

The Willamette Farmer.

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ONE PAGE OF READING MATTER PREPARED FOR THE BENEFIT OF THE AGRICULTURIST.

DIGGING, PRUNING AND TRANS-PLANTING YOUNG TREES.

A large proportion of the trees that are lost in re-setting, die because they have been injured when they were taken up. Without a good root system a tree can make but little progress in growth. In digging up trees the root system should be removed to the root system, then a trench dug around the tree outside the mass of roots; then by cutting under the roots with a sharp spade on each side, the tree may be loosened from the soil with a good supply of young growing roots. If the tree is large the trench must be made around the roots to the depth of the lowest, and the roots gradually loosened and freed from the soil.

No matter how carefully a tree is dug, many of the young feeding roots will be injured or destroyed. Thus only a small amount of sap can be supplied to the branches and buds, which nevertheless continue to evaporate a large amount of water; thus the tree often starts very slowly and sometimes falls entirely. By removing the branches and buds in proportion to the injury of the roots, a balance is maintained. All injured roots should be cut off clean with a knife and the wounds of large roots should be painted over with some waterproof covering.

When trees are planted, the roots should have a fine mellow bed of soil, which should be pressed firmly in contact with every fiber, leaving no air space around them, and all should be spread out in natural position. The soil should be pressed very firmly around all the roots, so that the new roots will be encouraged to make a rapid growth. If the soil in which the tree is planted is the same as the one from which it was taken, the tree should be set the same depth as it was before it was removed. If the soil is heavier, the tree should be shallower; if lighter, it should be placed deeper. The surface of the soil which is over the roots should be fine and light because the capillarity is then broken up and the moisture cannot escape.—W. H. Moore, Kan. Agri. Coll.

WHY CULTIVATE AN ORCHARD?

For the same reason that we cultivate a hill of corn. We plant apple trees 30 feet apart while we plant corn 3 1/2 feet apart for the reason that the foliage of an apple tree bears the same relation to 30 feet that the foliage of a hill of corn bears to 3 1/2 feet. Also that the roots of the tree occupy the 30 feet space as well as the roots of corn occupy 3 1/2 feet space. Cultivation is an absolute necessity for the one as for the other. Cultivation will give thrift to either and unthrift without it. To produce a good crop of corn we break the ground eight inches deep and pulverize a fine seed bed. In cultivating the orchard we break three inches deep only, on account of roots, and make the same finely pulverized surface. This bed retains moisture to the very surface of a dry season. By this kind of preparation and a fine level cultivation we retain moisture to the tree roots during a drought and consequently thrive of trees and large, smooth apples fit indeed for any market. A hill of corn half cultivated produces small ears of corn. An apple tree uncultivated set in pasture for the same reason produces fruit hardly fit for worms. The downfall of thousands of orchards commences when their foolish owners sow them to grass and turn the stock in, and, if possible, tramp them still harder than they were before. A belt of grass around a tree is about as fatal as a rope around a criminal's neck, especially if it be timothy, the great robber of moisture.

COMMON MISTAKES.

It is a mistake to think poultry can look out for itself and yield the owner any profit. Neglected poultry is everywhere, almost, on the place. Chickens will be found roosting in the mangers, on fences, in pig pens, in trees and elsewhere. Men will vote them a nuisance and declare they "eat their heads off," besides getting every board on the place covered with the obnoxious mites. It is a mistake to let the chickens that roost in the hen-house be tortured night after night by these same mites. As there must have been some object in every created thing, I suppose the mite has its mission. I fail to see what it is unless it is designed to force us to give our buildings more thorough and careful attention. Unquestionably this little pest can be kept down by constant care, and that is the only way.

