it also explains, in a more obscure way, the fact that there is a remarkably low percentage of joint-ill cases in foals coming at this time of the year.

Gives the foal a better chance for the first year. The fall born foal is usually an active individual at birth. As a rule it can get considerable exercise on pasture during October and November, on fine days. It does not suffer from heat, or from having to follow a hungry mare over a bare pasture. The flies that render the life of the foal almost unendurable in summer are gone.

There is no heated environment for a strong, shaggy-coated foal than the barn-yard in winter for a few hours each day, particularly where there is a shed or shelter; this and a box stall, preferably well ventilated, make conditions for healthy and rapid growth, other things being equal. Finally, the foal is weaned from his mother and faces the more trying summer conditions in a much different condition from that of his spring-born brother.

The Disadvantages.

Stallions not always available. Unless there is a stallion on the farm or owned near by, it is often impossible to breed a mare out of the regular season, when stallions are on the road, standing for service, or leased to associations.

Some mares difficult to breed. Certain mares will be found almost impossible to breed outside the natural season. While this is a decided difficulty, the fact remains that in many cases it is one of theory only, existing in the mind of the owner and not troubling the mare at all.

In general, this practice of fall breeding of mares is to be recommended.

The Largest Horse Farm East of Manitoba.

It is not generally known that the most important horse breeding establishment east of Manitoba is situated at St. Joachim, County of Montmorency, Province of Quebec. This farm was started by the united efforts of the Dominion Department of Agriculture, the Quebec Department of Agriculture, and the French-Canadian Horse Breeders' Association. The work is being carried on by the first-named and is under the direct supervision of Mr. Gus Langelier who is also Superintendent of the Dominion Experimental Station, Cap Rouge, Que. There are at present, on the Horse-Farm, over ninety horses, all pure-bred French-Canadians; an idea of the scale on which breeding operations are conducted can be had when it is known that twenty-two mares have youngsters this year, while thirty-four are due to foal in 1923.

It is fully admitted that part of the work is to improve French-Canadian horses, but it is also clear that most of the problems of horse breeding, feeding, housing, and management can be investigated as well with this breed as with any other. These problems are quite numerous; inbreeding, close, in line, and outcrossing; in feeding roughages, concentrates, pastures; in

Some Recent Investigations on Poisonous Plants.

Since the publication in 1920 of Bulletin No. 39, Second Series, by Miss F. Eyles, on "Principal Poisonous Plants of Canada," some further investigations have been made on various other species.

Crab-grass or Finger-grass (*Panicum sanguinale* L.) is an annual plant which has been introduced from Europe and now occurs in Eastern Canada and also in the Prairie Provinces. It has been looked upon with suspicion as the cause of a disease affecting cattle on different farms in Maryland, U.S.A.

Fowl Meadow-grass (*Glyceria nervata* Trin.) is a perennial species growing on wet ground from Newfoundland to Vancouver Island. It contains hydrocyanic acid and some cases of cattle poisoning have been attributed to it.

Sea Arrow-grass (*Triglochin maritima* L.) does not belong to the Grass family as the name would imply. It is a perennial plant with a tuft of narrow leaves and a spike of inconspicuous flowers. It occurs in salt marshes on both the Atlantic and Pacific coasts and is found in similar situations on the prairie. It contains a substance which breaks up in the stomach into hydrocyanic acid gas. It is poisonous both to sheep and cattle and is far more dangerous when cut and dried as hay.

Common St. John's Wort (*Hypericum perforatum* L.) is a perennial plant with opposite leaves and showy yellow flowers. It is a native of Europe but has been introduced into Eastern Canada and British Columbia. Observations made on this plant in New South Wales, Australia, when in flower, have shown that it is injurious to sheep and cattle.

Investigations made on certain trees have shown that they possess more or less poisonous properties. The Western Choke-cherry (*Prunus demissa* Nutt.) occurs in Alberta and British Columbia. It contains a substance which gives rise to hydrocyanic acid. The leaves of species of Oak (*Quercus*) may prove fatal if eaten exclusively for sixteen to thirty-five days.

Henbit (*Lamium amplexicaule* L.) is an annual plant with opposite leaves and reddish-purple flowers. It has been introduced from Europe and has been found in Eastern Canada and in British Columbia. It is said to produce

staggers in sheep in New South Wales, Australia.

There is also a case on record of cows having died after eating green potato tops.—J. Adams, Botanist.

Fruit and Vegetable Pests Numerous.

