

Soils and Crops

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How I Get the Best Work Out of My Few Horses.

Of all the leaks on the farm, it has been my experience that one of the worst is the poor use of horses. There are three reasons for this:

The use of too small or too poor quality horses, the use of too few horses in the team, and the use too few days in the year of the horses kept.

It has been said that the average number of hours per day worked by farm horses is three. This does not mean that the days worked are short, but that the horses stand in the barn or roam the pasture two-thirds of the time. Maybe you think you are not out anything while your horses are on pasture, or that you are only out the feed while they are standing in the stable, but on closer analysis you will see that this is not the case.

The cost items of keeping a horse are: Feed, interest, depreciation, shoeing, and veterinary bills. In addition, there are repairs to harness, though this is not a strictly horse cost, and some man labor. Of these costs, the idle horse is just as subject to those for interest and depreciation and veterinary bills as the one that is working. He is also subject to the feed and shoeing costs, though to a less extent. As to depreciation on harness, this wears out about as fast hanging in the stable as when in use.

Comparing the cost per working hour of a horse working 1,000 hours per year with that for one working 2,000 hours per year, we get figures as follows:

Items of cost.	1,000 hrs.	2,000 hrs.
Oats at 40¢ per bu.	\$36.00	\$45.00
Hay at \$18 per ton	60.00	54.00
Pasture	5.00	2.00
Interest at 6% on \$250	15.00	15.00
Depreciation, 10% a year on \$250	25.00	25.00
Veterinary bill	5.00	5.00
Shoeing	25.00	35.00

Total \$171.00 \$181.00
Cost per hr. worked 17.1¢ 9.05¢

The above figures, while they do not hold for every community, are as fair to the 1,000-hour horse as to the 2,000-hour one. You see that the cost is nearly double for the horse which works the smaller number of hours. Applying the figures to a crop like potatoes, on which about 100 hours of horse work are used, we get a difference in cost of production of \$8.05 per acre, which, though not large, is worth saving.

To get the best use out of your horses is a problem in farm management. Perhaps the best way I can illustrate is to give my own experience. When I started farming I had four horses. The farm consisted of 140 acres, of which 42 acres were woods. Three acres of potatoes were raised, and seven of corn, and the rest was in hay and oats. Later I raised from 12 to 19 acres of potatoes, and about 10 to 12 acres of corn, besides the hay and oats. The cultivated crops take more horse work anyway, and potatoes take a good deal of teaming to deliver. The result was a great increase in horse efficiency and, incidentally, in income. Then I rented first one 60-acre farm and later another, without any increase in the number of horses kept. In addition to the 260 acres farmed with the four horses, I also had a team on the road for several weeks, and took the job of hauling milk in the winter when there was too much snow for the trucks.

My year was about as follows: April, fitting land; May, fitting land and planting early potatoes, corn, and oats; June, fitting for late-planted late potatoes, planting them, and cultivating corn and potatoes; July, spraying, cultivating, and haying; August, harvesting grain, digging and delivering potatoes, and one team on the road. In September digging of

early potatoes continued, and I also kept the team on the road part of the month. In the latter part of the month the corn was cut, and put in the silo. October was given over to digging and delivering late potatoes, and a team was on the road part of this month. November was given over to fall plowing, and the other four months were spent hauling milk with one team, while the other did chores (the manure was hauled every day).

As will be seen, the work was continuous, there being no very slack times nor any times when we were overworked. I never kept exact track of how many days the horses worked during the year, but they were in the harness a part of nearly every good day, and put in most of the time good full days. They worked probably 240 days or more a year. Since then I have bought another 100 acres and a tractor, and now I am just making a change in my type of farming. I am substituting hay for potatoes for the money crop. When the change is completed, the year will be about the same in the spring and fall, but in the summer it will be as follows:

The latter part of June, cutting and drawing alfalfa; July, cutting and drawing timothy and clover; the latter part of July, second cutting of alfalfa; August, harvesting grain and third cutting of alfalfa.

I started with four horses that would not average 900 pounds apiece. I soon found that they were no good for business, and bought a pair weighing 1,300 apiece. Later I bought another pair weighing about 1,500 apiece, and still later I exchanged the lighter ones for horses weighing about 1,600 pounds apiece.

I had always heard about how slow big horses were getting around corners, and about how working on soft ground bothered them; but I have never found that to be the case. I did find that it takes no more grain to feed a big horse than a small one, and but little more hay. Why? Well, a small horse doing heavy work must work on his nerve, while a heavy one is at ease doing the same work.

