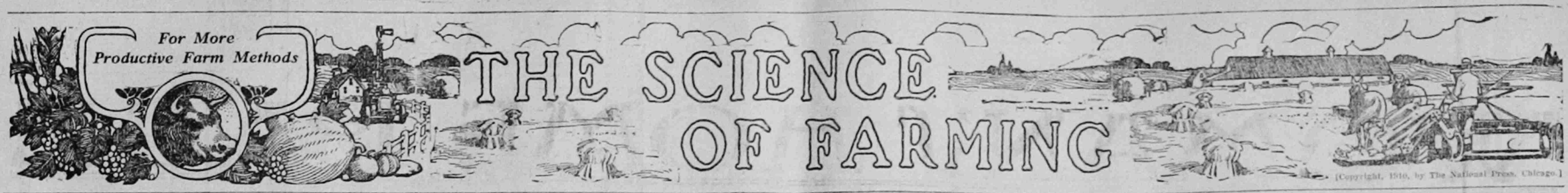


Answers by the Veterinarian

Dr. A. S. Alexander
Wisconsin College of Agriculture

Diarrhoea on Grass

WHEN cows begin to scour when first turned out on grass in spring what will stop the trouble? It is a nuisance and cows do not thrive well while it lasts. I have tried alum, but it is not a safe remedy. —D. R., Pennsylvania.

Reply.—Feed some dry hay before the cows are turned out and give each half a pound of cottonseed meal once a day and increase to a pound at a feed if deemed necessary. This will promptly check the scours complained of. Cottonseed meal is binding; flaxseed meal is laxative.

Does a Cow Sweat

WE HAVE been having a discussion as to how different animals sweat and we would like you to tell us if a cow sweats, and if so, on what part of body? Some say one place, some another, and some that a cow doesn't sweat at all. Also explain about horses, hogs, cats and dogs.—M. R. B., Wisconsin.

Reply.—There are sweat glands in the skin of the cow and she has been occasionally known to sweat all over the body, but usually the sweating is at the muzzle. Hogs sweat only on the snout. Cats and dogs sweat most on pads of feet and some on nose. Horses sweat on all parts of the body except the legs.

Worms

I HAVE a bunch of fall pigs, and although they have had plenty to eat, they are not much, if any, bigger than they were last October, and they seem to wander about wanting something they do not find. What is wrong with them, and what will make them take on flesh and fat? Some say to feed tankage, others tell me it will hurt them.—M. B., Iowa.

Reply.—Worms are the most likely cause of the conditions or lack of condition described. At once mix in the slop, for five successive days a week, sulphate of iron (copperas) at the rate of one-half pound for 100 pigs, and repeat the following week if necessary. Tankage added to other nutritious foods at the rate of 10 per cent of the mixture will prove beneficial, but gradually accustom the pigs to changes of food. We take it for granted that you have been feeding nutritious foods, such as corn, middlings, bran, flaxseed meal, oatmeal and milk in some combination or another. If not, then commence such feeding now and give the pigs free range out of doors.

Fistula of Colon

WE TRADED for a gelding recently and soon after taking him home discovered a sore lump high up on the right flank near the spine and close to the rib. He does not want us to touch the place, but it is getting to feel soft, as if it contained fluid. What would be the likely cause, and should it be blistered?—N. T., Iowa.

Reply—the lump is an abscess and the probable cause is tapping with a trocar and canula when the horse had an attack of wind colic. It will be necessary to clip off the hair and open the abscess freely for perfect evacuation of pus. Then swab out the cavity and pack it daily with oakum saturated in a mixture of equal parts of turpentine and raw linseed oil. Such abscesses often are difficult to handle, and it would be best to employ an expert surgeon. The cause is infection of the wound by use of a dirty instrument or foreign bodies entering the wound from outside or from the colon (large intestine).

