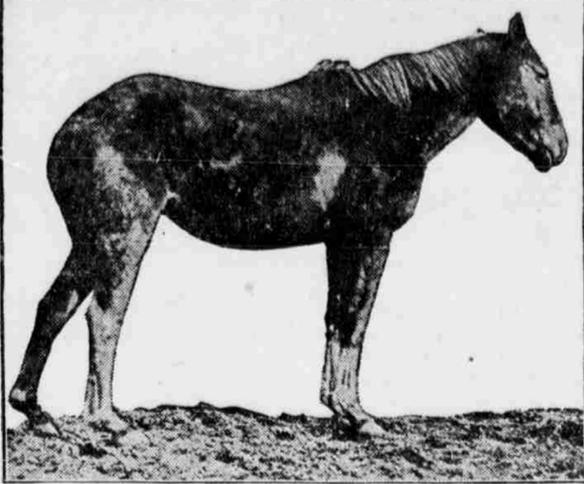


MAKING EXAMINATION OF A SICK HORSE



HIND LEGS TOO STRAIGHT, WITH PASTERNS TOO SLOPING.

(Prepared by the United States Department of Agriculture.)

A healthy horse ordinarily has a good appetite. Excitement, strange surroundings, fatigue, and hot weather may all cause loss of appetite. Where there is cerebral depression, fever, profound weakness, disorder of the stomach, or mechanical difficulty in chewing or swallowing, the appetite is diminished or destroyed. Sometimes there is an appetite or desire to eat abnormal things, such as dirty bedding, roots of grass, oil, etc. This desire usually comes from a chronic disturbance of nutrition.

Thirst is diminished in a good many mild diseases unaccompanied by distinct fever. It is seen where there is great exhaustion or depression or pro-



An Eight-Year-Old Mouth.

found brain disturbance. Thirst is increased after profuse sweating, in diabetes, diarrhea, in fever, at the crisis of infectious diseases, and when the mouth is dry and hot.

Some diseases of the mouth or throat make it difficult for the horse to chew or swallow his feed. Where difficulty in this respect is experienced, the following named conditions should be borne in mind and carefully looked for: Diseases of the teeth, consisting in decay, fracture, abscess formation, or overgrowth; inflammatory conditions, or wounds or tumors of the tongue, cheeks, or lips; paralysis of the muscles of chewing or swallowing; foreign bodies in upper part of the mouth between the molar teeth; inflammation of throat. Difficulty in swallowing is sometimes shown by the symptom known as "quidding." Quidding consists in dropping from the mouth well-chewed and insalivated boluses of feed. A mouthful of hay, for example, after being ground and masticated, is carried to the back part of the mouth. The horse then finds that from tenderness of the throat, or from some other cause, swallowing is difficult or painful, and the bolus is then dropped from the mouth. Another quantity of hay is similarly prepared, only to be dropped in turn. Sometimes quidding is due to a painful tooth, the bolus being dropped from the mouth when the tooth is struck and during the pang that follows.

In some brain diseases, and particularly in chronic internal hydrocephalus, the horse has a most peculiar manner of swallowing and of taking feed. A similar condition is seen in hyperemia of the brain. In eating the horse will sink his muzzle into the grain in the feed box and eat a while without raising the head. Long pauses are made while the feed is in the mouth. Sometimes the horse will eat very rapidly for a little while and then slowly; the jaws may be brought together so forcibly that the teeth gnash. In eating hay the horse will stop at times with hay protruding from the mouth and stand stupidly, as though he has forgotten what he was about.

In examining the mouth one should first look for swellings or for evidence of abnormal conditions upon the exterior; that is, the front and sides of the face, the jaws, and about the muzzle. By this means wounds, fractures, tumors, abscesses, and disease accompanied by eruptions about the muzzle may be detected. The interior of the mouth is examined by holding the head up and inserting the fingers through the interdental space in such a way as to cause the mouth to open. The mucous membrane should be clean and of a light-pink color, excepting on the back of the tongue, where the color is

a yellowish gray. As abnormalities of this region, the chief are diffuse inflammation, characterized by redness and catarrhal discharge; local inflammation, as from eruptions, ulcers, or wounds; necrosis of the lower jawbone in front of the first back tooth; and swellings. Foreign bodies are sometimes found embedded in the mucous membrane lining of the mouth or lodged between the teeth.

The examination of the pharynx and of the esophagus is made chiefly by pressing upon the skin covering these organs in the region of the throat and along the left side of the neck in the jugular gutter. Sometimes, when a more careful examination is necessary, an esophageal tube or probang is passed through the nose or mouth down the esophagus to the stomach.