As to using more horses in the team, there is no reason why many farmers in the East cannot do what is so commonly done in the West—drive four-horse teams.

By letting one man do all the milking with the machine, and the other drive the four-horse team, we are able to do a lot more work than otherwise. I use for fitting a six-foot double-disk harrow. Three horses are needed to pull a six-foot single disk if it is set up to where it ought to be. Four will pull a double disk as easily as three the single one, and do twice the work. And the work is more smoothly done.

Many people would say that this intensive use of horses would be hard on them. In reality, the opposite is the case. Regularity is of more importance with horses than are long vacations. The work horse that does a good day's work every day, gets fed regularly, and has few days off except Sundays, lives longer and suffers less from disease than the carriage horse used to, which did nothing for a week and then put in one or two hard days.

My horses were hard and in fine condition to work in the spring when they had been hauling milk all winter, and I would have half of my spring work done before some of the neighbors had got their horses hard enough to stand a full day's work.

I do not mean that a horse should never have a vacation. It is excellent if you can turn him out for two or three weeks in the spring or early summer, but this is all that I have ever found necessary, and even that can be dispensed with if the horses are turned out nights for a month or so, in addition to the usual feed of grain and some hay.—A. H. S.

THE CHILDREN'S HOUR

What Wakened Tumpty Toad.

Tumpty Toad sat on the garden walk sunning himself. It was a drowsy day, and Tumpty Toad was feeling much too sleepy to move. Indeed, when two mosquitoes lighted on a nasturtium leaf near his head, Tumpty Toad only blinked an eye at them. They would have tasted good no doubt, but hardly good enough to be worth the effort of putting out his tongue.

Now Tumpty Toad couldn't help hearing what the mosquitoes were saying. It seemed easier to listen than to move out of hearing. They weren't sleepy, he learned, in spite of the heat. They were merely hungry.

"And nothing biteable in sight," said one crossly, "but that old toad."

"You don't call him biteable," said the other. "He's too tough for my taste."

"Hush," warned the first. "He may hear us."

"No danger," returned the second. "Can't you see he's asleep?"

Tumpty Toad kept his eyes shut. Not that he wasn't annoyed. No one likes to be called tough, even by a mosquito.

"Here comes somebody tender," said the first mosquito suddenly.

"Aha," said the second with satisfaction.

And both mosquitoes fell silent. Tumpty Toad could hear them sharpening their bills. He was almost curious enough to open his eyes. Still he felt so lazy! And he could trust his ears to tell him who this tender somebody was.

For steps were coming along the walk, a big, grown-up pair of steps—not the tender ones decidedly—and a little, uncertain, toddling pair.

"Funny toad," said the baby.

Tumpty Toad felt a soft little tickle down his back. He didn't jump or wriggle away, for he knew that the tickle was the baby's finger stroking and patting him. He sat very still, not to frighten the tickle away.

"Nice, funny toad," said the baby. "See if it doesn't want a fly." Such a big, grown-up voice that belonged to the big, grown-up steps.

That was thoughtful surely. Tumpty Toad was almost excited enough to open his eyes. Still he felt so lazy! And he could trust his nose to tell him when the fly was near.

The mosquitoes stopped sharpening their bills.

"Ready?" asked the first.

"Go!" said the second.

Tumpty Toad heard the hum of their wings as they passed. It was a hungry hum. And it was headed straight for the baby.

Tumpty Toad opened both eyes wide. He had forgotten all about being sleepy. Close beside him on the walk, stooping to hold a big fat fly invitingly near his mouth was the baby. Such a gurgling, laughing, dumping of a baby. The first mosquito had settled on one bare little foot, and the second was lighting on the fat little hand that held out the fly.

But Tumpty Toad didn't wait to look at the fly. He darted out his long tongue, once, and wiped the first mosquito off the baby's foot; twice, and hooked the second mosquito off the baby's hand. Bite the baby, would they?

Parents as Educators

Preparing Our Children for Citizenship

By ALICE WINGATE FRARY

Our children are given regular instruction in citizenship in school, but the best that can be done for them there will not alone give them the urge toward helpful service in the community that they might have with the thoughtful co-operation of their parents. The talks, songs and pageants of school have served to widen their vision and strengthen their grasp of the dramatic events of the past. Fathers and mothers can help them to express their appreciation of the time and country in which they live in terms of every-day service. To teach them that they have an important part in keeping a happy, well-ordered home and that the atmosphere of a community is the atmosphere of its homes, is to-day a foundation for substantial citizenship later. To add to this a sense of responsibility toward a younger child in one's own family or a friend's or toward animal pets, is at least to start the habit of considering the interests of others. Just to keep emphasizing these two points day after day so that they become a part of the children's lives is no small task in itself.