The Entomological Branch of the Dominion Department of Agriculture, dealing with the insect conditions in June, report the grape leaf hopper particularly active in the Niagara district; the tent caterpillar especially numerous in the Maritime provinces and fairly so throughout Canada; the Bud moth unusually abundant in Nova Scotia, Ontario and British Columbia; the gooseberry borer busy in southern Quebec; the measuring worm giving trouble in British Columbia orchards; the currant sawfly and spanworm heard from in Quebec and Ontario; the strawberry root worm causing injury in southern Ontario; the strawberry weevil showing vitality in the Maritime provinces and the strawberry root weevil (a different species) in British Columbia. Successful efforts are being made in southern Ontario to check the activities of the rose chafers, but the raspberry leaf-roller is unusually prevalent in southern Ontario, where the San Jose scale is also in evidence. The canker worm is also noted in certain sections of Ontario. As regards vegetables, cutworms are reported more numerous than usual; flea beetles are particularly injurious on potatoes, turnips, tomatoes, etc., and the onion maggot is exceptionally active in parts of Ontario, Quebec and British Columbia.

Poultry fever is a good fairy at work. It takes one into the open air, gets one interested in live things, gives interest in something besides bad feelings, and puts one in line for better health and longer life. If successful, well and good; if a failure, more is gained than lost.

The taste of roses, either leaves or blossoms, is not liked by fowls, consequently rosebushes may be safely planted inside the poultry run. The fowls keep the bushes free from insects. Climbing varieties do well on the poultry fencing. By the judicious use of roses, an unsightly chicken yard can be made into a spot of beauty. The ground around the bushes has to be spaded occasionally to loosen the soil, and protected with wire netting, or the chickens will scratch the dirt away from the roots.

Hired Hand or Partner?

By Russell Adams

To be strictly candid, I am lazy. If I have a problem to solve, I look around until I locate a man who has solved it to his entire satisfaction—then I take advantage of his experience.

That's why I spent last Sunday visiting with Tom Ewing, for Tom had solved the farm-help problem as satisfactorily as any man I know of. "It's as easy as keeping a good man as it is to keep a good team, and just as profitable," was Tom's answer to my leading question.

"In the old days I hired and fired pretty regularly; I'd hire anybody who happened to drop in, and if he didn't suit me he didn't last long."

"In those days, practically all farm labor belonged to 'The Rambling Rover'; single men roaming from province to province across the country. Very seldom would you see a married man hunting work on a farm, for the reason that land was cheap and he started out on a place of his own, but to-day it is quite different."

"For the last five years I have employed one man (a married man by the way) steadily and, taking every thing into consideration, he is the most profitable man I have ever employed. "Right at the beginning I thought I could not afford to hire a married man, pay him living wages, furnish him a house, a cow, fuel, etc., but I have learned better; he is the cheapest man I have ever hired."

"If you hire the right man, he longer he stays with you the more valuable he becomes. Fred knows as much about my system of farming as I do, and such is far from being the truth when you hire a man to-day and let him go next week or next month. A man must know your system, your stock, your farm and your plans before he can give you his best service."

"Married help is preferable to single help, for one reason at least; cooking and washing for help has long been a bug in the butter of farm women; but many farmers believe it is cheaper to take single help into their homes than it is to employ married men, furnish them a house, fuel, etc., and possibly pay higher wages, but that is a mistaken idea from start to finish. Add \$15 a month to the wages demanded by the single man, and you can hire a married man who will stay with you indefinitely. The best part of it is, that he is always on the job when needed. Single help is prone to rush away Saturday afternoon and not show up until Monday morning, leaving all the chores for the boss to do, but when married help is employed it is different; his interests are where you wish them to be—on the farm."

"How do I find work for my man to do the year around?" That's the easiest question to answer that I have been asked in many a day. We have our general work to do, about the same as on any other 160-acre farm, our fencing, hauling, marketing and road work; besides, we do considerable

hauling for others. A year ago last fall I bought a two-and-a-half ton farm motor-truck, which I consider one of the best investments I have ever made. We are only four miles from a railroad station, but the motor-truck enables one man to do the work of four men, four wagons and eight horses, and has reduced my hauling costs more than a hundred per cent. In addition it has opened up good markets heretofore closed to us. The motor-truck has much to do with the contentment of my man, as you will understand when I tell you that last spring I told Fred that he could have all he raised on that little three-cornered patch you probably noticed between the river and the corn-field, below the bridge. That is rich soil, but unprofitable for corn on account of the short rows and much turning in cultivating. He planted the patch to tomatoes and potatoes and marketed the stuff in the city, twenty-five miles away, while hauling for me. Off a scant two acres of ground he sold almost \$300 worth of vegetables, and he was as tickled as a boy with his first gun.