In examination of the abdomen one should remember that its size depends largely upon the breed, sex, and conformation of the animal, and also upon the manner in which the animal has been fed and the use to which it has been put. A pendulous abdomen may be the result of an abdominal tumor or of an accumulation of fluid in the abdominal cavity; or, on the other hand, it may merely be an indication of pregnancy, or of the fact that the horse has been fed for a long time on bulky and innutritious food. Pendulous abdomen occurring in a work horse kept on concentrated diet is an abnormal condition. The abdomen may increase suddenly in volume from accumulation of gas in tympanic colic. The abdomen becomes small and the horse is said to be "tucked up" from long-continued poor appetite, as in diseases of the digestive tract and in fever.

In applying the ear to the flank, on either the right or left side, certain bubbling sounds may be heard that are known as peristaltic sounds, because they are produced by peristalsis, or wormlike contraction of the intestines. These sounds are a little louder on the right side than on the left on account of the fact that the large intestines lie in the right flank. Absence of peristaltic sounds is always an indication of disease, and suggests exhaustion or paralysis of the intestines. This may occur in certain kinds of colic and is an unfavorable symptom. Increased sounds are heard where the intestines are contracted



Teeth at Past Three Years.

more violently than in health, as in spasmodic colic, and also where there is an excess of fluid or gas in the intestinal canal.

The feces show, to a certain extent, the thoroughness of digestion. They should show that the feed has been well ground, and should, in the horse, be free from offensive odor or coatings of mucus. A coating of mucus shows intestinal catarrh. Blood on the feces indicates severe inflammation. Very light color and bad odor may come from inactive liver.

PASTURE MAKES CHEAP PORK

Forage Crop Permits Cutting Grain Allowance to Minimum—Best to Plan Early.

Forage crops make cheap pork, because they permit cutting the grain allowance to the minimum.

A system of management which will furnish forage through the entire grazing season should be planned early.

Will You Raise a Garden This Summer

—and help increase the national food supply so that living costs may be reduced and a victorious peace be assured : : This is a matter of vital importance to every one of us

By Robert H. Moulton

WAR MAY end that great American anomaly, high cost of living in a land of plenty. It probably will be the means of bringing into cultivation practically untouched arable land, of awakening the country to the value of native food staples of which many are still ignorant, and of enforcing a system of distribution which will supplant the wasteful and inefficient methods now in vogue.

It is unlikely that the United States will ever be in the position of the belligerent countries in Europe, especially Germany, where land is scarce as compared with the farm acreage on this continent. The problem of feeding the more than 100,000,000 of inhabitants of the United States as well as supplying Great Britain and France can be solved by means of the enormous agricultural resources at the disposal of the American nation. Prudence, foresight and efficiency are needed.

National policy decrees that there should be a big increase in our acreage, and this being so, the nation as a whole and not the farmer as a class should and must assume the major part of the risk involved. Each section of the country must become as nearly as practicable agriculturally independent. This is a good policy in time of peace and is a vitally important policy now that we have entered the war, with every prospect that our transportation systems will eventually be chiefly occupied with the transportation of soldiers and military supplies.

From Washington comes the call of the national emergency food garden commission, which would see a million food gardens planted throughout the United States. This plan is similar to that which was followed in Germany when the lawns of private houses, the parks and the grounds about hospitals alike were subjected to the spade and hoe. The Germans are given to the intensive development of every inch of soil; as for that matter are other European nations. The call to the garden, however, will undoubtedly have some effect in providing food for those who are thrifty and patient enough to look after their own gardens.

Benjamin F. Albaugh, known nationally as an enthusiast in the subject of city lot gardening, and author of several books on the subject, says that the "gardenette," or back yard farm, is one of the surest means of combating the rapid rise in the price of foodstuffs. In his book, "The Gardenette," Mr. Albaugh has pointed out the possibilities of unoccupied building lots, and he is now taking an active part in the general campaign which has been inaugurated to educate the city dweller up to the potential worth of a few square rods of ground.

If one has an unoccupied area in the rear of his home, even if it is only 25 by 50 feet in size, then he has the means of cutting down the cost of summer foodstuffs almost two-thirds, says Mr. Albaugh. The soil need not be particularly fertile to yield satisfactory returns in garden crops, if treated right. And the soaring equations on all varieties of vegetable foodstuffs make the effort well worth while.

The backlot garden has been tried successfully in the East and in many other sections of the country. At first the backyard gardening in the larger centers of population was undertaken by people of foreign birth, who from a desire to effect practical economies, or from an inherited penchant for the work, began industriously spading up the small areas of unoccupied ground around their homes.

