

# AGRICULTURAL.

## KILLING CANADA THISTLES.

A number of times recently I have noticed inquiries for the best method of eradicating the very undesirable Canada thistle. As I live in a section "peculiarly blessed" with them, I may be able to help some afflicted brother. When I bought one of the farms I now own, says Mr. Woodward in Practical Farmer, the seller's son said, in answer to a question of a neighbor, "Yes, the farm is rich, but the natural production is Canada's thistles." And when I came to cut the newly seeded clover meadow and found the thistles as high as the horse's backs, and so thick that I was compelled to put "trousers" on them before I could drive them into the meadow, I concluded that the lad had told the exact truth; but in one summer I so effectively rid the twenty-five acre field that this year, it being again in clover meadow, a man can carry in one fork full all the thistles to be found. If a man has only a little patch, or a few stalks, they can be killed by cutting and salting, or putting on coal oil, but hardly by covering with straw or sawdust. A good, healthy, genuine Canada thistle, will grow through two feet of solid sawdust, or double that of straw, and be only the more vigorous for the mule. Nothing short of matched oak planks, or cemented flagging stones will effectively smother them. They are made for "rooters," as the stalk has a sharp, hard point. I have seen them come up, through a foot of solid clay, by the side of track in the road, where it had been packed by constant treading all the spring. Luckily for the farmer Canada thistles have very few seeds that will grow. They spread mostly by running underground root stalks, rhizoma, which grow during the after part of the summer and become filled with matter for future growth, like a potato. These are in no sense roots. Nor do any roots grow out of them; but in the spring line shoots start from eyes, which are numerous along these, and from these shoots spring the roots of the plant. If one set of these shoots be broken off, pulled up or plowed down, another lot will at once start from the remaining part of the shoot, or from other eyes on the rhizoma, and there is vitality enough stored to keep them starting for a whole year if the young shoots are taken off for so long a time. If these rhizoma be broken and scattered by cultivation every piece an inch long will grow, and in this way they mostly spread. If the plant is allowed to grow most of the growth up to blossoming time will be at the expense of vitality taken from these reserves, and they will become exhausted; finally "all the starch" will be taken out of them. Now, if the plant be pulled up or cut off, there will be but very few plants thrown up, and what do come will be very yellow and feeble. Knowing this much of the nature of the pest, the way to eradicate it is plain. Get the land seeded to clover, and cut just as soon as the thistles begin to show the first bloom, which will be just when the clover is at its best. The mowing does not in the least eat the clover back, but it denaturalizes the thistles. Any that start will come feeble and look yellow and "sick." When the clover has grown about a foot high, put in a team and plow every inch. Be sure to have all turned over flat. Now put on the roller and follow with harrows, to get all down solid and every thistle covered. The clover will form a thick mat of foliage that it will be hard for a weak thistle to penetrate, and there will be few or none of the pieces of rhizoma in the furrow slice. New thistles will show their heads after this treatment, but every time one does show, the catch should be given over with some tool having sharp cutting teeth, as to cut the thistles off below the surface, and to make assurance doubly sure, the cultivating should be followed the next day, and with a sharp hoe every straggler should be cut off. Follow this up as often as a single thistle starts, and just before the ground freezes plow, and you will have the nicest of all seed beds the next spring for any sowed crop, and if this work be thoroughly done, I will agree to pay one dollar for every plant of Canada thistle ever showing again in that patch, unless it comes from subsequent seeding. This is virtually fall following commenced a little early, and is the best way to clean lands of all kinds of weeds.

## CRUELTY TO THE COIT.

Farmers are seldom intentionally cruel to farm animals. The relations of profit and loss are too close between the farmer and his animals to permit of anything but kindness on his part. Besides all this, says Wallace's Farmer, there is a fellowship which exists between the farmer and his stock. The stock look up to him as a protector, while he looks upon them as his dependents, and he takes just pride in their mute recognition of his thoughtfulness and kindness. We may attempt to patronize men and they resent it; the animal does not. Nevertheless, farmers are sometimes unintentionally cruel to their live stock, mainly by want of thought. "Evil is wrought by want of thought as well as want of deed." We never see a colt trailing along after a plow in the field or to town on a Saturday or Sabbath but we pity