However eager a young person may be to serve his community, his impulse will be dissipated or accomplished rather than good unless his efforts are intelligent. In Maude Lindsay's tale of "The Giant Energy and the Fairy Skill" (an effective story to read to children from five to ten) the fairy teaches the eager, clumsy giant to do direct his boisterous impulse to serve, that after days of patient effort he is welcomed as a helper instead of being merely tolerated by those generous enough to overlook his carelessness. A ten-year-old who was crocheting a gift for her grandmother remarked, "Even if it isn't done well, Grandmother will like it because it's my work." How much more whole-

"Serves them right for being hungry," thought Tumpty Toad.

He darted out his long tongue again and the big fat fly followed the mosquitoes down Tumpty Toad's capacious throat. And that was the very best place for them all, if you ask me!

Tumpty Toad winked at the nasturtium leaf, where the mosquitoes had sat.

"I'm not as sleepy as I look," said Tumpty Toad.

Storage of Vegetables.

An earthen pit, a cellar under the barn driveway, a cellar under a building, and an isolated cellar provide four ways in which farmers can best store their field roots and other perishable products. Methods in which the three cellars can be constructed or adapted for the purposes are described in Pamphlet No. 10, new series, of the Dominion Department of Agriculture. The earth pit is fully dealt with in Exhibition Circular No. 57 and is therefore omitted in this pamphlet. Besides giving minute particulars of the nature and amount of material required in each instance, the plans submitted have been designed with an eye to simplicity and economy in construction.

It is pointed out that the elements to be first considered for the preservation of vegetables in their natural state are ventilation, temperature, moisture, drainage, depth, and location. All these matters are taken into consideration. The cellar under the barn driveway is of course intended only for the keeping of feed for the live stock. The plan given provides for a cellar 14 feet by 20 feet inside with a storage capacity of 750 bushels based on a depth of 5 feet. The cellar under a building is so nearly like the other cellars that no special description is thought necessary. Three types of an isolated cellar are dealt with and designated as C1, C2, and C3, respectively. C1 is a type that has been tried with success for eight years at Lethbridge, Alta., experimental station, and C2 one that has been used at Rosthern, Sask., station for half that time, also with satisfactory results. The one has a capacity of 880 bushels and the other of 1,500 bushels, each based on a depth of 5 feet. C3 is different from the others, principally in the matter of its roof, two methods for forming which are given. It is also a little more expensive. If the soil be sandy and the ground high, the most favorable conditions are offered for the cellars.

Cleaning Weedy Corn.

One season the wet weather kept us out of our cornfield until the weeds grew very thick. It looked as though they would take the crop.

Ordinary cultivation would have done very little, if any, good, so we hitched to the lister with one horse, and ran a shallow furrow between the rows, the dirt, of course, being thrown each way, covering the weeds.

As soon as the dirt settled a little, we took the five-shovel cultivator and, letting the horses walk down the shallow furrows, practically leveled the ground between the rows.

By this time the weeds had been given such a good worrying that the ordinary four-shovel cultivator was put in the field, and the ground worked to a good advantage where it would have been impracticable without previous preparation.

A little nonsense is singularly refreshing to the man who works hard.

SMOKE



in 1/2 lb. tins and 15¢ pkts.

OLD CHUM

The Tobacco of Quality

The Girls' Institutes of Ontario

By Emily J. Guest, M.A.

The Junior Women's or, as they are popularly known, the Girls' Institutes, continue to be one of the interesting features of the Ontario institute organization.

Where their numbers are small, the girls usually carry on as an integral part of the Women's Branch Institute, receiving special consideration when the program is being planned and carried out. As a rule also one girl is elected to the Branch board of directors to represent the junior members and bring forward their views and desires. Sometimes also they form a girls' circle within the branch, having their own chairman who is a member of the executive, and making themselves responsible for all of some meetings or some of each. These methods remain popular in many places where much driving is done as mother and daughter can thus come together to the meetings. Also the life and brightness brought into the meetings by the girls is greatly appreciated by the women.

