

Soils and Crops

By Agronomist.

This Department is for the use of our farm readers who want the advice of an expert on any question regarding soil, seed, crops, etc. If your question is of sufficient general interest, it will be answered through this column. If stamped and addressed envelope is enclosed with your letter, a complete answer will be mailed to you. Address Agronomist, care of Wilson Publishing Co., Ltd., 73 Adelaide St. W., Toronto.

Growing Beans and Parsnips.

Nothing is to be gained by planting the bush beans outdoors too early, as they are very tender and one light frost may either kill or retard them more than a week or more's later planting. Of course, if you are equipped to cover or otherwise protect them and are sure to attend to it, you can get an earlier crop by taking some risk. But, in any case, it will not be wise to plant until the ground is warm and the weather somewhat settled, as beans planted in cold or soggy soil are likely to rot in the ground.

The Various Varieties

Beans naturally divide themselves in the following classes: The dwarf green and yellowpodded, the dwarf shell beans, which are matured, and beans shelled out for winter use; the tall, or pole, green and yellow podded, and the tall shell beans for winter. Few persons grow any of the shell beans in small home gardens, and we will not further consider them here.

For beans the soil should be rich and mellow. To get them tender at picking time they should have quick and continuous growth, and this is best assured when they are planted in a warm, rich, porous soil, well-drained and given plenty of water. Well-rotted manure, dug into the trench, is best; and the soil should be made fine with the shovel when digging and finished with the rake.

Beans are planted in two general ways: In hills and in furrows or drills. Cleaner cultivation can be given by the hill system, but more can be grown in the same space of garden by the drill plan.

By the hill system you can hoe all around them, but when planted in drills, if you have many weeds, it will require hand-weeding along the rows where the hoe cannot reach.

As some beans, for different reasons, do not germinate, it will pay to plant them rather thickly, and thin out in the drills to four inches apart. Make the drills as far apart as may be convenient. If to be worked entirely with the hoe, eighteen inches apart will do; if to be worked with the wheel cultivator, make them two feet apart between the drills.

When using the hill system of planting, drop four to six beans to a hill, making the hills a foot apart. When fully up, thin out to three or four to a hill.

Beans require frequent cultivation, always drawing the soil up around the plants. If the wheel cultivator is used it will be well to go over them with the hoe to get the soil well up

to the plants. Work them when the crust forms after rains, and at all times when necessary to keep down the weeds.

Parsnip a Valuable Food

As a solid dinner vegetable the parsnip is welcomed on the tables of the rich and poor alike. Boiled with meat it makes a whole meal, and it is just as much relished when cooked in any of the many ways in which it can be served.

It is the sugar content which makes the parsnip so valuable as a food. It is heavy with sugar, and it is to get into it so much of this valuable quality that we give it the very best soil and cultivation.

A great deal of the value of the parsnip also lies in its good keeping qualities. It may be taken up in the fall and stored in pits, or cool cellars in sand, or it can be allowed to remain in the open ground over winter, which will improve its flavor and make a good vegetable for use in the early spring when such are scarce.

As they are an all-season vegetable, they can be planted eighteen inches apart, and the space between intercropped with radishes, lettuce and other smaller vegetables.

Best results will be obtained by digging into the soil as much well-rotted manure as it will take, using it in the trench in preference to spreading it on top. As is the case with all large-growing root crops, the soil should be made porous and mellow, so that the roots can grow and expand easily.

Parsnip seed is of rather easy germination, on which account it should not be covered more than a half inch with fine soil. A gentle wetting down of the drills will pack the soil and the seeds together sufficiently that compacting with the foot will not be necessary.

Requires Much Water

When the young plants are two inches high they should be thinned out to three inches apart.

Early small-growing parsnips which are pulled out for bunching can be left stand at three inches apart, but if you plant the long winter varieties, they should be thinned out to six inches apart, as their foliage is very heavy and will crowd even at that distance. The largest varieties had better be thinned out to eight inches.

Parsnips, like all root crops containing large quantities of sugar, require a great amount of water, and it should be given them regularly; but be sure that the ground they are growing in is well drained so that it does not get boggy.

