

## The Crushing of Oats For Work Horses is Unprofitable

(Experimental Farms Note.)

The practise of crushing or grincing oats for horses is increasing. The best authorities have for years contended that gringing oats for draft horses does not pay and if the meal is made too dusty or fine it may often be injurious.

Hewever, the practice of rolling or crushing has largely replaced grirding th many districts. Many large city com panies are now using crushed grain and report favourably as to its economy. Advocates of oat crushing claim great tenefits therefrom, such as:

- 1. Increasing the percentage of dig estibility of oats for horses on hard work and having little time for feed
- 2. Greedy feeders are made to eat more slowly.
- 3. Horses with bad teeth are assist ed to digest the grain properly.
- 4. That twenty five percent of grain fed whole is not digested and is lost in the manure unless crushing is adopted.
- 5. Proper crushing leaves the grain free from dust and fine meal.
- 6. Crushing exposes the grain more fully to the digestive juices, thus aiding digestion.

7. That crushing even at a consider able cost is profitable in that grain is saved and that horses are healthier.

These and other arguments are used by advocates of crushing oats for horses. Considering the high cost of grain and also of crushing, it has been consid ered advisable to conduct an experiment along this line. The results of this trial given herewith appear to answer con Alleged Attempt on clusively most of the above stated claims.

#### RESULTS OF EXPERIMENT.

Five teams of horses were selected for this experiment and these were fel experimentally, for eight months start ing in October, 1915. The object of this trial was a comparison of the same quantity, by weight of whole and crush | ed oats One horse from each team was started on crushed, and the mate on whole oats, thus insuring a fair com parison as to work performed on each feed. At the end of each month the feeds were reversed in each team. Careful records and weights were kept as to the foods consumed. All horses received their usual supply of hay, water and sait. Horses were weighed each

As all experiments and practical trials proven the value of some bran in a ation the following mixture; oats parts, bran 1 part, was adopted for both the whole and crushed oats.

The hirst week of each month, the transition period, was disregarded in in compiling results. The following observations were made:

- 1. The gains and losses in the weight of the horses were closely related to general health and vigour.
- 2. No horses became fat but all remained in good condition in spite of extra heavy work in fall, spring and early summer and regular work in winter.
- 3. During the whole trial the gains or losses in weight were approximately the same for both whole and crushed grain.
- 4. The slight difference in weights was in favour of crushed grain out amounted to only 125 lb. gain for 1. horses fed half the time on crushed grain during the eight months.

This is . 15 lb. per horse per day. At the average charge of \$2.00 per ton for crushing, such slight gains would cost 13 1 3 cents per pound. However no difference was apparent in health or general condition.

- 5. When bran was mixed with the whole oats the horses could not eat too rapidly owing to the dry, flakey charac ter of the bran.
- 6. When horses were properly water ed and not fed too much hay, whole grain was found in but very small quan tities when at all, in the manure.

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- 7. Both from the weights and appearance of the horses and the condit ion of the manure, crushing did not appreciably increase the digestibility of
- 8. Whether fed crushed or whole grain, horses must have sufficient rest after meals to start digestion at least. If time is short, feed less rather than allow too rapid eating of the regular

In conclusion, it seemed to be definitely shown that, to horses fed in the proper manner, the crushing of oats had little if any advantage and was unprofitable. In other words, the cost of crushing is wasted.

### Notice to Water Takers

Notice is hereby given that all cersons cwing Water Rates must settle the same on or before 18th day of November next or the Water will be turned off.

> Per Order Chairman Water Committee,

H. W. Bourne, A. G. Fields, Collector.

Woodstock, N. B., Oct. 28, 1916.

# King Alfonso's Life

Madrid, Jan. 29, Via Paris - A min arrest ed for the alleged attempt to wreck King Alfonso's train has been identified at Rafael Dura Floriot, a deserter from a regiment stationed at Malaga.

According to some reports the bars of lead found on the tracks had fallen or were stolefrom a freight train returning from the mis at Lineres, and their presence in the para of the royal train was purely accidental.

(This attempt was made on Sunday. The royal train was p eceded by a freight train, he engineer of which saw an obstacle on the track and removed it. Neither the royal taan nor the freight suffered any damage. The pot chosen for the derailment of the rova; rain, neur Granada Andalusia, was a part. interly favorable one, as the road here begin run down grade, The police arres ed two men, on one of whom was found code letters from Barcelona.

#### Dutch Deputies on Peace Question

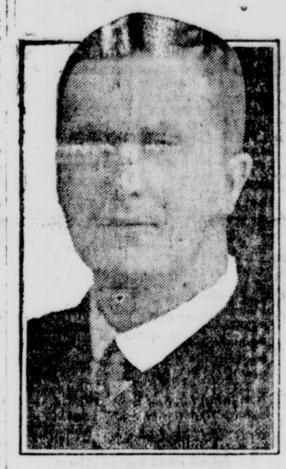
The Hague, Jan 25. via London. -In the Chamber to-day in the course of a debite on President Wilson's address to the Sena'e everal Socialists declared against an enforcement of peace. The aged Calvanist leader, tonkher Alexander Frederick de Saverin Lohman, however, said it was wrong to dismiss President Wilson's aims as Utopian and appealed to Holand to support the President to the fullest extent of its power.