Swine Breeding Plus Brains Equal Cash

By L. P. Martiny

IN COMMENTING on the three classes of swine breeders would say, first, there are not enough good swine breeders of pure bred swine. I do not mean to advocate that every farmer should be a breeder of pure bred swine, but there are a great many that could take up this line of breeding and not only improve their own herds, but those of their own locality. In Wisconsin there are many young men on farms and about to go to farming. Among them are a great many who have taken the short course in agriculture and the farmers' course at our college of agriculture. I would say to these men that from my own experience I have found the breeding of pure bred swine one of profit and it has afforded a great amount of pleasure. At first thought, a great many may think the breeding business would soon be overdone on account of too many breeders, but I do not think so. With more breeders of pure bred hogs would go an education to the more indifferent fellows and the swine themselves, if they are of the right kind, would stimulate their own demand. I have heard so many say in answer to this, "that would never work around here because the farmers here do not appreciate the value of good hogs and they would not patronize you. "In answer to that I would say that is the very best place to start to build a herd, for human nature is nearly alike everywhere, and they will soon learn to appreciate when they see the profit to be derived from using good breeding stock. There is plenty of room at the top for the best breeders.

Concerning the second class of breeders I have nothing to say. The farmer that is using nothing but pure bred sires and using his best females, using mature stock as much as possible in producing hogs for pork, is on the right track and is always going to make some money.

Concerning the third class will say that as one travels over the state and notices the inferior, nondescript stock that is being used, he will be surprised; no definite system being followed, going on the supposition that a hog is a hog and one hog is as good for them as another. They breed from immature stock, without any regard for their breeding, type or conformation.

So many times we hear a man say, "I have tried this breed and they seem to run out; they are not what they should be. I guess I will try some other breed and see what they will do for me," so he trys some other breed with about the same results, and then he is ready to try some other. If he would stay by one breed and use judgment in selecting the best individuals from the breed he has, he would make better progress and get more improvement. Do not think that any breed is your salvation. Any breed will do for you in just the proportion you do for them. The man that is a true admirer of a certain breed and has been successful in improving that breed under his selections, breeding care and management, has a greater appreciation of other breeds and their merits than the man has who is continually changing breeds with the hope of finding something that is going to work wonders in the improvement of his herd. Stick to your breed and learn to appreciate that you are to blame and not the breed.

No matter which breed we choose, they should all have about the same type and standard of conformation, for they are all intended for the same purpose, namely, the production of pork. We would note the different breed characteristics in the different breeds, such as a black color with nicely drooping ears in the Poland China, a dished face and upright ears in the Berkshire, and the white color in the Chester Whites, but the best individuals of these breeds should be very nearly alike in shape, type and conformation.

Where Good Breeding Counts for as Much as Good Feeding

Good feeding without good breeding, and good breeding without good feeding, are useless in the feed lot. No matter how fine feed is given a scrub hog the pork produced is of poor quality and the waste is great. Likewise a pure-bred hog, while it is capable of making use of all feed in the production of high-quality meat, can do nothing unless given the feed to manufacture into pork chops and bacon. Good breeding and judicious feeding go hand in hand in pork production.

The first thing we should look to in the improvement and selection of our breeding swine should be the sire. This is very important, as it is a law in breeding that the progeny partakes more of the conformation of the sire and more of the disposition and temperament of the dam, so it is very important to have a well bred, good individual for the sire.

The first thing I would note when I looked at him would be that he was a strong, vigorous, growthy fellow, with plenty of energy and lots of vigor. I like to see a nice head, not coarse, but showing strength. Nose not too long, face nicely dished, wide between the eyes and ears. We like them wide between the eyes and showing a good broad forehead, because any animal that has a wide forehead usually has plenty of brains and intelligence. Some may ask why we want brains and intelligence in a hog; he don't know anything and is always on the contrary side anyway. We have found by experience that the most intelligent hog is the best dispositioned hog—that means he is the best feeder. A hog that is long in the head, narrow between the eyes, is usually a bad dispositioned hog, and we know a restless dispositioned hog is never a good feeder. Such a hog converts too much of his feed into energy and energy never weighs anything.

We want a wide, straight back, and we want this hog to be of even width throughout his entire length; not cut in back of the shoulders, or at the loin, or running to a point behind. He should be as nearly parallel in his top and bottom lines as possible. It would be a serious defect to have a droop behind the shoulders, or drooped rump. He should be well let down in the flanks and not tucked up between the fore legs, as we so often see.

In selecting the females, I should like to have them as near the type of the sire as possible, a little longer in the neck, more roomy in the body and not so massive in head and shoulders.

I have given a brief description of some of the essentials a hog should possess, but there is one thing that is as important as all of the others, and that is the quality of the animal.