The Dairy

There can be no successful dairying which does not rest upon an appreciation of the fact that a cow is first of all a mother. A cow's ability to bring forth strong and vigorous offspring and to provide abundantly for the nourishment of such is the corner stone of the dairy business.

There are those who call the cow a machine, who figure painstakingly the amount of foodstuffs she should have to produce her utmost, and who go about their business upon the basis that, as in the case of other machines, production is simply a matter of how much raw material can be turned in a given time into finished product.

It is, of course, unjust to the cow to call her a machine. Machines do not possess nerves, whereas a cow has an intricate system of them. And the relation between this system and the milk pail is so intimate that any condition which affects the cow's nervous system reacts at once upon the milk-producing system. An undue disturbance of normal, tranquil conditions diverts the blood supply from the milk glands and the cow either "holds up her milk" or gives a lessened quantity. It is not without reason that Swiss peasants sing or yodel softly to their cows at milking time.

If calves are weaned they should be fed whole milk until they are one month old, when they should be changed to skim milk. They should be fed skim milk until they are six months old. While they are on milk they should be given some grain and alfalfa hay.

A good mixture for grain feed is four parts of corn chop, one part of oil meal, and two parts of wheat bran. After taking the calf off the milk, increase the grain gradually to two pounds a day in addition to silage and alfalfa hay.

The heifers should be bred so as to calve when from twenty-four to thirty months of age, depending upon the breed and growth of the animal. If bred so as to calve earlier than this, their growth is apt to be injured.

Donald Smith of Red Deer received for some fine beef cows what is reported to be the highest price ever paid for this class of beef in Western Canada \$9.45 per hundred.

Bacon contains about 7 per cent. bone, dressed beef 20, mutton 20 and veal 25. That is one reason why bacon is so much desired for shipment to Europe under present conditions of shipping.

Like produces like, and to get good crops without planting good seed is next to impossible.

GOOD HEALTH QUESTION BOX

By Andrew F. Currier, M. D.

Dr. Currier will answer all signed letters pertaining to Health. If your question is of general interest it will be answered through these columns; if not it will be answered personally. If stamped, addressed envelope is enclosed, Dr. Currier will not prescribe for individual cases or make diagnosis. Address Dr. Andrew F. Currier, care of Wilson Publishing Co., 73 Adelaide St. West, Toronto.

Blood Pressure

Blood pressure is an important subject, insurance companies lay stress upon it and doctors who keep abreast of the progress of the times find it necessary to be skillful in determining it.

It means the degree of force which the blood current in the arteries exerts against their wall under the influence of the contractile force of the heart muscle.

It is measured by the height of a column of mercury in a capillary tube. It should be remembered that the heart is a pump and the arteries a series of elastic tubes proceeding from a great trunk vessel attached to the heart, and dividing and subdividing until every portion of the body has been traversed by them.

Any artery can be used to determine the blood pressure, if the system is in good working order, but one of moderate size is more convenient than one which is very large or very small. It is also desirable to choose an artery near the surface, which can easily be got at.

The arteries of the body are subject to disease like any other tissue or organ and such disease is often an important symptom of disease elsewhere.

Changes in the structure of the arteries may take place at any time, but there are certain changes which ordinarily occur in them after middle life and in old age which are characteristic, so that we are accustomed to say that a person is as old as his arteries.

Hardening or arteriosclerosis is a change which occurs naturally in the arteries during old age. This means that the connective tissue which holds together the cells composing the arterial wall, is increased, making them more or less rigid and inelastic instead of resilient as they are in early life.

Sometimes during old age the arteries absorb salts of lime from the blood, and may become brittle like pipe-stems, and they are apt to snap if subjected to unusual strain or pressure.

They may also be softened by a process which is known as atheroma and this also makes them very susceptible to rupture or breaking.

If rupture should occur in arteries

like those of the brain we have the condition known as apoplexy which is almost always serious and very frequently fatal.

All this shows the necessity of keeping track of the arteries for when they become unusually hard or unusually soft the condition becomes one which is dangerous.