Two or three months later these thrifty intensive agriculturists were selling hundreds of bunches of celery, radishes or lettuce about the neighborhood, and receiving the full market price for their wares.

Housewives augmented the family income with a strip of garden land 15 or 20 feet in width and 40 or 50 feet in length. The amount of vegetables that can be grown on such a lot, when intelligently cultivated and carefully tended, is astonishing.

There is a threefold incentive to city lot gardening. The first is a handsome saving if the vegetables are consumed by the family, or a neat profit if they are sold in the neighborhood. The second is the incomparable superiority in crispness and flavor of garden-grown produce. The variety purchased after several days of transportation and exhibition in stock is often tough, leathery and flavorless.

Mr. Albaugh is authority for the statement that three square rods or a space of ground, say 18 by 45 feet, can be made to produce a large part of all the vegetables needed to supply the table of a family of five or six persons, throughout the season. He, himself, has repeatedly produced on such a plot, but containing four square rods, the following:

Thirty dozen green onions, one bushel dry onions, ten messes green peas, 15 dozen beets, 22 dozen radishes, 200 heads fine celery, 25 choice egg plant fruits, 25 extra fine squashes, 50 messes lettuce, 20 messes corn, ten messes kohlrabi, eight dozen sugar corn, ten messes green beans, 25 heads finest cauliflower, 25 heads cabbage, 20 messes spinach, ten messes chard, 20 messes asparagus, ten messes salsify, ten dozen carrots, ten dozen parsnips, 50 fine muskmelons, 200 pickling cucumbers, ten slicing cucumbers, five bushels tomatoes, two bushels early potatoes, eight quarts lima beans, three bushels turnips, three quarts okra, and three dozen sweet mangoes.

At a low estimate these crops were worth well over \$50. Often they would cost much more to buy. Yet the plot was cultivated in Mr. Albaugh's



old moments, without in any way interfering with his usual pursuits.

For the business or professional man, who toils all day in office, bank, factory or shop, the change to the light physical labor in the open air and sunshine, gives just the needed change necessary for health of both body and mind. Such employment will be found restful and soothing to the overtaxed and wearied mind and nerves.

For city lot soil that is hard, impoverished or rocky, Mr. Albaugh has invented a new system of gardening. From it he has achieved such surprisingly favorable results as to augur a great future for the new "sandwich" method of city lot cultivation. The "sandwich" garden is, in a sense, an artificial creation. It may be constructed on brick or cement pavement, or even the tarred or tile surfaces of the roofs of buildings. By this method of growing vegetables, the products of the garden are always earlier, and at the same time of better quality than can possibly be produced in any other way.

In making a "sandwich bed," Mr. Albaugh first places a layer of straw or stable litter or leaves, about five inches thick, upon the surface selected and then tramps or packs it rather smooth and firm. Over this he spreads about one inch deep of rich, fine stable manure. Another layer of stable manure about two inches thick goes over this, after which a hose is turned on and the mass given a thorough soaking, care being exercised to stop before leaching begins.

The next step is to spread evenly over the bed at least four inches of street scrapings, avoiding, however, streets that have oil or asphalt in their make-up. If street scrapings cannot be readily obtained, a composition of equal parts of fine river sand, rich garden soil and old, fine stable manure may be used instead. This should be thoroughly mixed by shoveling over in a heap, and then, after it is in place, tramped until it is firm. The bed is then ready to plant.

In some instances the real "sandwich bed" is not possible or practicable. If this be the case, and the soil is yet reasonably fertile, and in good condition, excellent results may be obtained by the following method:

Procure one load of rich stable manure for each square rod of ground (a square rod is 16 by 16 feet) and dump it near where the beds are to be made. Then with a spading fork, beginning at one end of the bed, spade a furrow across the bed, fill the furrow nearly full of manure, and tramp it down firmly. Now spade another furrow, throwing the dirt from this over the tramped-down manure in the first furrow. Fill the second furrow with manure and tramp it down as before, and throw over this the dirt from the third line of spading, and so on until the entire bed is spaded.

Finest vegetables, says Mr. Albaugh, can be grown on hard, stony, or alkaline soils, where or-

inary cultivation would be utterly fruitless. For best results plants need aeration at the roots. If air cannot penetrate to the roots the plant languishes and dies from suffocation. When the surface of the ground is covered with water, the plant suffers in the same way and for the same reason. The "sandwich beds" can neither be drowned nor smothered. The air circulates through the several layers of material, and if too much water is applied, it readily passes through the fibrous beds and does no harm. Other advantages of these beds are that the fertility is placed just where it can be easily absorbed and assimilated up earlier than does the natural soil, and the decaying mass of fibrous material retains moisture to such an extent that only a nominal quantity of hydrant water is required.

