Agricultural Department.

PASTURE SHADES FOR MILCH COWS.

The question of shade in pastures is being discussed, and we regret to see it urged that shade is of no benefit to dairy stock, but is, on the contrary, a disadvantage in this—that it fosters a kind of lazy inactivity and thus, by preventing a full consumption of food, lessens the yield of milk.

The advocates of "no shade in pasture," argue that the cow is simply a machine for the manufacture of milk—that to make a large yield requires a large amount of food above that needed for the support of the animal, and that when pastures are supplied with trees or other shade, cows in hot weather seek shelter and rest and will not feed for a full yield of milk. Take away this inducement for comfort, they say, and cows will rest no longer in the hot sun than is necessary, because they will be compelled in their discomfort to move about—and thus grazing is promoted. We know dairymen of large practical experience who hold to this view of the question, and who have taken pains to remove every shade tree from their pastures. But is it a fact that cows will give more milk under such circumstances? And even though it be shown that a gain of milk can be made by removing all shade in pastures, are dairymen justified in adopting such a system?—and will not the milk of cows so exposed to the sun during intensely hot weather be injured?

So far as we can learn, there have been no properly conducted experiments that prove that a larger yield of milk can be obtained from cows when they are not allowed shade in hot weather, than when they are allowed shade. It is true cows will not yield so much milk when they have the run of large tracts of timber, because in woodlands the cows crop the leaves of trees and feed upon various plants that have a tendency to lessen the yield of milk. It is quite different with shade trees scattered here and there over grass lands—they have acquired size and the branches are above the reach of cattle. We do not believe that cows deprived of shade will yield more milk than those which have it under such circumstances. All our experience in the care and management of milch cows teaches us that the more comfort you can give the animal the more milk she will yield, other things being equal; and when cows seek shade during hot weather, they do it to escape the burning rays of the sun, and because it affords them relief and comfort in the same way that it does man when similarly exposed. It is a cruel practice to compel cattle to bear the intense rays of the sun during our hot summers. They need protection at such seasons and if man finds shade, at times, not only grateful but necessary, there is no reason why the same rule may not apply in some degree to our domestic animals. We have reason to believe that milk is not unfrequently seriously impaired, when cows have been exposed for many hours to intense heat under the direct rays of the sun. It has a tendency to make the animal feverish, and hence where pastures are stripped of shade trees it is well to erect temporary shades. And these temporary shades can be made useful for enriching knolls and the poorest parts of the field that need manures for these shades will draw the cattle to such points for rest and there will be an accumulation of droppings which will be of great utility in renovating these spots. Then by changing the shades from place to place as occasion requires these poor spots will be permanently benefited all over the field.

Those who study to get the largest results from milch cows are careful to keep the animals as quiet and as comfortable as possible. All excessive travel or labor in obtaining food, all pain, fear, and anxiety are disturbing causes that check the secretion of milk to a much larger extent than most people imagine. —*Rural New Yorker.*

Training Colts.—One of the meanest habits of young horses is that of lying down in the harness. Some colts will lie down almost as soon as you have them harnessed. Sometimes a blow from the whip, delivered low down along the side, quick and sharp, will bring them up with a spring. If one or two blows do not answer, the whip is of no use; you will only torture and scare your colt needlessly. The better way is "to beat him at his own trade," as the saying is. When he lies down, get upon his head and neck, and make him stay there. After five or ten minutes, he will begin to grow uneasy. Now there is no position which gives man such absolute command and mastery over a colt as when he has his knee on his neck, and his hands gripped into the bridle-pieces. Thus situated, man is absolutely "master of the situation;" and we have often thought that it was a very good idea to have a colt of rather vicious temper lie down once, in order that he might learn how powerless he is in the hands of man. When a colt gives up, the man at his head will easily perceive it. The hot blaze and mad glitter will leave the eye; the muscles will relax their tension; the neck will become limp; and the whole body, losing its rigidity, will lie along the earth as if it had no thought of rising, and would never rise. This is the stage of exhaustion and submission. The colt's rampant spirit is cowed, and his pride humbled. His conceit is taken out of him. He has been beaten by his own weapons and knows it. He will never trouble you again in that way. As to the time it takes to bring a colt to this conviction, there is no precise limit. Some colts will "give it up" in twenty minutes, some in sixty, and we have known colts hold out for three hours. But, whether it takes longer or shorter, carry the thing through. Believe us, you cannot spend your time better.—*Golden Rule.*