The Foreign Minister, Jonkheer Louden sail that he believed it would be unwise for he Netherlands to bind herself to exercise conomic or military compulsion with a view the enforcement of peace He said his reraining from supporting President Wilson's peace note must not be considered as an action against the Presidents proposals or as proof of excessive circumspection.

#### CABBAGE BURSTING

Many persons growing their own regetables have experienced conaderable annoyance on having a large number of fine heads of cabbage to burst before the vegetable can be used or marketed. The bursting is caused by rapid growth, and usually occurs efter a warm rain which has followed dry spell. It is surprising how rapidly the heads will split and push out from the center, which is damaging unless the cabbage is used at once. To prevent cabbage from bursting, go to each head, and pull it just enough to break a large number of the small rootlets, but not enough to allow the head to fall or lean very much to one side. This will lessen the amount of moisture and food taken into the plant and the development of the head, and consemost cases the cabbage will remain effect and uninjured, and can be sold used before any damage results.

Knows the Paper Business



MR. A. G. MCINTYRE

who was appointed special representative of the Committee on Paper of the American Newspaper Publishers' Association. To accept this position Mr. McIntyre, who is a Toronto man, resigned the general managership of the Metagami Pulp and Paper Co. He had been associated with several successful pulp and paper enterprises in the Dominion, and was the organizer of the Pulp and Paper Association of Canada.

#### MAKING TREES BEAR

The Question of Cultivation Around Trees is Important

Hard, impervious soil is the tree's greatest obetacle to maximum thrifi-Plowing the surface between and around trees helps, but a ... en a tree is eight or ten years of ag or older, its roots go down several leet. The plough cannot break up the hard subsoil, and thus little or no relief is afforded the feeding roots by ploughing. In fact, surface ploughing encourages shallow rooting, which every horticulturist knows is bad for

To date the only practical remedy that has been found for hard soil is blasting with dynamite. Its use enbles the orchardist to deeply stir and break the subsoil.

The blasting, usually an inch and half soil auger being employed to down holes to a depth of about three to four feet. One-quarter pound charge of a slow dynamite, five or six feet out from the trunk is generally sufficient for a tree under five years For larger trees from two to six charges, planted at different points around the trunk, will be required. The proper point to place the holes for the older trees is out at about the edge of the foliage line,

The affect of blasting is to break up; the hard soil, enabling the roots advance easily into new feeding beds; also to increase the waterstorage capacity of the subsoil so that the tree may not suffer from lack of moisture during periods of daught.

Canad

In a repe James Bona: dethe Royal Mint, Ots that worn coin has received from the finance department in one year for re-coinage to the value of \$106,424.97 silver, and \$34.82 bronze. From a consignment of 13 bags, five bags were chosen at haphazard as delivered, and taken as a fair sample for estimating the age and wear and tear of the several denominations. The results for the two highest denominations showed a mean age of 42 years for the 50-cent piece, and of 39 years for the 25-cent plece, as against 36 and 34 respectivein 1912. The 10-cent pieces show a mean age of 34 years.

Canada's National Anthem

Calixa Lavalle, famous as being the mposer of "O Canada," one of Canent but erratic musician, and left few works for the plane, the most important being his well known stude, pillon," this being a showy place comewhat glittering character, but

#### ART OF MAKING FRIENDS

Often you come across people who complain that they have but few friends. The matter is easy enough to explain, for, as some one has well said! "The only way to have a friend is to be one." For friendship cannot possibly be a one-sided matter. Just as it takes two to make a bargain or a quarrel, so does it take the same number to make a friendship.

What really does happen is this: Two people meet, and gradually they find points of congeniality, gradually each does little favors for the other, gradually a feeling of affection takes root in each heart. Neither one is thinking of what can be gained from the acquaintance; rather, each is thinking and planning to give instead of take. In other words, both are trying to be a friend unselfishly. And, lo, it is the very thing which makes their friendship.

Every Day a Sabbath Ev. 7 day in the week is a Sabbath for some one. The Greeks observe Monday; the Persians, Tuesday; the Assyrians, Wednesday; the Egyptians, Thursday; the Turks, Friday; the Hebrews and several Christian sects, Saturday, and the remainder of the Christians, Sunday.

#### Flowers Most Fragrant

Flowers are more fragrant when the sun is not shining on them, according to a French scientist, because the oils that produce the perfume are forced out by the water pressure in the plant cells, and this is diminished by sun-

"Utility" in fowls does not mean "mongrelism" any more than "thoroughbred' 'means "standard-bred."

Sweet corn requires from 54 to 115 days from planting to reach the edible stage, depending on variety.

#### Protect the Horse

To allow the horse to suffer from the cold for lack of a blanket is either heartless cruelty or sens less neglect. If you are observant and humane you will take notice of the horses upon the streets during the winter and see to & that the blanket is used properly. Protect the borse!

Don't permit rubbish, paper or greasy rags to accumulate.