"If Fred had been forced to sell his truck patch products at our shipping station, it is doubtful whether he would have received enough for them to pay him for his trouble; but by taking them to the city, where the demand was strong, he cleared up a splendid profit on his spare time work."

"What should a person pay his farm help? Why, pay him what he is worth; some men are worth \$40 a month, some \$50, while there are others who would be overpaid if they received a dollar a week. Worthless help has ruined more good teams and sent more machinery to the junk-pile than all other causes combined. When we haul for others, we use a scale of charges based on ton-mile haul, and Fred sets 20 per cent of the net profit realized on each haul. This gives him a little extra income and at the same time causes him to take an added interest in the work and the best of care of the truck; he feels that our interests are the same, he realizes that in a way we are partners, and when you get a man to thinking along that line, you have solved the farm labor problem to your mutual satisfaction."

"Tom, how do you get time to keep the road along your place in such good shape?—every time I come this way it reminds me of a paved street," I asked.

"Oh, that's easy; when Fred and I return from a trip to town, if we have a spare half-hour, we hitch the truck to the grader and fix the road a bit. We plan on working a full ten-hour day, and every minute has to count. 'Keeping everlastingly at it brings success, you know,' he grinned in reply."

As Tom pays income tax and enjoys the good things of life along with his family, I believe he is correct.

SMOKE OLD CHUM

The Tobacco of Quality
1/2 LB. TINS
and in packages

Parents as Educators The Nursery—By Ellen Creelman.

Every home, if possible, should contain one room for the child's especial use. Not that he must always be confined to the nursery or denied the privileges of the entire home, but that he may have the privacy of a room in which to commence his education through play uninterrupted by many of the activities of the home.

The child should be required to spend a part of the time in the nursery. This he will gladly do without coercion, provided he has a pleasant room, suitable toys and protection from intrusion as he attempts to develop his mind through play.

There should be a sunny exposure, good ventilation and low windows protected against accident. The child enjoys pictures of the outside world as seen from the windows. The blue sky, the wind-blown clouds, rain drops, wind storms, sunbeams, flowers, trees, and birds afford him a continuous source of pleasure. In fact such pictures acted upon by his keen imagination frequently record more vital and lasting impressions upon the child's mind than those hung upon the walls.

The walls and woodwork of the nursery should be finished in soft harmonious colors, while the utmost cleanliness and neatness are necessary. The nursery walls may be relieved by pictures of interest to the child. There is a wide selection of suitable pictures from which to choose. But there should always be a picture of

"Mother and Child," pictures of the child's near-at-hand environment, human life, plant life, animal life, natural phenomena, also pictures illustrating nursery rhymes. These should not be hung indiscriminately upon the walls, or they may destroy the beauty of the room. Many pictures may be kept in portfolios or presented through picture books.

There should be growing plants in the window boxes where bulbs and seeds are frequently planted which the child may care for. His interest in them is natural and ought to be cherished.

The furniture should be simple, with the chairs and tables of suitable height placed correctly as regards the light. Cushions are useful upon the floor.

There should be a cabinet with low shelves and individual places for all toys and play-materials. Every nursery should contain a sand table.

The child should play as frequently as possible in the open air, and be kept away from the distractions of the street.

The nursery should be an attractive room, for the child learns more from incidental impressions than from direct teaching. In fact the child's whole environment should aid the natural development of his mind, protecting him against undesirable impressions, guiding him happily towards the goal of education—good habits.

THE CHILDREN'S HOUR

Apple Turnovers.

One Saturday morning Sylvia put on her apron and went into the kitchen and made three apple turnovers. All winter she had been learning to cook, but this was the first time that she had tried to do anything alone.

As she forked the last turnover she felt very proud of herself. A little later, when she drew the three brown, sugary turnovers out of the oven, she felt prouder still. How delicious they looked! One was for grandmother, one was for Uncle Paul, and the third was for herself.

She set them in a row on the window sill to cool. A few minutes later, hearing a clinking sound, she ran back to the window. A little barefoot boy and a little barefoot girl were going down the road to the blackberry patch, and the noise that Sylvia had heard was the sound of their tin pails clinking together.

As Sylvia leaned forward to watch them she knocked one of her precious turnovers off the sill. It fell splash into the little puddle under the window that had been left by the last rain. She went running out to rescue it, but the old drake got ahead of her. When she reached the puddle he was shoving his greedy bill into the soft-edged pastry.