The Potato Disease.—An important discovery in relation to the potato has been made by Mr. Worthington Smith, who has at last found the resting spores of the *Peronospora infestans.* These he discovered when investigating leaves attacked with the so-called "new" disease, of which so much has been said and written of late. He has distinctly detected the zoospore and antheridium of the potato fungus after macerating one of the diseased leaves for several days in water. The "new" disease proves to be the "old enemy in disguise," or in other words he says, "the old *Peronospora infestans* is an unusual and excited condition." Mr. Smith, in a paper recently read before the Society, recounts the process by which he arrived at such conclusions, in which he also explains his reasons for thinking that "the fungus which produces the potato disease is aquatic in one stage of its existence, and in that stage the resting spores are formed." The reason the resting spores have evaded previous search is because no one has thought of finding them amongst leaves macerated with water. The Society have awarded Mr. Smith the Banksian gold medal, in recognition of the value of his discoveries. Of course nothing is yet gained but additional scientific information of the history of the disease, and its means of propagation. No remedy is suggested. It is certain, however, the disease cannot be cured until it is understood, and a correct knowledge of its nature will, perhaps, some day suggest the proper means of prevention or cure.—*London (Eng.) Farmer.*

Hungarian Grass.—I sowed my Hungarian grass, last year, on the 15th of June, half a bushel of seed to the acre, which is enough. I began to mow for hay on the 20th of August. I had then mowed and fed it green to the cows for more than a week. The yield of hay was more than two tons per acre. The cows giving milk ate it well all winter, once a day, with a foddering of corn stalks once and hay once. I cannot say that it is equal to the best hay, but it is very valuable when hay is scarce, and giving a good crop on those farms where there is not sufficient meadow, and the tillable land is warm and dry. It requires as much time for curing as clover, and the same method; that is, in the cock. It is more easily handled than clover, and less in danger of being injured by rains. It leaves the land in good condition to be prepared for wheat, and wheat now looks very promising where preceded by this grass. The Hungarian smothers all weeds, thistles and quack. It comes (with me) in the place of a summer fallow, after corn, and makes no more labor really than a fallow, which requires frequent ploughing. If it proves that wheat does about as well after Hungarian grass as after a fallow, we shall call it an acquisition. It does not make as much valuable fodder as sowed corn, but the cost of labor is not nearly so much as in harvesting sowed corn. And sowed corn cannot well be followed by wheat; even if it were early enough, it leaves the land in a bad condition.—*Newton Reed, in Country Gentleman.*

The Horse's Age.—A colt is born with twelve grinders; in twelve days he will have four front teeth added, and when another four make their appearance he will be four weeks old. At eight months of age the corner teeth have come, and when they have attained to the length of the front teeth he is one year old. A two year old colt has the dark substance in the middle of the crown of the teeth, called the kernel, ground out of all its front teeth. During the fourth year the next four teeth are shifted, and the corner teeth in the fifth. At six years of age the bridle teeth have attained to their full growth, and the kernel is worn out of the lower middle front teeth. At seven years the bridle teeth begin to wear off, the kernel of the teeth next to the middle front is worn out, and a hook has been formed in the corner teeth of the upper jaw. The kernel is worn out of all the lower teeth and begins to decrease in the middle upper front at eight years. In the ninth year the bridle teeth lose their points, the hook in the corner teeth has increased in size, and the kernel has entirely disappeared from the upper middle front teeth. At ten years the kernel has worn out of the teeth next to the middle front of the upper jaw, and it has entirely vanished from the corner teeth of the same jaw in the eleventh year. When the animal has attained twelve years the crowns of all the front teeth in the lower jaw have become triangular, and the bridle teeth are worn down a great deal. As the horse further advances in age, the gums shrink away from the teeth and the kernels change into dark-looking points.