Where there are a considerable number of girls brought together by such interests as one of the short courses, they frequently decide to organize a junior institute, still co-operating closely with the women's institute, if there is one, but planning and carrying on their own work and meetings and receiving similar help and recognition from the departments in the way of grants, literature, and extension lectures. In their own programs, besides the regular study of book and more scientific home-making—for as the majority of the girls are looking forward to having a home of their own, one of the primary aims of the club is to prepare them better to fulfill this mission—community matters, schools, hospitals, libraries, and recreation are given attention.

For the hospitals the branch undertakes plain sewing of such kind that the younger girls can share in it. In some cases at least one complete infant's layette, cradle included, is made during the year.

The junior institutes are showing, too, an active friendly interest in the schools, visiting them and the teacher, giving prizes at the school fairs, encouraging the literary societies, and doing what they can generally to aid in getting better, cleaner and more attractive schools and grounds.

Besides an active sympathy with the improvement of the local libraries, the juniors avail themselves of the travelling girls' libraries sent out on loan by the Library Branch, Department of Education. The books are selected to meet the needs especially of girls, and can be had for a period of six months in the institute by the branch paying one-way express charges. The travelling library is returned and, if desired, replaced by a fresh one.

Play has, of course, its legitimate place. Co-operation with the seniors has resulted in the provision of tennis, basket or volleyball, and other wholesome recreations in connection in some cases with the community hall grounds. At the indoor gatherings, essays, debates, one minute speeches, story telling, discussions, spelling and geography matches, music, contests, and folk games are features.

The branches plan their meetings—usually two hours in duration—to suit their own tastes and needs. The first hour is given to serious work—papers, debates, discussions, handicraft, domestic science, or the study of Shakespeare or some other author, and the second to recreation—chorus singing, instrumental music, physical culture, folk games, table games, and charades or tableaux in some branches. Others devote an entire meeting to

each of the following subjects in rotation:—

1. Horticulture, Agriculture, and out-of-door matters;
2. Literary and education topics;
3. Practical and ideal home-making;
4. Social.

It is expected that all social gatherings of junior institutes be properly chaperoned and close at a reasonably early hour.

Short courses by departmental demonstrators and lecturers remain popular. These are often carried on at the same time as the junior farmers' courses in agriculture, the two organizations uniting for a weekly literary afternoon and concluding with a joint banquet at which there are toasts, music, recitations, and speeches by prominent people.

One county followed up such a course in domestic science by selecting a team of four, a captain and three others, from each junior branch in the county, to put on a canning contest at the fall fair. The prizes were trips to institute conventions in one or other of Ontario's leading cities, or canning outfits for the home. One such short course, recently closed, lasted for a month and brought together over two hundred and fifty young people from the countryside, being a veritable little travelling college, in a small centre remote from the large cities.

Some features of interest from the girls' programs are:

Education—Studies in parliamentary law and procedure; How we are governed; Laws of health and beauty; English and Canadian Literature; public speaking.

Home craft—Planning, remodeling, and furnishing a house; Understanding and caring for the human body; Good form in home and in public.

Income earning pointers for girls on the farm, in the home, in the community.

Healthful recreation, out of doors; indoors.

Junior women's institutes may avail themselves of departmental assistance through the various short courses in domestic science, sewing, millinery, first aid and home nursing, and house decoration; also of help from individual lecturers on special topics in connection with the Institutes Branch of the Department of Agriculture; the travelling libraries, extension lectures, and assistance in the preparation of papers through the Packet Loan Library of the Ontario Agricultural College at Guelph.

Plow Points Wear Rapidly.

Many farmers who are using tractors are learning that plow points wear out more rapidly when propelled by the tractor than when horses pull the implement. This is due to the fact that the tractor travels more rapidly and the increased resistance due to speed wears out the points much quicker. It therefore becomes necessary to sharpen the plow points more frequently than is the case when using horses.



Does Music Tend to Produce Longevity?

The recent death of Saint-Saens, the noted French composer, at the ripe old age of 86, brings us to the question: does music tend to longevity?

This question cannot be answered satisfactorily in the affirmative, for our opponent will come along and say: "What about our great composers—Mozart, Bizet, Mendelssohn, Chopin, Purcell, Bellini and Schubert—all died before they were forty? Did music lengthen their lives?"

Our opponent so far is right. But he must not forget that while several died at a comparatively early age, a great many more have exceeded the three score and ten. Insurance authorities give 40 years of age as the average life span, and if we take a list of our leading musical composers we shall see that for every one that died before 40, at least five exceeded that age.

While we have Schubert stricken down at 31 through under-nourishment and over-work, we have Verdi living to be 87 and now Saint-Saens to 86.