I think the average farmer, and some breeders, are very much mistaken in what constitutes quality in a hog, or they don't want any quality at all. I get so many letters inquiring for coarse hogs. Now, this is a mistake. We do not want a coarse hog any more than we would want a feeding steer of a coarse conformation. Any one knows that a steer with a big head and big coarse horns, long, coarse legs, with a thick hide, is a poor feeder and no one would go out to buy a horse with a big head and ears, big, meaty legs, with hair growing all around them and showing a coarseness of conformation all through, but when it comes to hogs, that is just the type some people seem to be looking for.

I like a hog with plenty of size; in fact, I have been called a crank on size by some of my fellow breeders, but I like a certain amount of quality. We want large, heavy-boned hogs, but they should be of a fine quality. So many farmers select a coarse hog with big legs, saying they want something that is not going to break down when they come to finish it for market. Now, I do not consider that the size of a hog's leg has nearly as much to do with its strength as its quality, and we cannot judge of its strength by its size.

The first thing I would note in determining the quality of a hog would be to see that he is covered with a thick coat of fine, silky hair, and that his skin is free from wrinkles. If a hog is wrinkly, he is sure to be a thick-hided hog, and a thick-hided hog is always a hard feeder. I should like to see his ears medium sized and covered with a fine, silky hair.

In caring for our breeding stock, we should see that they are fed on properly balanced rations. It is just as important that our breeding swine should have a balanced ration as our dairy cows.

So often we hear farmers complaining that their hogs are getting too fine, too small, lack constitution and vitality and are not prolific enough. This is due to two causes; first, they have not the right kind of breeding stock, and second, they do not care for and feed them properly. If any one will keep good breeding stock and feed and care for them properly, they are sure of success, and if they fail they have gone wrong in one or both of these points.

In the winter care of our brood sows, there are two things that we always keep in mind; first, to feed them such feeds as will promote the greatest growth of bone and muscle and develop the strongest pigs, and second, see that our breeding stock gets plenty of exercise.

The ration for our brood sows the past winter has been as follows: In the morning and evening we give them a slop made of about two parts wheat middlings and one part ground oats and barley. To this is added some germ oil meal, or a little of Swift's digester tankage and a bushel basket of clover leaves and blossoms, or fine cut second growth clover hay. This feed is soaked from one feed to the other and fed in a thick slop. After the morning feed we sow some whole oats around the yard very thinly for the hogs to pick up. It takes them a long time to pick them up and they get lots of exercise in this way. We have bred hogs to be good feeders and make good use of the feed fed them in laying flesh on their backs, so we must bear this in mind in caring for our breeding stock and see that they get plenty of exercise, or we may be disappointed at our results and say the well bred hog is a failure.

In conclusion I will say that if we select our breed, use nothing but the best individuals of this breed, and breed, feed and care for them in a systematic and intelligent manner there will be good money in hogs.

Questions of the Feed Lot

Professor Herbert W. Mumford
Illinois College of Agriculture

Oilmeal-Cottonseed Meal Best

"I HAVE never fed anything but calves or light-weight cattle, and those only in a small way (one to three cars). They have practically all the alfalfa they will eat from a shed with feed rack alongside, and not any more corn than they will clean up within two hours after feeding. I estimate about eight to ten quarts per day; few large ones balance about 700 pounds feeding ear corn. How would I feed oilmeal and in what quantity? A neighbor, a regular feeder, thinks I am not feeding enough corn."

With an abundance of alfalfa of good quality it is questionable whether or not it would pay you to feed either oilmeal or cottonseed meal to the cattle of which you speak. I believe that the better results would warrant feeding either oilmeal or cottonseed meal, and you would be able to make better and smoother cattle in a shorter feeding period. The feeding of nitrogenous concentrates would also increase the value of the manure produced to some extent. If you conclude to feed oilmeal, I would suggest feeding the pea size and sprinkling it over the corn at each feed. If you are to feed cottonseed meal I would get the nut size and feed it in a similar manner. If you are feeding all the corn the cattle will clean up in two hours after feeding you are feeding enough. You will find that the cattle will eat practically, if not fully, as much corn as you have been feeding, with the oilmeal or cottonseed meal in addition. With the alfalfa hay I would not feed to exceed two pounds of either of these feeds daily per thousand pounds of live weight of cattle, beginning with from one-quarter to one-half a pound per head per day.