Uses of Rawhide.—The skin of an animal, whether cow, calf, colt, or horse, that dies on a farm, is worth more at home than at the tanner's. Cut into narrow strips, and shave off the hair with a sharp knife before the kitchen fire, or in your work-shop, on stormy days and evenings. You may make them soft by rubbing. A rawhide halter-strap an inch wide will hold a horse better and last longer than an inch rope. It is stronger than hoop-iron, and more durable; and may be used to hoop dry casks and boxes, and for hinges. Try it on a broken thill, or any wood-work that has been split. Put it on wet, and nail it fast. Thin skins make the best bag-string in the world. A rawhide rope is a good substitute for a chain. It is valuable to mend a broken link in a trace-chain: For some purposes it is best to use it in its natural state. For other purposes it may be dressed soft.—*Vermont Chronicle.*

Early Cut Grass Best.—The German papers publish details of a series of experiments carried on at the agricultural schools in that country for the purpose of testing the nutritive properties of grass and hay at various stages. By an elaborate series of analyses it is shown why young grass is more nutritious than mature grass. The physiological experiments show that it is more easily digestible. Thus grass 2½ inches high contains nearly 50 per cent. more of albumenoid than the grass which is 6 inches high, and 10 more of "crude fat." The mature grass contains more woody fibre and less flesh-forming matter than the young grass, and, besides this, it is found that the nutritious albumenoids exist in a less soluble form in hay than in young grass. Hence the difference of nutritive value and digestibility. Autumnal hay was found to be more nutritious than summer hay.

Bran and Corn Meal for Cows.—The *Practical Farmer* says: It is well settled, in the opinion of all our best dairymen, that bran greatly promotes the milk secretions in cows, and it is fed almost universally. About equally mixed with corn meal is the usual proportion. This mixture seems to promote both quantity and quality of milk. Hungarian grass is also found for milch cows to be rather superior to the ordinary run of hay. The last year or two Hungarian grass has loomed up wonderfully in the estimation of our dairy farmers, and a very large scope of land will be sown with it the coming season. It matures for cutting in about sixty days, and produces two to four tons per acre, the latter, of course, on good soil. Three pecks to the acre is the usual allowance of seed.

Old House Plaster.—In tearing down old buildings or scraping *plaster* off the ceilings, for improvements, a large mass of stuff is furnished that may be of great benefit to gardeners and farmers, if they will haul it home and put it on their land. There is no other form of lime which they can get that would be so valuable, in proportion to its cost, as old house-plaster; and when their teams are in town, it will pay the farmers richly to haul the old plaster home and put it on their corn and garden patches; and in no application will it give a better return than when put around the trees and berry bushes.—*Maryland Farmer.*

—A writer in the London *Garden* describes his method of training petunias as follows: "He takes hazel rods, about two feet long, bends them like croquet hoops, and drives both ends into the bed, at suitable intervals, all over it. On these he trains petunias, which blossom more abundantly than usual under this treatment. Petunias have been successfully treated as if they were sweet pea vines, and trained on a slanting trellis. The trailing habit of this plant, especially late in the season, is not always sufficiently considered."

—There has as yet been no application discovered for destroying the Colorado potato beetle so sure and cheap as Paris green. It is a poison, and a physician-farmer, living near this city, wishes us to call attention to the fact that if applied with water, it is perfectly safe for ordinary use. A table-spoonful mixed in a pailful of water and applied with an old broom will invariably kill the beetles; and by keeping a pail set apart to this special use, there can be no danger of injury to anything except the beetles.