It is a mistake to think that with all the care you may give your fowls that you can get good results with poor or indifferent breeds. A few days ago a neighbor called on me and, seeing a dish full of eggs, said: "Why, do you get eggs now?" I told her, "Certainly I did." She asked, "What chickens were laying them?" I told her, "Both my light Brahmas and my Leghorns." She said she believed she would buy a White Leghorn rooster and mate with her common hens. I offered her a fine one (as she was a neighbor) for 50 cents. She said she would think about it. That means she will buy somewhere else for 20 or 25 cents anything that is a rooster, and then wonder that she doesn't get the same returns that I do. It is a mistake to expect something from nothing.

Another neighbor once said to me, "How do you manage to get such fine turkeys?" I explained that for breeding stock I kept only the best; that, when I wanted a gobbler I sent where I knew I could get the best, and that price was a secondary consideration. I offered this neighbor an extra good gobbler for \$2, but he said (this was a man you understand) that it seemed like a good deal of money to put into

turkeys. That was true. I had paid \$7 for my gobbler and \$4 for some hens. The next year showed results. His turkeys were about the size of my light Brahma chickens—while my turkeys were immense. How many turkeys do you think it would take to make the difference in price of breeding stock, even at ordinary market prices?—Rural World.

THE POLAND-CHINA HOG.

Perhaps one of the most convincing evidences of the great merit of the Poland-China breed is that men of speculative turn of mind, have, during the past few years attempted to make it a means of quick money making. Shrewd farmers have turned to the business of breeding with the object of realizing more and quicker money than the farm would do. Professional men have seen fortunes in breeding, and business men have made it a side issue. In addition there have been men whose knowledge of the business was limited to the talking points necessary to make good sale, and whose honesty was of the doubtful order. The efforts of these different classes have not been wholly detrimental to the breed for the reason that they have been increasing in their work of putting its advantages before the farmers. The benefits, however, can scarcely be traced farther than this. An unhealthy interest was stimulated, and when the actual demand for breeding stock failed to keep prices in line, a system of buying back and forth, which was really nothing more than "swapping notes," was resorted to. Meritorious strains were taken up and boomed to the limit. The breeding qualities of certain sires were exploited upon until great reputations seemed to exist.

After all these things it is only the unflinching merit of the Poland-China hog, which today prevents a ruinous era of low prices which such a set of circumstances has a natural tendency to bring about. Breeders, while they profited to some extent by the higher prices temporarily, are paying a penalty. Those who have in their herds the produce of the much boomed Klever's Model, farrowed since 1897, find it discredited. Record companies refuse to record such animals, and it is quite probable that when this particular muddle is settled to the satisfaction of all, the question will have ceased to be of value. This unfortunate condition of affairs, it should be remembered, is due to dishonest actions of alleged breeders, and not to any fault of the breed.—Ex.

KNOW THE COW.

The dairyman should know his cows, and know how much each cow consumes every day, and whether she digests all she gets and could use more and give a larger return for it, or if she is wasting a part of what she gets by giving no more than she would give if she was fed less liberally. A better knowledge of how to vary the rations and of what should be the result of a change in kind or amount, would help much to give this practical knowledge.

That is, a man needs to know the feeding value of the forage and the grain he uses, which knowledge he can obtain theoretically from the agricultural papers and bulletins from experiment stations, and then he needs the knowledge gained only by practical experience which will show him not only the amounts consumed and produced by each animal, but the effects upon the condition of the animal.

To weigh and measure and put upon record food and products of each animal is some trouble, but it is almost as important to the farmer as it is to the trader to weigh and measure and keep a close account of what he buys and sells. We would think it a queer method if the storekeeper agreed to give the farmer what he wanted from the store for what he had to spare from his farm products, be it much or little. He might make money in some cases and would probably lose in others, and that is what the farmer does with his cows.

Try to keep an account that will tell which ones are paying a profit, and strike the others off the books as worthless customers, unless a little more knowledge of feeding rules, a little more warmth in the stables and a little better care generally can stimulate them to better production.

FEEDING CATTLE.