Feeding Sweet Corn

"I WOULD like to know what results I would get from feeding sweet corn fodder to fattening lambs of sheep. Would it do to turn in a bunch of sheep in a sweet corn field in August, after the corn had been jerked and hauled out of the field?"

There would be no difficulty in turning lambs or sheep on stalk fields from which sweet corn had been jerked or removed. Of course, you would be able to turn into such a stalk field much earlier than the ordinary stalk field, but otherwise I see little advantage in such a field over the ordinary one.

Cement Roller Serviceable

VERY serviceable smooth land rollers have been made of cement in the past. An experimental corrugated roller, having cement wheels, was constructed by the farm mechanics department at the Colorado Agricultural college in the spring of 1909. The wheels are 19 inches in diameter and 4¾ inches thick. The face of each wheel is brought to an edge in the center of the rolling face. Fifteen wheels run on one shaft, which is 1⅝ inches in diameter. The roller is 6 feet wide and its total weight is about 1,600 pounds.

The wheels are the most important part of a corrugated roller, and it often happens that the iron wheels of the most expensive corrugated roller break and must be replaced.

The cement wheels were made of mixtures varying from one part cement and one part sand to one part cement and three parts sand. The wheels were re-enforced with different amounts of barbwire in the form of rings and cross stays. The cost of such a roller may be kept under $10, if the time and labor required for its construction are not considered.

IN POULTRY YARD, FEED LOT AND GARDEN

Breeding Profitable Hens

IT IS a well-known fact that there are some hens as well as some cows that are not paying well for the feed they consume. It is the star boarder of cows that are bills of expense above what they return in milk or butter that should be weeded out of the dairy herds. It is the hens that begin to lay late in the season and lay only a short period of time and only partially pay for what they eat that one should get rid of and breed a class of hens that have the inherent characteristic of laying while young and continuing to do so for a long time both in winter and summer.

In breeding chicks on the farm the system of selecting the eggs for hatching is likely to be faulty. The early laying pullets generally begin to lay in the fall or midwinter and have laid their first course of eggs before the eggs are saved for hatching. Then when the eggs are selected they come from the late-laying pullets and hens. It will be seen that in many cases the characteristics of the short-period hens are being bred along instead of those of the long-period hens. This may be the factor that decides whether the flock of hens kept are bred to pay well or do not pay well. Careful poultry breeders consider this point and devise means by which the eggs set are gathered from the best-laying pullets.

One point should be kept in mind: There should be as much or more attention paid to the individual characteristics of the hens as there is to the breed. One hen of a breed may be a good producer and another of the same breed be a poor producer and an unprofitable servant. When we select eggs from the poor layer we are breeding in the wrong direction.

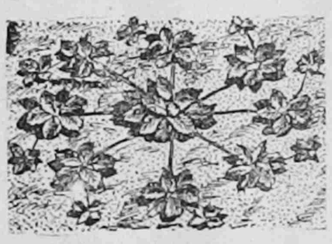
I have a case that illustrates the importance of securing eggs from the long-period hens. Last September I instructed a young man who had an incubator to secure for me some eggs from a pure-bred White Leghorn flock. I felt sure that the short-period hens would not be laying then. The eggs were hatched and I came into possession of them in a short time. Those pullets were given a good chance, both as to feed and comfortable quarters. By the middle of the winter they began to lay and have been persistent workers since, making good returns for their feed.

I have known of instances where pullets that were of good laying strains would lay from in the fall on through the winter, even when the conditions were not ideal. Other pullets having an equally good chance would not begin to lay until up to or past the middle of the winter. It is the persistent layers that yield the profits worth noticing. Select the eggs for hatching from them.

MIDDLINGS are without doubt an excellent feed for young pigs previous to weaning and perhaps for a short time after, but beyond that they should make up only a small part of the ration for the growing and fattening hog.

Less Sheep in Argentina

THE live stock statistics of different provinces in Argentina show that since 1895 there has been an increase of 2,605,339 cattle, 844,568 horses, 462,521 pigs, 8,550 asses and mules and a decrease of over 18,000,000 sheep.



A STRAWBERRY PLANT FAMILY.

Strawberry plants send out runners which, on striking the soil a few inches distant from the mother, form self-sustaining plants, as shown above. In this way a mat of plants soon cover the ground unless controlled. Some growers prefer to remove all runners, claiming the berries are made larger and better thereby. Cultivation is then able to be given and the vigor of the mother plant (usually wasted in making of runners and supporting of the small plants for a short time) is increased.