DOMESTIC.

Currant and Raspberry, or Currant and Cherry Pudding.—Take equal quantities of raspberries and currants, or cherries and currants; line a pudding-basin with a suet-crust; stem your fruit; put it into the basin with plenty of sugar, but do not put any water; cover it with a top crust well fastened on; tie a cloth over it, and boil for two hours.

Baked Tomatoes.—Select well-ripened fruit of a nearly uniform size, say two or three inches in diameter, and arrange them on an earthen pie-dish. Baking them on tin injures them in taste, color, and wholesomeness. Place the smaller ones in the middle and bake in quite a hot oven, until tender, say from an hour to an hour and a quarter. If the juice should dry out, add a little water. Make them soft and tender, but do not let them burn. Serve warm or cold.

French Raspberry Tart.—Choose a pint of very fine ripe raspberries, either red or white; stem them, and throw them into a boiling syrup, made with a quarter of a pound of loaf-sugar and a tablespoonful of water; withdraw them immediately from the fire; line a tart-dish with a puff-paste rolled as thinly as possible; lay in the fruit, and syrup, observing to keep the raspberries as whole as possible; put it into a quick oven for twenty minutes; strew more sugar over it, and glaze it; or, if to be served cold, pour raw cream over it.

Bean and Tomato Soup.—Take one quart each of well-boiled beans and canned tomatoes; mash the beans thoroughly with a pestle, and rub them through a collander; then add two quarts of water and put them to cook with the tomatoes; add one medium-sized onion, finely minced; boil all together fifteen or twenty minutes; thicken with about one gill of sifted Graham flour rubbed in water; boil five minutes more and then serve. The above quantity is sufficient for a dozen persons. Parsley, thyme, or sage may be used instead of the onion.

Baked Beans and Tomatoes.—Mix equal proportions of well-cooked beans and cooked or canned tomatoes; add finely minced onion, to the taste, depending somewhat on the strength of the latter, and put all in a dish to bake. If there is a large proportion of moisture, let the dish be wide and flat like a pie-dish, otherwise use a nappy. Bake long and gently, from an hour to an hour and a half in a moderate oven. Less baking will do, but does not make them so nice. Serve warm.

Method in the Household.—A girl who ever since she left the school-room has been at every one's beck and call all day long, and then has had all her habits deranged by her halcyon days of courtship, and afterward by bridal travels and visits, may often feel it difficult to settle into regularity when in her own house. But then is her time. Most likely, though her avocations are more needful, the arrangement of them is more in her own hands than when she was only one member of a household. If her husband be a busy man, he is probably bound to certain hours, and she knows exactly what time he will have to bestow on her. If he has a good deal of time on his hands, and is apt to want her at all hours, though all plans must be postponed to his pleasure, still it is well to have certain fixed landmarks in the day, to which to persuade him to conform, or that strange wild thing will grow up, a ramshackle household, in which no one knows when anything is to be done, nor where any one is to be found, and there is continual fret and worry to all who do not chance to be born with a reckless easy-going temper. Let not the young wife be led away by the foolish saying that only tiresome people do things at regular times. Probably she has a good many hours of the day before her while her husband is engaged, and she will do much more wisely if she resolves against being desultory. If she picks up her work or her book, or tries the last bit of music, just when the humor takes her; rushes out to garden or to shop the moment an idea or a want strikes her, encourages gaddings at all hours with the friend next door, and writes her letters either on the spur of the incoming post or in a frenzy of haste at its departure, she will ere long be weary, find nothing done, and have begun on a course that will not be easy to break. She will be much wiser, and much less likely to spend a wearisome life of muddle, and of running after omissions, if she fixes with herself certain tasks at certain hours, and on regular days—putting foremost those that she is most disposed to shirk. Domestic affairs naturally are periodical, and good servants are only to be made, or kept, by regularity in all that concerns them. So charitable works (except on emergencies) are better followed out at regular times.—*Monthly Packet.*