it. We do not blame the youngster for getting in front of the team and poking along, knowing that its mother will not run over it, and thus saying to the driver, "Hold on, old man; I am young and tired; this is no place for a colt; you don't make your babies trot along with you in this fashion." We sometimes wonder what a colt's thoughts must be as it trails wearily along from one end of the corn field to the other and back, fearing to part with its dam lest she will leave it, and feeling awfully tried in its efforts to keep up. It must think that this is a cruel, wicked world. If this did either a farmer, mare or colt any good it all three harm; it stunts the colt's growth, and thus injures the farmer; it worries the mare, and there is no possible compensation. Tie the colt in the stable for the first day or two, or better, still, put it in some small building, and when it gets used to restraint and begins to understand that at noon its mother will be as glad to see it as it is to see her, it will take kindly to the separation and conclude that you are a kind man to her, instead of a cruel tyrant. It will soon learn to go out into the pasture, get some fresh grass, and when the sun gets hot, go back into the shade and avoid the flies, acquire the habit of eating and become weaned. When the time comes without the slightest loss of condition. It will be all the better if it has company, either of other colts or some reliable old horse that has learned wisdom by experience and enjoys the comforts of the pasture. Horses are the most sociable of farm animals, and should have company. They are not particular as to it is one of their own kind with which they can hold hobnob and gossip, horse fashion. The colt is no exception; he is all the better with company.

## CLOVER HAY FOR HORSES.

There seems to be a great prejudice in the minds of the public against clover hay for road or driving horses. That this is common, especially so in cities, is fully proven by the greater demand for timothy hay, and its very much higher price over clover. Chemical analysis shows, writes J. S. Woodward, that clover has by far the greater feeding value, especially in those elements necessary for the fast driving road horse, and the experience of every one who has sensibly experimented in the matter fully substantiates the claims of chemistry.

The facts are that clover hay is much better for all hay-eating animals, and that they can do more work and drive farther on the same weight. The trouble is it is too good; it is so much more palatable to the horse that if fill, he will gorge himself so as to render it unfit for fast driving. It is like filling a boy with some dainty of which he is very fond and then daintily him to hunt for or close his mouth, or like turning a lot of hungry cows in to a fresh clover pasture, from which they are sure to be troubled with bloat, not because the food is unwholesome, but so good that they eat so rapidly as to retard digestion. With managers filled over so full of timothy, especially as usually cut much over-ripe, the horse will not eat too much. There is nothing to tempt his appetite.

To feed clover hay to a road or driving horse the feeder should use his judgment and give just what the horse needs and no more. Let it be eaten over so quickly, the horse should have no more until the next feeding time. The feeder's brains, and not the horse's belly, should be the judge as to what he should receive. There is as much digestible, muscle-supporting food in one pound of clover hay as in two and one-half times as much timothy, and as much carbohydrates, weight for weight, and fifty per cent more fat or food of energy. Early cut, bright, well-cured clover hay and calls make an ideal food for a driving horse, fed a proper quantity. The owner wants to amuse his horse with any kind of straw; but if he will eat too much for his own good in fast driving. For a growing colt there is no food so good as clover hay and wheat bran.

## PATENT LIFE-SAVING BELT.

Among recent English patents is a belt for saving life, which consists of a band of canvas, with cork layers at intervals. Attached to the belt are four floats or bladder of rubber, with a protective covering. This is strapped around the body under the arms, the bladders being inflated with air, by the wearer by blowing through a tube which runs around the belt, and is fitted with a self-closing valve. The floating takes less than half a minute. Equipped with one of these belts a man can walk into deep water with his clothes and shoes on, and be supported with ease in a perpendicular position without making any effort. He can, in fact, smoke a cigar while in the water. This life preserver does not prevent its wearer from swimming, but if he is exhausted it enables him to float in an erect position, it being impossible for his head to fall under the water. A passenger at sea who is nervous can wear a belt under his clothes without its being noticed by his fellow-travelers.

## NOT SO GREEN.

Good-night, dearest, he said, putting on his hat. "E-r-r aren't you forgetting something, Rudolph?" falteringly inquired the maiden. "By Jove, I came near, he exclaimed and snatching her father's best silk umbrella from the stand, he departed.