Meal Better Than Hulls

THE objects sought in undertaking experiments at the Mississippi experiment station was to determine (1) the feeding value of cottonseed meal and hulls combined, when fed (a) to 2-year-old cattle, (b) to 1-year-old cattle; (2) what amounts are most desirable for daily rations, and (3) the profitableness of making beef on meal and hulls. The experimental animals were of mixed Hereford, Shorthorn and Angus breeds.

A lot of twenty-two 2-year-olds fed a ration of cottonseed meal and hulls made for eighty-nine days an average daily gain per head of 2.06 pounds, at a cost of 6.49 cents per pound. The steers sold at $5.65 and the heifers for $5.25 per hundredweight. Estimating them to be worth 3½ cents per pound at the beginning of the test they would have given a total profit of $257.93.

A lot of twenty-six yearlings fed for 103 days a similar ration made an average daily gain per head of 1.82 pounds at a cost of 6.06 cents per pound. The steers sold at $4.50 and the heifers at $3.50 per hundredweight. The net proceeds would allow only $2.57 per hundredweight as a possible purchase price, which would indicate that yearlings of such condition and size as these should be fed longer for profitable results and on a ration of not more than four to five pounds per head per day.

Useful Bacteria

IN THEIR relation to man bacteria may be said to be both harmful and useful. Our attention has been repeatedly called to the hostile ones, but almost nothing has been said about the immense good we derive from others. In terms of dollars and cents it would be practically impossible to estimate the value of germ life to the agricultural world. Soil bacteria are largely responsible for the increased fertility which results from resting land, or what is known as fallow cultivation. The complex organic substances found in the soil, together with the green crops and the stable manure which are plowed under, would all remain, for the most part, unchanged and of no use as plant food, were it not for the decomposing action of bacteria. When the soil is supplied with the requisite moisture and the proper temperature the millions of germs which make this their home utilize the complex substances present for food and incidentally change the composition of this manure and other material so that it becomes available for the use of plants. In this way thousands of pounds of nitrogen are returned to the fields every season which, without the aid of the soil organisms, would remain locked up forever so far as growing crops are concerned.—Walter G. Sackett, Colorado Agricultural College.

Sheep Scab Easily Eradicated

SHEEP scab is not a very hard disease to eradicate, as is usually supposed; a couple of good dippings with a good dip when properly applied will cure it, but much precaution in becoming infected again from old scabs and wool that may have been rubbed off is necessary.

SHOWING HOW PLANTS FEED.

In the south only the first few inches of soil is stirred and the crops feed near the surface, resulting in quick soil depletion. Roots seek food. When ground is plowed deep plant food is made available to the depth loosened, and the roots go deep, supporting the plant well and furnishing an abundance of nourishment.

Cattle Preserve Soil Fertility

FEEDING live stock must be considered from the standpoint of fertility of the soil and not alone from that of direct profit in the cattle or other animals. Beef cattle even more than dairy cattle can make an excellent use of some of the by-products of the farm that cannot be used in any other way.

It has been demonstrated at the University of Illinois through a series of years that the money received for corn which is fed to cattle was more than the corn would have brought in the market. I believe it takes a smarter and better-trained man to succeed with beef cattle than in the dairy business. That is why I am in the dairy business on my own farm in charge of a tenant. It takes a great deal of business ability to manage cattle feeding successfully.

I think the manure is worth considerably more than the labor involved in feeding the cattle. There is a decided movement in Illinois now toward grain farming instead of live stock. I think that is a serious mistake. Practically half the corn grown in Illinois is shipped out of the state, enough to fatten 2,000,000 steers. If the manure from these were properly preserved and properly applied to the land it would increase the producing capacity of the farms of this state $12,000,000. That is not a fancy nor a theory; it is a fact. Live stock consumes about 80 per cent of our corn. The high price of corn is caused by its demand to feed live stock far more than by its use as human food. Destroy the live stock market for corn and the price of corn will be much lower.