"Quack!" he said in a satisfied way. Sylvia went sorrowfully back into the kitchen. The two remaining turnovers looked lonely in the window.

"I'll put them in the pantry the moment they're cool," she said to herself. But while she was reading a recipe for cookies she heard another sound. Glancing up quickly, she saw one of the two turnovers teeter for an instant on the sill and then disappear.

With a cry she hurried to the window. She was just in time to see a neighbor's dog running across the yard with something in his mouth and with his tail tucked between his legs.

SELLING THE OLD HORSE

If you don't mind, friends, I'll put in a word for the old horse—that old bay fellow, you know, with the enlarged knees. He has worked for you some twelve years, I understand, and has been satisfied with his board and room and a set of new shoes now and then.

During those twelve years, if I am rightly informed, nineteen hired men have kicked, balked, and lain down on the job, but the old bay has never done any of those old things. I am told that in the same length of time three hired girls have run away, but the good horse has never done that either. It is also said that you yourself have been away two winters, two months each time, but the faithful nag has stuck to the farm and kept things running until your return.

He is eighteen now, or is it nineteen? At any rate he is about as old in horse language as you will be in seventy in man language. He is still doing his best, but of course his best is not good, and, if I'm alive at the time, I'll say the same thing about you when you are seventy. What are you going to do with him?

I know what you are thinking of doing with him. You are thinking of selling him for \$15, or \$17.50 if you can get it, to the old garbage man in town. He could do the garbage man's work all right, you say, it would not be hard on him, you need the money for school taxes, and then—well, the barn is crowded, badly crowded. That's what you are thinking. Confess.

Say, friend, think again—and while you are thinking, look me in the eye. You know mighty well that old garbage man is so stingy he wouldn't stutter on account of the waste of breath, and will not feed himself enough, let alone a horse; you know he cusses like a pirate when he is mad, and he is always mad; you know he never used a blanket on the last horse he had, and the beast died early in the spring from exposure and malnutrition. That's why he wants another horse now.

What's that? The garbage man is not so bad as painted? Well, granting that he is not; granting for the moment that he is a near-angel with stub wings sticking out, through the holes in his sweater, don't forget that your farm is the old horse's home, and that he loves his home just as much as you do, if not more. He grew to horsehood here and knows every corner and fence-post. If you sell him to any one you will break his heart. He depends on you, he has every confidence in you. He has given you twelve long years of his active life, and if he had kept books he could prove you owe him \$2,400 at least. Don't break his heart.

Personally, I don't think your barn is crowded. Why not slip those collars into that box stall and tie these two mares over in that double stall? Make room for the old fellow inside when the weather is bad, and give him the range of the pasture when the weather is fine. In the two or three years that he has left to live you can pay him back a little of that \$2,400.

Make room for the old horse, friend. When you are his age—seventy in your case—the boys and girls will make a corner for you and try to pay you back for the years that you labored for them without pay.—J. E. Tuft.

SPROUTS

Poor feeding is pretty certain to put a lot of good hens into the cull list. A mash is necessary to keep up egg production in hot weather. Grain alone will not do it. This mash should carry some protein feed, such as milk. Here is a suggested mash for summer feeding: An abundance of milk, say a gallon per day for thirty hens, fed in a trough, and then fifty pounds of bran and fifty pounds of middlings mixed together and fed dry. If milk is not available, then thirty pounds of high-grade tankage should be added to the bran and middlings.

The important thing to watch during the summer is to get the hens to properly balance their ration. They should eat as much of the mash as they do of the grain. This cannot be done by the self-feeder method. The hens like the grain better, and will fill up on it and neglect the mash.

Here is a plan of feeding that gives good results: Feed a light grain ration in the morning, then put extra mash in troughs in the shade where the hens stay during the day. Have water close to the mash. Feed no grain at noon. This will encourage a larger consumption of the mash and thereby promote heavier production.

During the first three months of the current year 4,345,000 pounds of hail-bait was taken in Canada, of a value of \$425,531. Last year in the same period 5,300,000 pounds was taken valued at \$607,100.

To get rid of burdocks, just let them grow till they are in blossom, then cut them off level with the ground. Nine times out of ten Mr. Burdock's family will make no more fuss. Pulling them up is a good way, but not a very easy way when you come to one of those old hairy ones. One more way of killing them is cut them off above the ground and put a few drops of gasoline in the opening of the stems. It is the surest way I know of killing them.—L. W.