It is therefore easy to see how desirable it is to determine the blood pressure from time to time and find out the condition of the arterial wall.

One form of instrument measures this pressure, as I have already stated, by the height to which a column of mercury is raised in a capillary tube and another by the registry of an indicator upon a circular dial plate as the result of pressure upon a spring, but these springs vary in their resisting power and the column of mercury is therefore more accurate and reliable.

A certain number on the scale of the instrument indicates the blood pressure as the ventricle of the heart contracts and sends out the column of blood into the arteries.

This is the maximum and is obtained when the pressure of the dilated rubber bag, which is a part of the instrument, over the artery at the elbow which is chosen for the measurement, obliterates the flow of the blood current within it.

The minimum is indicated on the register when the pressure of the rubber bag is released and the current again flows within it as indicated by the return of the pulse at the wrist.

The differential between the maximum and the minimum is known as the pulse pressure.

QUESTIONS AND ANSWERS.

O. A. L.—Kindly tell me whether the use of sodium phosphates, calcium chloride, and compound syrup of the phosphates, will lead to kidney disease—particularly to stone in the kidney.

Answer—I do not think that the disease you refer to can result from the use of the medicines you mention; but do you think it desirable to take such a quantity of medicines? Of course I do not know whether you are taking it under the advice of a physician, or not; but if you were under my care, I should not think it advisable to dose you with so many medicines.

MOTHER-WISDOM

Some of the Reasons Why Our Children Ought to Play

By Helen Johnson Keyes

Have you ever noticed how hard at work children seem to be when they are playing? They do not act in the way men and women do who are being amused at a concert or a social.

The play of children and the recreation of grown-ups are absolutely different the one from the other. They are not entered into from the same motives or followed in the same spirit. A grown-up seeks a good time for the sake of recovering from the fatigue of work and of forgetting worries; a child is not conscious of any motives, for his play is instinctive but the purpose of nature in making him play is to educate him.

This difference is so important and fundamental that every mother ought to realize it and have it constantly in mind. A child educates himself through his play. A man named Groos, who has studied this matter very deeply, believes that one reason why the period of childhood is so much longer in human beings than it is in animals—who attain almost at once about as much intelligence as they ever have—is in order that they shall have a long educational course of play to prepare them for the very great difficulties of adult human life.

We parents must realize, then, that if we do not give our youngsters opportunities to play, we are making cripples of them, sending them out into manhood and womanhood lame, blind and deaf as it were, unable to march in the ranks of success, unable to see life and people as they truly are or to understand the demands which the world makes upon us.

What are some of the lessons, valuable in after life, which play teaches to children?

(1) Justice. When tots begin to play together each one seeks to grab for himself the most attractive toys. Gradually, however, the necessity of sharing is impressed upon the little brains. By and by the age of games comes and then this lesson is repeated. Finally, those great sports, baseball, football, basketball, are entered into which teach, with a power which no sermon can ever attain, the lesson of fair play and cooperative action. What an example there is in the incident of the tennis player who had an opportunity to win the national championship by a fluke if his opponent made but who, instead, intentionally made the same fluke himself on the next ball so as to win—if win he could—by his own skill and not on his opponent's misfortune. Would you not trust that man's fair play in any business deal? No very young boy, I think, would be equal to such a sacrifice, but, through play, and only thus—he will acquire that desire to give every man his due and of winning fairly and squarely in all the relations of life or not at all.

(2) The Power to Decide Wisely and Act Quickly. Did you ever see play

that was slow, hesitating, undecided? Not often, I think, for play is born of thoughts that are winged and which transform themselves instantly into acts. From the infantile game of puss in the corner right through high-school sports a good judgment put into swift execution is what wins. Is it not so in life, also?

(3) The Power to Control. Consequences. Probably too often for the moral growth of our children, do mothers protect them from the results of their deeds. Often it is even necessary to their survival or health that we should. But in play they must meet squarely the consequences of what they do. The lesson is sometimes painful, sometimes joyful but it is always plain and undisguised: "You did that, there fore you get this." Must not the realization of this truth educate young people away from those happy-go-lucky, careless deeds, violations of natural and moral laws, which usually bring with them a trail of ill health, failure and misery?