Does it pay to feed cattle? Answers will vary greatly. If the profit is computed simply on the supposed increase of the value of the feed, most feeders will answer in the negative. But if the value of manure and of the wine that follow the cattle, are taken into consideration, there is a profit. It will be admitted pretty generally that we must get about \$1.50 per hundred more for the steer than we paid for it, in order to have the accounts balance on the right side. The manure is a very important consideration. We can better afford to feed our grain and hay to cattle, even if we but just come out even than we can to sell the grain and hay. No farm should be without all the feeders that it can take care of, and the smaller the farm, in our judgment, the more certainly it should have a herd of cattle. On small farms, it is often said, there is not room for this business. It is an error. All small herds and flocks can receive better care than large ones, and hence may be more profitable than large ones.—Epitomist.

There were 249,145 marriages in England and Wales last year, more than in any year since 1876.

HORSES DEMANDED FOR ENGLISH TRADE.

Prof. Curtis, of the Ames, (Iowa) Agricultural college, is about going to Europe to study agricultural conditions, and Secretary Wilson has arranged with him to make a special investigation concerning the demand and market for horses in Great Britain and on the continent, in behalf of the agricultural department. This information will bring the Horse Bulletin which the department has recently issued down to date, concerning prices, demand, requirements, etc. Secretary Wilson believes there is a promising field in hunters, especially in England. This is the most expensive horse, next to the pedigree thoroughbred. He must have special qualities, the secretary says, be a strong, moderately large horse, capable of carrying a heavy, beefy Englishman of fourteen or fifteen stones, across fields and ditches and over hedges and fences after the hounds. He must be swift, too, and of good bottom and possess great courage. Here is a combination of qualities not found usually in horses in this country, but the prices paid for the best of such animals are enormous, and Mr. Wilson believes it worth the effort to attempt to meet such a demand from American breeding and training. "It is true," he said, "that our people are not in the habit of running their horses around the country over hedges and fences and across ditches and stone piles, but if \$500 or \$1,000 a horse is the prize, our American farm boys can break horses to anything. What Prof. Curtis is going

to do is to find just what opportunity there is and what profit for feeding and supplying such stock to Englishmen."

MIDDLE WEIGHT HOGS.

The heavy-weight hog is losing his popularity and the middle-weight swine is supplanting him in the affections of American pork consumers. Hogs weighing from 200 to 250 pounds probably now have the call in our markets. The reasons advanced for this change are that cotton and oil products are forcing lard into the background by reducing the demand for it and therefore its price, and that lovers of breakfast bacon do not want six inches of fat on their side meat. Packing houses and butchers report that their customers regard the exceedingly fat hog with much disfavour and it is thought his day will soon be over. Hog raisers will, of course have to meet whatever conditions may arise in this regard. If the price of lard remains depressed, pork must be produced for its edibility and the most money it will bring, rather than for its heretofore great commercial product. There is no denying the fact that many housewives openly express their preference for cotton seed oil products in cooking, and whether their taste is right or wrong, facts are facts, and our friend, the pork producer, must eventually be governed by them.

In nearly every street in Japanese cities is a public oven, where, for a small fee, housewives may have the dinners cooked for them.

IMPORTANCE OF LIVE-STOCK INTERESTS.



The days of the grain farmer, as a grain farmer alone, are past. While the broad prairies of Iowa are no less productive than in their virgin richness, yet changed conditions have established a new scale of prices for the grain products—prices at which no amount of richness of soil will enable the farmer to produce at a profit. In fact, so close is the margin that even with the most economical production, and marketing the grain products of the farm, only in the form of beef and pork, the profits of farming do not give a fair rate of interest on the money invested.

Horses, cattle, sheep and hogs are the finished products of the farm through which the profits must come. We believe no Iowa farmer will be at its best until all these animals are installed, and we are quite sure that the successful farmer of today is he who has already recognized and acted upon that fact.