Six per cent. of the line of a railroad built in Switzerland is bridges and 10.5 per cent. through tunnels. Al' nands at the work of cutting potato seed, if well supervised, gives better results than most me the for

#### # HISTORY OF MATCHES

Three milion Matches Used Every

The first ! weifer or friction match dates back ', 1829. They were made and dipped by hand, and sold for a little over two dollars per hundred.

To-day the same quantity may be bought for a couple of cents, or even less. This cheapness is due to the fact that all matches are made, and most of them are dipped by machinery. In making matches by one process, a cylinder of pine wood the length of seven matches, which has been soaked in water to make it tough, is placed in a sort of lathe and as it revolves the circumference comes in contact with a sharp blade which cuts off a continuous shaving the thickness of a match. As this shaving comes away from the log it is out into seven strips, each as wide as a match is long. These ribbons are cut into lengths of about eight feet, and one hundred and twenty or so are piled on top of each other, and fed into a cutting machine, which cuts as many splints at each stroke as there are ribbons in the pile. Rapid as this process of making splints is, it has been displaced in America by another method in which very little hard work is required. In this case the raw material is received at the factory in the shap of a two-inch white pine plank. This is sawed into blocks the length of the match.

The blocks are then fastened by means of clamps, to the bed of the machine, and cutters groove out a set of splints from the surface. The cutters do not turn the entire surface into splints at one impact, but cut: them out one-fourth of an inch apart. The ridges left between the places from which the first set of splints was cut, are then worked up, and so on until the whole block is consumed.

As soon as the splints are separated from the block they are seized in iron clamp plates, which form an endless chain. The endless chain carries the uplints across a steam heated drum, which warms them nearly to the temperature of the paraffin, into which they are next dipped. From the paraf-In bath the splints move on continubusly to the rollers that carry the "heading mixture"-phosphorous, chlorate of potash, etc.-and, as the matches are carried past the rollers each one receives a red or blue head, as the case may be. From the rollers they continue on through a room swept by a blast of cold dry air.

The matches move on until, just before they reach the starting point again, an automatic punch thrusts the matches out and places them side by eide in a box, put in the right, at the right time, by another endless epolt. dvilized world use, in round numbers, three million matches a minute. Fifteen hundred billion is the enormous maber for the entire year.



The best sugar for the sugar bowl is

Its purity and "fine" granulation give it the highly sweetening power. It dissolves instantly in your teacup or on your breakfast cereal.



#### HABITS OF SEAGULLS

Most to be Easily "Gulled" Though Name Implies Same

The name Gull is a misapmer for no bird is less gullible, and few combine such interest, grace and sagacity. Galls possess marvellous powers of sight and are indeed the living model of the mondern monoplane. The German aviators called their machines taube (meaning pigeon), but it is not the pigeon but the gull they imitated. The relative size of wing and body, the gliding motion, is exclusively that of the gull.

Scientists can only partly explain their flight where in the strongest gale, they glide against the wind with never a perceptible movement of their outstretched wings. As the kite is kept up by wind pressure, so it must be with the gull, a slight upward movement of the wings causes it to rise. This is followed by a long gradual slant downwards, in which it. gathers momentum for soaring heavenward again. Many species are represented under this general term, varying much in color, size, and habits. One species, the Skua, in habits partakes more of the nature of the hawks, he is a genuine plunderer, a pirate in fact, living solely on the hard gotten gains of others.

The Skuas are exclusively seabirds, never leaving the ocean as other gulls do in search of food. The ordinary gall is, however, very tame and becomes fearless of man when not molested. In London, the largest city in the world, the gull is quite at home. At any of the bridges over the Thames or in the parks near the river a flock of gulls can be collected in a few minutes by throwin woread into the water. At London Bridge one of the busiest thoroughfares, the gulls delight many a crowd, and bring a touch of brightness into lives, lived amidst the murk and gloom of winter fogs. Poised on the wing about the paraget, they are adepts at catching the food thrown them, while some of the tamer ones will snatch a morsek from the hand.

#### CARE OF HARNESS

Neat's Foot Oil Best Leather Protector

Leather goods of any kind are expensive. You can greatly prolong the usefulness of such goods by proper care in keeping them free of mud and by frequent oiling. Mud is more destructive to leather than moderate wear; water is even more destructive. Therefore, one of the main things to be observed in the care of harness is to keep it clean and the pores filled with the proper ingredients to increase the pliableness, and at the same time render the leather impervious to water. Any leather which freely takes in water soon becomes brittle, and its usefulness is thereby greatly impaired. Before oiling harness unbuckle every strap and wash it clean with warm. soft water, in which there is a little castile soap, using a sponge or cloth. and when it is nearly dry apply the Vegetable oils, with the exception of castor oil, being hardening in their effect, should not be applied to barness. Neat's foot oil is considered. one of the very best leather protectors that can be used. It is necessary that the leather be slightly dampened before applying the oil, so that it will penetrate. One quart of neat'stoot off, four ounces of beef tallow and three tallespoonfuls of lamphack; make an excellent drossing for ham