(4) Courage. Very young children whimper over the bumps they get in play, quarrel over their bad luck in games and brag of their successes. By the time the fourth or fifth grade is reached, however, no more of that cowardly or boastful manner is tolerated. The youngsters have learned, through playing, to take the bumps and blows in silence and to abide by the laws of the game and the decisions of the umpire.

They began in the days of their little childhood, as soreheads but play has made them honorable sportsmen. Did you ever see success come to a grown-up sorehead? I never have. The spirit which wins in life is the spirit of sportmanship—courage to get hurt, if necessary, for a good cause, to lose cheerfully and to win without bragging. The child who does not play may learn this lesson too late to take his place honorably when he plays in the great game of life.

The country offers every opportunity for play and sport but farming is a difficult and anxious business and too often those who are engaged in it, laboring ceaselessly for those immediate results on which their living depends, forget the educational value of free play and team sports to children, giving them longer and harder labor than their ages justify. The result is that these Jacks and Jills, although they may be very capable machines, are a little slow to understand the larger and more complicated demands which life makes upon us all, whose moral and social demands, I mean, which are becoming more and more exacting as community life advances to greater and greater perfection on our farms. Play will teach teamwork—the great principle of our new rural life.



INTERNATIONAL LESSON MARCH 10.

Lesson X.—Jesus Restoring Life and Health—Mark 5: 21-23, 35-43. Golden Text, Matt. 8: 17.

Verse 21.—We do not know where he landed, probably at Capernaum, which lay in a north-westerly direction from the country of the Gerasenes, about an eight-mile sail. A great multitude was gathered unto him—We read between the lines that his recent mighty works in Capernaum and vicinity had immensely augmented his fame, so that immediately upon his landing the crowd of sufferers surged about him in increasing numbers.

22. One of the rulers of the synagogue, Jairus—The synagogue, or local church of the Jews, was found in every town. Its services were very simple. A "ruler" was one of the chief men having direction of its affairs. In Capernaum was a notable synagogue, built, we infer, by a large-minded Roman centurion. On the present site of Capernaum there might have been soon a few years ago the ruins of a synagogue—huge marble blocks, sculptured and bearing Jewish emblems. While the Jewish leader might have hesitated to endorse the great Teacher, the possibility of help for his sick daughter impelled him as a last resort to appeal to Jesus. This case is one so clearly fixed in the mind of the writer that his very name, Jairus, is given. Falleth at his feet—The Oriental attitude of the suppliant.

23. Beseecheth him much—A word implying the most urgent entreaty for the life of his child. The expression "at the point of death" is to be read literally, "has finally," that is, has come to the verge of slipping away. Lay thy hands on her—Luke omits this, but Matthew gives it. The laying on of hands in case of healing is mentioned several times in Mark, also in Acts.

Verse 24 tells how Jesus' compassionate heart responded to the troubled heart of the appealing father.

Gunns Shur-Gain Fertilizer

Verses 25 to 34 relate the episode of the healing of the afflicted woman who touched the hem of the Saviour's garment.

35. Thy daughter is dead: why troublest thou the Teacher any further?—The announcement was seemingly an unfeeling breaking of the sad news to the father and is simply the conclusion of the people that it was no use to take the Master's time for a case already beyond earthly skill. Jesus not-heeding the word—Literally, "overhearing the word," which was not addressed to him, but to the father.

36. Fear not, only believe—Jesus paid no attention to the interruption, but did notice the effect of the announcement upon the father, whom he now seeks to comfort.

37. Suffered no man to follow, save Peter, and James, and John—The trio of disciples most responsive to him and nearest his heart.

38. A tumult, and many weeping and wailing—A true picture of Oriental grief, which grows more intense at the time of the funeral, when hired mourners rend the air with their ululations.

39. The child is not dead, but sleeppeth—This is the only account of the raising of the dead given by all of the Synoptic Gospels—Matthew, Mark, and Luke.