I do not advise dry-lot feeding in summer, but I am not sure but we are coming to it. It must be demonstrated before we know about it. Pasture is the most expensive cattle feed. Silage makes cheaper beef than anything else. It can be kept throughout the year or two or three years. I have no doubt that silage is one of the most important feeds for beef cattle. I have never found a man who fed silage to beef cattle that has abandoned it. At the university the beef-breeding cows were wintered cheaper on silage and hay than they could be kept in the summer. A silo 18 by 36 feet is ample to supply silage six months for fifty steers. A good ration of cottonseed meal or linseed meal is three pounds per day per 1000 pounds of live weight of the animal. We get more out of the corn by feeding the meal; the corn is digested better.—Professor H. W. Mumford, University of Illinois.

AS A result of eighteen years' careful experiment the Ohio experiment station has determined that the value of a ton of farmyard manure from cattle, registered in the cash value of increased crops produced, is $2.27 per ton. The same station has also determined, by careful experiment, that the manure produced by a 1000-pound steer during a six months' feeding period will amount to three and one-half tons, which at $2.27 per ton is worth $7.95.

Propagation and Culture of Blackberries

By Professor J. Troop

Purdue University Agricultural Experiment Station

THE blackberry follows the raspberry in time of ripening, although some earlier varities lap over with the later varieties of raspberries. There are still some sections of our state where the blackberry runs wild and where it is not necessary to spend time in its cultivation. Such localities, however, are becoming fewer every year as the timber lands are cleared up, so that at the present time the blackberry should find a place in nearly every farmer's garden.

The blackberry is easily propagated by means of root cuttings; that is one reason why it sprouts so badly where deep cultivation is practiced. Wherever a root is broken it sends out new shoots. If enough new plants cannot be found of the desired varieties, young roots from the old plants may be taken and cut into pieces three or four inches in length and as many as are wanted. These may be scattered in a row a few inches apart, covered two or three inches with soil and allowed to grow one year before transplanting into the permanent plot.

The soil best adapted to their bearing is a rather rich sand. If set on moist, rich muck land the canes will grow too rank and produce too little fruit, and besides are more likely to winter kill.

Unless it is desired to have only a single row for home use which can be planted along one side of the garden, the rows had better be planted about seven or eight feet apart, and the plants six feet apart in the row. This will give plenty of room to cultivate with a horse and cultivator. Cultivation should always be shallow in order to prevent tearing up too many roots. To secure fine fruit and plenty of it, most of the suckers must be cut out when young, as, if they are allowed to grow, they will weaken the main canes by crowding and depriving them of nourishment. It is generally understood that blackberries should not be cultivated in autumn, as cultivation will have a tendency to cause them to continue to make new wood which will not have time to ripen up before winter. Hence, otherwise hardy varieties will be quite likely to winter kill.

This is quite essential, and yet if the mulch is put on before freezing weather, the result will be the same as with late cultivation. After the ground freezes put on a good coating of straw or coarse manure.

As soon as the young canes are two or two and a half feet high the tips should be nipped off, to cause them to branch out and become stocky enough to support themselves without much staking. It it is necessary to support them, a single solid stake at each end of the row with a wire running at each side, as mentioned for raspberries, will be all that is necessary to keep the canes out of the way of the horse when cultivating and also to insure clean berries.

Like the raspberry, the blackberry bears its fruit on wood of the previous year's growth, hence all of these old fruiting canes should be cut out and burned as soon as they are done fruiting.

Varieties. Among all of the species of cultivated berries there is always an old standby that seems to be the general favorite under almost all conditions. Among blackberries it is the Snyder. Everybody plants the Snyder; not because it produces the largest and finest fruit, but because it is the most reliable on the greatest varieties of soils. Eldorado, Rathbun, Agawam, Taylor, and Early Harvest are all good, but Early Harvest is somewhat tender and liable to winter kill if not protected. This is a favorite variety in southern Indiana, where, with a little protection, it produces bountifully.

Next to dry weather the orange rust is the most serious drawback to blackberry culture. This is a fungous disease which attacks the leaves of the young shoots early in the season. The disease spreads very rapidly and kills everything that it attacks. The plantations should be carefully watched and whenever the disease makes its appearance, all affected parts should be cut out and burned. The plants in the immediate vicinity should then be sprayed with the Bordeau mixture.

The lifetime of the plantation will depend very largely upon the adaptability of the soil, and the treatment which the plants secure during their time of service. Under favorable circumstances a plantation should continue to bear good crops for eight or ten years.