## OF COURSE NOT.

Mr. Huggins—Isn't Miss Roxy a peach? Miss Kittish—Yes, but she is not the only fruit in the orchard.

# HOUSEHOLD.

## BE FIRM.

We are doubtless familiar with a conversation similar to the one I am about to have overheard between two boys. Said one to the other, "Are you going fishing to-day?" "No," replied the second boy, "Mother won't let me."

"Fudge," said the first boy contemptuously, "tease her and tease her, and if she won't let you go lie down on the floor and kick. That's the way I do; then she will let you go." The first thought is one of indignation against the little rascal; the second, no, the child is not to blame. If he knows he can get what he wants by teasing, why should he not tease? Or, if kicking upon the floor will change his mother's no into yes, he would be a very foolish boy if he did not kick. If he was not confident of getting what he wants by teasing and kicking he would not do it. The mother has only herself to blame for her son's naughtiness. I believe that right here lies three-fourths of the trouble and anxiety and wear upon the nerves in the management of children. Let your no mean no always, and it will be a cept as final; but if sometimes it may rest assured that you will not be one to get the benefit of the doubt; but think before you say no.

Remember that what seems to you a foolish trifle may mean a great deal to your little one, and to be deprived of a certain pleasure may cause a bitter disappointment. When your little daughter comes to you, brimming over with some anticipated scheme that promises such lots of fun, enter into the plans with interest and be glad with her. If it seems to you not a feasible thing, do not say no, but tell her that you will think it over. Think it over carefully, and the difficulties may disappear. If not, and her request tell her so lovingly, giving her the reasons if it is wise, why it is not met, and let her know that you have taught her by her daily actions that her mother is her truest friend; she knows that you love her, and that you will grant her every happiness that is in your power, if it is best that she should have it. She will accept the decision because, "Mamma knows best," and when a request must be refused, there will be no scene, no outbreak of temper, such as all mothers dread.

A child brought up close to the mother's heart, with perfect confidence in her unchangeable love, will give obedience as a matter of course, and will not enter into her mind to doubt her love in the demand. Since your children's joys as well as their sorrows are shared with them when you can, and the latter will be half won.

Dealing with children a little sternly sometimes be used with marvellous good results, and before she is doing the deed she realizes what she is doing, and she has been so gently turned that she has done exactly what you wished her to do, and forgotten to rebel over it.

## PREPARING FOR WINTER.

The work of house cleaning is not so hard when the housewife goes about it with a system or plan always in view. Many things may be done before beginning the heaviest part of the work, which will help greatly. New comforts and bedding can be made, heating stoves cleaned inside, polished outside, and new linings put in if necessary. The clothing that was put away last spring in the closet or attic should be carefully looked over, and disposed of in the best and most economical manner. When you find anything that cannot possibly be of future use, destroy it; but many things that look shabby can be mended and their period of usefulness greatly lengthened.

The best parts of two or more old blankets can be pieced together, and used for an interlining in a comforter, taking the place of the cotton batting. A blanket that is good for nothing else may be fastened smoothly around the ironing board, and make a good floor for the cotton cover. An old fitted dining table, may be used in place of the felt science cloth under keepers who are economically inclined, tear worn sheets in two in the middle, and sew the outside edges together to make them last longer. There are outgrown or partly worn garments in every family, that would do to use again, if they were fresh and cleaned. These should be taken apart made before the regular house-cleaning time. Or, if you have not time to do the sewing, fold the pieces nicely, and lay them away until you are ready to make them. It is much easier to care for them in this way, than if the old garments were left whole. The appearance of faded material is greatly improved by dyeing it, and if the dyestuff or dyes are used it is not a difficult or disagreeable task. Excellent made from garments that contain only a little good material, for in these days of combinations, the dress may be of one kind, and the collar, cuffs and trimmings of another. Begin early and have the clothing ready for the first cold days.