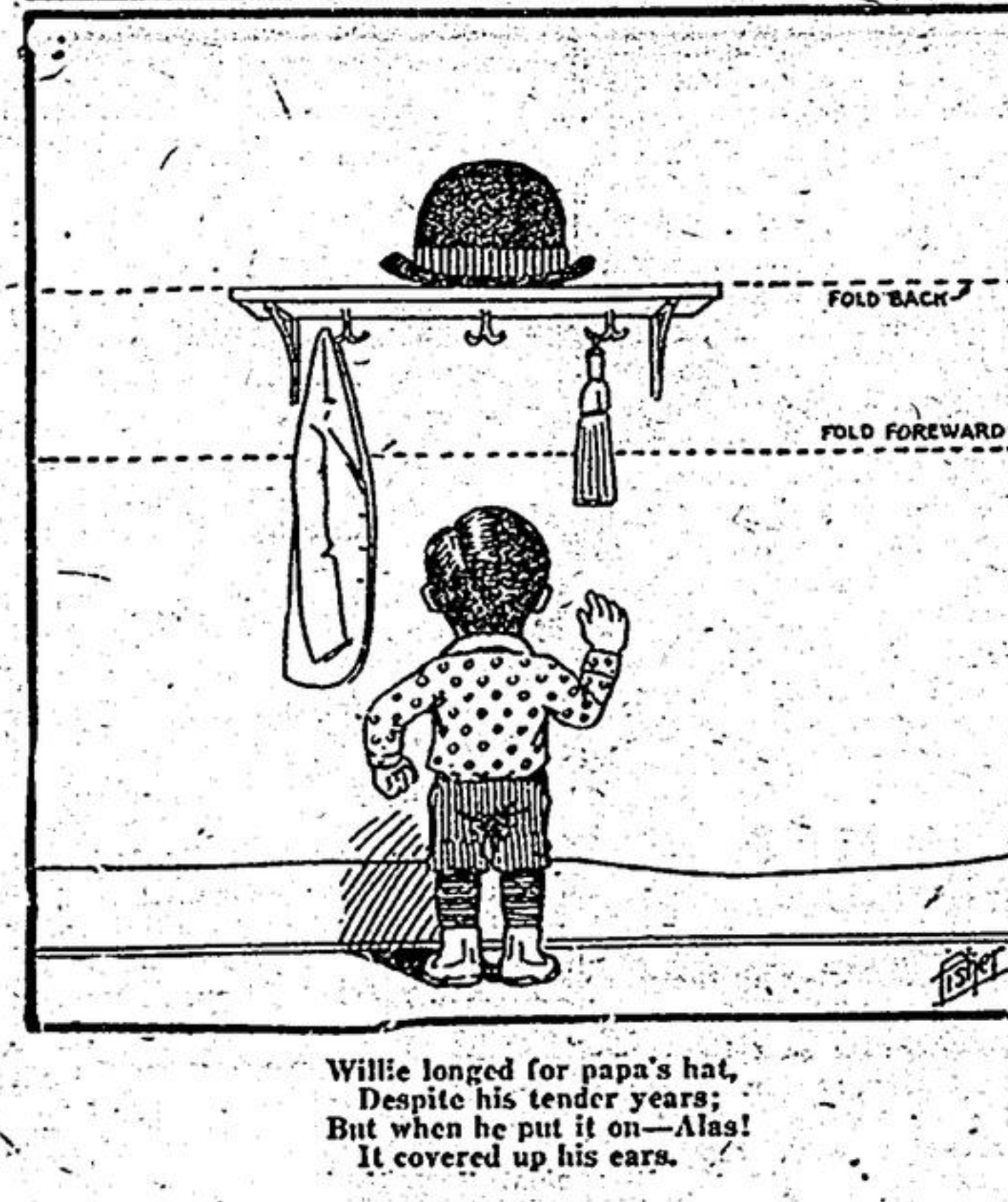
40. They laughed him to scorn—Those who were mourning quickly turned to derision upon his command for silence. Put them all forth—He would have no curious and unsympathetic hired mourners at such a sacred moment. Taketh the father of the child and her mother and them that were with him—We may well conjecture as the little company stood about the bier of the little girl.