Dysentery claimed Bellini at 33, while Mozart succumbed to typhus at 35. Bizet and Purcell both died at 37. After losing father, mother, and favorite sister, Mendelssohn at 38 fell into a fatal decline. Chopin at 39, Weber at 40, and Herold at 42 were claimed by consumption. Schumann died in an asylum at 46 and Donizetti from paralysis at 51. Wallace from a general decline, brought about by loss of fortune and eyesight, died at the same age. Glinka at 53 died of heart failure.

Lully's death was indeed strange. He had been conducting a "Te Deum" to celebrate the king's return to health when the baton caught his foot and caused an abscess which developed into fatal blood-poisoning. Tallis, the old English composer, who preceded Lully by a century, lived to 66, while Paganini died at the same age. It was dropsy, brought on by inflammation of the lungs, which claimed the great Beethoven when 57, while Sir Arthur Sullivan only exceeded him by a year. Raff, the composer of the famous "Cavatina," lived to just three score years. Balfe, of "Bohemian Girl" fame, was 62, and Johannes Brahms and Edward Grieg were 64 when they died. Anton Rubinstein and J. Sebastian Bach, 65; Hector Berlioz, Scarlatti and Corelli were each 66, while Dr. Arne, the composer of "Rule Britannia," was 68; Meyerbeer, Charles Dillien, and Sir Henry Bishop, composer of "Home, Sweet Home," lived till they were 69 years of age.

The next twenty odd names are those of celebrated composers who have reached and exceeded the allotted span of "three score years and ten." The list, considering the eminence of those geniuses, makes interesting reading.

Wagner died at 70; Flotow at 71; Massenet, Gluck at 73; Handel at 74; Gounod, Liszt and Spohr at 75; Rossini, 76; Haydn and Franz at 77; Palestrina at 80; Rameau and Sir Julius Benedict at 81; Cherubini, 82; Ambrose Thomas and Byrd each at 85; and, as we have said before, Verdi at 87.

It would seem from this analytical list that music is more or less conducive to longevity and that the more we steep ourselves in sweet sounds the better are our chances of hanging on to this mortal coil.

Caponizing is Profitable.

Any breed of fowl may be caponized and it is probable that the process could be performed in Canada with profit to poultry keepers more frequently than it is. The operation tends to increase the quantity of flesh and to the retention of the quality to a greater age than is the case with uncaponized cockerels. In every case the operation should be performed, says Pamphlet No. 12 of the Dominion Department of Agriculture entitled "How to Caponize," before the sexual precocity appears, the most favorable time being when the birds are from two to three months old. The tools desirable are a small surgical knife, a spreader, a steel hook and probe, and forceps. A bowl of weak disinfecting solution, absorbent cotton and a couple of pieces of stout twine with weight attached are also needed. Birds to be operated on can be supplied with a little water for from thirty-six to forty-eight hours previously, but otherwise should be starved. The pamphlet referred to, which can be had free on application to the Publications Branch of the Department at Ottawa, gives full instructions for carrying out the operation. If a little of the determination and coolness of the surgeon are shown by the operator, the birds will suffer little, and the wounds will heal very rapidly, providing the capons are fed for the time only mash and liquid and are kept in a pen supplied with soft litter. Caponizing is an ancient process commonly practiced in France and increasing in the United States and Canada, especially near populous centres, where tenderness in fowl is demanded by the large fashionable hotels.

A man has no moral right to skin the earth, unless he is forced to do it in sheer self-defence and to enable him to live in some epoch of an unequally developed society; and if there are or have been such social epochs, then is society itself directly responsible for the waste of the common heritage.—L. H. Bailey.

Horse Sense

The young foal will make more use of these summer days if he is kept in the stable during the day. Flies and hot weather are not contributing factors to a healthy and vigorous growth. The mare and foal stabled during the day, given a couple of grain feeds, and then turned out at night, will do better than the ones left out all day. A ration of four-fifths parts of oats and one-fifth part of bran by weight forms a good feed at this time.

Careful breeders have probably had their mares and foals in during the day since the first of July. If the mares have been needed for work, a moderate amount has not hurt them and they are better off than they would be if left in a pasture all evening the day. The foals are big enough now so that they do not need the mare.

My "Birthday Book."

Do you ever forget when your cow is going to calve, or when your sow is going to have pigs? I have, and I sometimes used to put it down on the calendar and in my notebook, too. Then, usually, the calendar would be used for something else, or I'd lose the leaf out of the notebook. Now I have found a much better place to