## CHILDISH SUPERSTITIONS.

Welsh mothers put a pair of tongs or a knife in the cradle to insure the safety of their children. The knife is also used for the same purpose in some parts of England. Among Vosges peasants children born at the new moon are supposed to have tongues better hung than others, while those born at the last quarter better reasoning powers. A daughter born during the wax-

ing moon in always precocious. At the birth of a child in Lower Brittany the neighbouring women take it in charge, wash it, crack its joints, and rub its head with oil to solder the cranium bones. It is then wrapped in a light bundle, and its lips are anointed with brandy to make it a full Breton. The Greek mother before putting her child in its cradle turns three times round before the fire while singing her favorite song to ward off evil spirits. The Turkish mother loads her child with amulets as soon as it is born, and a small bit of mud, steeped in hot water, prepared by previous charms, is stuck on its forehead. In Spain the infant's face is swept with a pine tree bough to bring good luck.

## VENTILATION.

Now that the weather has become cooler, with frequent rains, there is a tendency to close the windows and keep them so. This is something that should be especially guarded against, for poor ventilation and damp rooms are the cause of frequent colds and sickness. The house should be opened to air and sunshine every day, if only for a few minutes during the coldest weather. This is especially necessary after a rain, when everything seems cold and damp to the touch. The first sunny, windy day after a rainy spell all doors and windows should be opened for a thorough drying out and airing of the rooms. This will prevent the musty odor found in so many houses in the spring and fall.

Great care must be taken to guard against dampness at all times. As indispensable and beautiful as trees are to the human race, they must not be grown to great numbers close to the house. They have a tendency to keep the place damp. The drainages should be perfect, and for that reason the house should be placed on high ground, with plenty of windows at all sides to admit as much of the life-giving sunshine as possible.

Pure, sweet air, sunshine and pure water are the preventives of many diseases, and are frequently better cures in abundance, but evidently many people are afraid of them, since they do not use more than is absolutely necessary in order to exist. For the sake of health—which is wealth—keep the house filled with pure air and sunshine.

## FOR THE COOK.

It is not economy for the careful housewife to make use of scraps at all times. Very often a dish is made from scraps which is neither savory nor appetizing, and it ultimately finds its way into the garbage receptacle. In such cases it means a decided waste. Time has been spent, extra ingredients have been used which might have been put to a better use, and there is the mortification of the cook's knowing that the concoction has been refused by those whom it was hoped perhaps to please. As an instance, take the bread puddings that are often made from the odds and ends from loaves. Now, a bread pudding at best is a very unsatisfactory article of diet. It is often heavy, indigestible, and never a tempting dish to look at. Some cooks will try and disguise the insipidity by a sauce of some kind. But if the same materials in the way of eggs, sugar, etc., were put into other use, say a custard, or with the addition of a little rice or sago, a pudding may be made that will be eaten with relish. The thoughtful housewife will do well to consider such things as in the course of a year they mean a decided drain on the pocket-book.

## HEAT OF THE SUN.

Prof. Langley and Lord Kelvin agree that the temperature of the sun is about eight thousand degrees centigrade.

The eminent Italian astronomer and mathematician, Secchi, gave it as his opinion that the temperature could be but little, if any, short of ten million degrees centigrade.

Shorer thought it might be thirty-seven thousand degrees.

Pouillet brought it down to somewhere between one thousand four hundred and one thousand eight hundred degrees.

M. Boqueron's opinion was insubstantial agreement with that of Prof. Langley.

M. St. Clair Deville declares that the heat of the solar surface does not give evidence of being in excess of two thousand eight hundred degrees.

M. Deville's conclusion is in accordance, also, with the conclusion arrived at by Bunsen and Delroy.

Sir Robert Ball, Professor of Astronomy at Cambridge, England, is quoted as rating the effective temperature of the sun as probably eighteen thousand degrees.

## NATURE'S BALLOONS.

The island of fire, known by the natives as "The Home of the Hot Devil's," is a recent discovery in Java. In the center of a huge lake of boiling mud and slime exists a phenomenon absolutely unique, and so wonderful that tourists brave the difficulties of the long journey inland simply to see it. Feers of enormous bubbles are formed in the sticky slime by the gases which arise from the lower depths, and these grow and increase to an enormous size looking like nothing so much as the large model balloons sent up sometimes to ascertain the direction of the wind. These bubbles, some of them, attain a diameter of five or six feet before they burst, which they do with a loud explosion. The sounds are described as resembling a constant series of heavy platoon firing.