41. Talitha cumi—The Aramaic words in the language spoken by Jesus. This is one of the few places where is given the very language used by Jesus. The phrase means, Damsel, arise.

42. Straightway the damsel rose up, and walked—The single word "arise" was enough. For she was twelve years old—This is an explanation of her walking. They were amazed with a great amazement—This is a sort of climax to Jesus' mighty works by the lakeside.

43. Charged them that no man should know this—For the reason that it would stir up the populace to such a pitch that it would kindle mistaken and premature expectations which would not help his work, but would greatly impede it. Commanded that something should be given her to eat—This shows Jesus' consideration, attention to details. The child's immediate need was not overlooked.

FUNNY FOLD-UPS



Horse Sense

The feed a colt gets the first eighteen months, and especially the first winter, determines to a great extent the size of the colt at maturity. The size of a horse determines its value very largely. Good breeding gives wonderful possibilities; but it takes feeding if these possibilities are to be fully realized. The best-bred colt will be no better than a scrub if it is fed upon a starvation ration.

A draft colt makes one half of its development by the time it is one year old, hence the importance of a good start. The colt should be taught to eat grain before it is weaned, and after being weaned should be allowed a liberal ration of alfalfa or clover hay with other available roughage, such as corn fodder, kafir butts, cane hay, and straw. The colt should be fed sufficient grain to keep it in good growing and thrifty condition.

If the colt is fed properly, one should never be able to see its ribs. A ration of from six to eight pounds a day should be fed for each 1,000 pounds of live weight. Oats is an excellent feed, but at the present price is so high it is not practical. A good substitute is corn 70 per cent, bran 20 per cent, and oil meal 5 per cent by weight. Colts should have access to a pasture or a large lot so as to have plenty of exercise.

A collar should be fitted to the horse, and not the horse to the collar. The collar that is too large should not be used on a horse in the hope that he will grow large enough so it will eventually fit. A collar that fits well in the spring may not fit at all in the fall.

When one is fitting a horse with a collar, the animal should be standing in a natural position, on level ground, with his head held at the height maintained while at work. The collar, when buckled, should fit snugly to the side of the neck, and its face should follow closely and be in even contact with the surface of the shoulders from the top of the withers to the region of his throat. At the throat there should be enough room for a man's hand to be inserted inside the collar.

The style of horse collars are created mostly by the use of different kinds of materials in their construction. Such materials as heavy duck, ticking, and leather are used either alone or in various combinations. All-metal collars may also be bought, but are not so much used.

Pigs

More pigs are ruined at weaning time than at any other stage of their existence. They should have access to corn and other grain when they are with their mother, so that they will know how to eat and will not miss the milk.

Skim milk or buttermilk is desirable feed for pigs at weaning time. The milk should be fed in the same condition at all times—either sweet or sour—otherwise the digestive system will be impaired.

Usually the pigs are large and thrifty enough to wean at the age of six to eight weeks. They should have access to green forage, such as alfalfa, rape, clover, or sorghum, at all times. The feeding trough should always be kept clean.

Care should be taken that the pigs are not overfed. Overfeeding causes feverish conditions and will stunt the growth of the pigs.

Machinery for Bean-Raising.

Beans may be expected to do well on any well-drained soil, but they seem to prefer a sandy or gravelly loam of fair fertility. Too rich a soil will favor the growth of too much vine and the beans will not ripen uniformly. The seed is usually planted with a grain drill, but when the crop is to be grown in hills it is best to use a corn planter equipped with a bean plate. A shovel cultivator is needed for the three or four cultivations the crop requires. For harvesting there are several kinds of machinery, of which a special bean harvester is best, though a mower equipped with a bunching attachment may also be used. The only satisfactory method of threshing bean crops of considerable size is a bean thrasher, which may also be used for peas. They are made in various sizes some of which may be operated with two men and a small gas engine. Such a thrasher will thresh from about eight to twelve bushels of beans an hour, depending on the amount of vines.

"The blue of Heaven is larger than the cloud."—Elizabeth Barrett Browning.

FERTILIZER PAYS

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