A steel garden rake, spading fork, small garden trowel, a long handled shovel, a manure fork, and a small hand sprayer are about all the tools that need be purchased. Mr. Albaugh uses a small hand sprayer which is cheap and very satisfactory. It has a quart Mason glass jar for a reservoir, and has the advantage of blowing the spray at right angles from the barrel of the machine. With it the under side of the leaves can be effectively reached, and this is often essential to success. The barrel should be of brass, as many spraying compounds are corrosive on iron. With this little machine, and a supply of bordeaux mixture, hellebore, tobacco extract or tea, paris green, aphine, etc., the careful gardener is well fortified against attacks of insects and fungi.

The provisioning of the country will be much aided by the educational work among boys and girls of the United States which has been carried on through the co-operation of the department of agriculture and the rural school garden clubs of the various states. The younger generation has been stimulated in the raising of vegetables and fruits on waste land and in the backyards in the cities and towns.

An example of what can be accomplished by the pupils of rural schools was strikingly demonstrated last year by the Cook County, Illinois, Garden club which had a membership of 2,387. The club cultivated over 200 acres of land, upon which grew nearly \$48,000 worth of vegetables. After deducting expenses the club members had a net profit of \$41,629.28. If these 2,387 boys and girls had not grown these gardens, probably 75 per cent of them would have been idle—doing nothing—throwing away time and energy. The gardens gave helpful exercise, stimulated interest, and encouraged thrift and ownership.

The economic side of the problem is astonishing, but greater still, and of far more importance, is the wholesome, moral influence brought to bear upon the lives of these young people who are receiving most excellent training in doing worthwhile things.

SUFFERING CATS!

Enemies of Tom and Maria Accuse Them of Many Serious Crimes.

"Suppress the cat!" was a recent demand made on the legislature of New York state according to a bill for licensing felines. Connecticut and other commonwealths also are crusading against outlaw Grimalkin.

Millions of cats are leading lives of vagabondage. They roam the wilds, seeking what they may devour. Birds are slain by them in large numbers. They do harm in other ways.

The cat has an ancient history. Tradition has it that the creature appeared in Egypt about 1500 B. C., and being highly regarded there as a fideside Sphinx snuggled down near the seats of the mighty and made himself very much at home. Mummy cats are found in the pyramids.

The first cat is believed to have been of African origin. Travelers from Greece seeing the cats so comfortably ensconced in Egypt saw to it that some of them were brought to Athens, and from the ancient seat of culture the cat is supposed to have spread over Europe. The animal in Europe was adopted by man as a pet about the ninth century.

There is something so inherently wild about the cat that even when he reposes on silk cushions and has his fur combed with celluloid and has cream every day he has within him the old spark of savagery.

The cat is of the race of the saber-toothed tiger and is credited with an insatiably bloodthirsty disposition. He torments his prey. He has no abiding affection for those whose hands have fed him. Chateaubriand said to his friend, M. de Marcellus, that there is in the cat an ungrateful spirit which prevents him from being attached to anyone.

The principal goad of the nationwide crusade against the "villainous, false cat" comes from the

friends of the birds. The cat is a crafty bird catcher by nature. Cats have been seen lying in wait for the winged victims which are attracted to the feast so bountifully spread. They have even been accused of decoying birds within the reach of their paws by imitating the note of the feathered songsters. They climb the trees by night and day in quest of eggs and fledglings.

John Burroughs declares that cats kill more birds than do any other animals on this continent. It is also charged that the cat kills squirrels and hares and rabbits, moles and shrews and fish and useful insects, while as a rat terrier he is greatly over-rated.

Rat traps, when well handled, are credited with surpassing the cat in efficiency. The other day there was put on exhibition an illustration of the efficiency of the cat. The cabin of a steamship was fumigated with the result of a mortality of one cat and 24 rats, which the cat was supposed to keep away. When the cat is right on the premises the mice play just as much as when he is away, say the enemies of the cat, only they keep out of sight.

"Few persons in a normal lifetime," insists Dr. A. K. Fisher, who is in charge of economic investigations for the bureau of biological survey of the United States department of agriculture, "run across more than half a dozen cats that habitually attack rats."

When the cat is permitted to run wild the experts decline to give him the slightest excuse for living.

The known facts are that the domestic cat, straying into the fields and woods, whether a pet, a vagabond or a wild dweller in the open, is a menace to wild life and a detriment to the general welfare.

As a further argument against the cat the charge is made against him that he disseminates disease by becoming the playmate of sick children and that he carries microbes in his fur, lockjaw in the scratch of his claw, and rabies in the bite of his teeth.—New York Sun.