## TOUGH LUCK.

We all have burdens to bear. But some of us have a double load; I have to walk the floor with twins every night.

## CHILD SLAVERY IN FRANCE.

Disclosures Concerning the Sale of Italian Boys to Agents of Glass Works.

Public attention has been turned to a form of slave trade now carried on in France and Italy by disclosures which are being made on the subject. The victims are Italian children who are bought from their parents by padrones and forced to work in glass factories, chiefly in the central part of France. Formerly large numbers of these children were sold into virtual slavery as beggars, when mat latons were practiced upon them to excite sympathy as musicians and as chimney sweeps. That slave trade was suppressed, but the law does not reach the present form.

The children bring from 100 to 150 francs, \$20 to \$30, and are sold for a period of three years. It is so much money found and a mouth less to fill, the peasants say. The contract is duly executed before a notary and the village priest blesses the departing convoy of little ones. There are no statistics of the mortality among them but it was calculated formerly that of 10 children taken from their homes by padrones 20 returned home at the end of their period of slavery, 30 settled permanently in their new surroundings, and the other 50 died; and in view of the conditions in which they find themselves at the glass works there is no reason to suppose that the mortality is any less now. Their ages vary from 11 to 18 years. The French law for its the employment of children less than 13 years old at such work but that is evaded easily. Their services are sold to the manufacturers at from \$7 to \$13 a month according to the locality, and they work

## TEN HOURS A DAY.

The padrones pocket all their wages and sometimes even the gratuities that may be distributed among the employees of an establishment upon special occasions.

Their condition in the factories is described as shocking. They work in a superheated atmosphere charged in addition with noxious gases and are constantly exposed to severe accidents, while their injuries do not receive proper treatment. They are scarcely allowed to sleep, and their normal state is in many cases it is aggravated by the brutality of the regular workmen who take them both as being it a man and as working at far below the regular scale of wages. They are naturally ill-fed. A man is a man who was a let up to make an imitation in a certain case found that their chief vice was a supple leg. One of these animals was a small one and it is estimated that the cost of sustenance of these children ranges from 5 to 8 cents a day each to the padrone. In one case a slave of feeding thirteen of the little slaves was found to be 49 cents a day. The children are as wretched in appearance as it is to be expected. They are clothed in shabby rags, and their faces are soiled with rarely or never even a wash. They are clothed in rags for the padrones do not permit them to carry an luggage from their homes, to save expense.

The number of the children can only be guessed at. It is estimated that in two factories 1300 are employed. No children are constantly being brought into France from Italy to take the place of those who have become incapacitated for work, or to supply the increasing demand for cheap labor. So great is the demand because of late that girls as well as boys are being sold by their parents. The attention of the French and the Italian Government has been called to the matter, and the trade will be regulated if not suppressed.

## A SPARK CATCHER.

It is Thought to be a Good Preventive for Fire.

An important invention was recently patented in Stettin, Germany. It is a spark catcher, which is placed into the smokestacks of locomotives, factories, steamers and into chimneys where there is danger of fire. The idea upon which the new invention is based is rather simple. The column of smoke and steam rising in the stack is sifted through a system of tubular sieves. There are two of these sieves a little distance from each other, the upper one of which may be lowered or raised in order to obtain the best results. The two sieves are built very much alike, the only difference being that the tubes are not directly above each other, but distant from each other by one-half the diameter of the tubes. By this arrangement the tubes are placed in such a way that directly above the mouth of each lower tube there is a space between the tubes called a "blind pocket" in the upper sieve, while above the closed space on the lower set there is a tube leading out in the upper. The forced draft throws up the glowing sparks straight through the lower set of tubes, and while the smoke and steam will readily deviate from their straight course in order to pass out the tubes of the upper sieve, the heavier sparks are thrown into the blind pockets, where they are naturally extinguished. The particles of still glowing coal and the extinguished sparks are collected in a receptacle on the smokestack, which is cleaned out from time to time. Even when an engine is running under forced draft and when the burning embers are carried out by the steam with great force, they are harmless, for if they do get through the tubular sieve at all they only come through extinct. Since the distance between the two sieves can be regulated it is possible to use any fuel with this spark catcher, a feature which insures its popularity.