The horse can never be produced upon the wholesale plan, as can cattle, hogs or sheep, but must be grown upon the farm in a small way and as an active part of the farm equipment. No farm can be operated without the horse. These two facts being conceded, it only remains for the farmer in his horse-raising to raise the very best of the sort suited to his work, when he may rest assured that no output of the farm will bring a better profit than will his surplus horses.

Of cattle it need scarcely be said

A BIG HOG.

The largest hog ever raised was recently slaughtered in New York. The animal was a Jersey Red boar, 2 1/2 years old, weighing alive 1009 pounds, and ressed 1336 pounds. The National Provisioner has the following to say of the prodigy: "This huge swine measured over nine feet from tip of its nose to end of its tail. It measured two and one-half feet across the hams and six feet in girth. This makes the hog three feet through. It is split at the shoulders, and to look into the great carcass is like looking into the crevice of a cavern. The carcass spreads across the perspective of the store like a Titanic statue of pork personified. It also looks like the body of the great hog embalmed and reposing in its gigantic majesty. From hip bone to toe it measures three and one-half feet and about the same from the crest of the shoulder blade to the bottom of the foot. The great fat jowls extend nearly two feet across. From between the ears to the tail is over seven feet. The tail itself is the tallest thing in the big proportions. It is a mere point in the air. The face of the hog is also small for the size of the animal. It is only sixteen inches long. The hams are monstrous in size, and the vast stretch of pork in the long waist is comparatively small feet. The usual porker is a mere pigmy by its side. The biggest hog heretofore grown weighed 1250 pounds dead weight."

WHAT HEIFER CALVES TO RAISE.

After a calf is a few days old a good judge of the ideal form of a dairy cow

can generally tell whether it is worth keeping for that purpose. Some years ago there were strong appeals in a certain class of agricultural papers to farmers to raise most if not all their heifer calves. But we have had since that time low prices for all dairy products, and that without any profit to the producer. At present a heifer to be worth raising must be not only of the best dairy form, but be on one side or the other connected with the best dairy blood. If all the cows that give small yields of milk were at once killed off it would be better for the dairy business, and in the end better also for those who thus lose their dairy stock. The single tax on land would place as high a tax on land without improvement as on that improved. This we do not believe in. But it might not be a bad thing for a year or two to put the same tax on all cows until the poorest were all weeded out. It would be an inequitable tax, of course, but really less than farmers impose on themselves by keeping poor cows in their dairy.—American Cultivator.

PROFITABLE GOATS.

D. A. Walker, of Yamhill county, Oregon, writes: "I have a band of 97 goats which sheared 472 pounds of mohair. These goats, twenty-five were kids; forty-five were nannies two years old and over, and twenty-seven were withers two years old and over. This makes an average clip of over 4 1/2 pounds per head. At some future time I will give some of my fifty-six years' experience in the goat business. I breed for heavy fleece and fine fibre."

CULTIVATION OF ORCHARDS.

There is a common complaint among farmers that their orchards are dying out because of the intense summer droughts which visit nearly every part of the country once every year or two. Thousands of orchards are rotting away, and in nine cases out of ten this reason will be given as the primary cause. Next to this is the damage done to the trees by the excessive cold of severe winters, especially in the northern belt of states.

Both of these causes are traceable to poor cultivation or lack of cultivation. Trees can stand more drought than grains or any of our vegetables, and it must be a dry season indeed to injure them to any great extent. Consequently if we gave the same cultivation to them as we do to the grain plants, sufficient moisture would be drawn up from the underground reservoirs to keep them in healthy growing condition. Good cultivation means good drainage, and where trees have proper drainage they are not apt to suffer much from freezing. There is such a close connection between summer droughts and winter freezing that one cannot be considered independent of the other. It is because we have just the soil for freezing the roots of the trees that our trees are injured in winter. If the soil is cultivated in summer, and properly drained, there will be little danger of the trees being badly injured by the coldest weather.

The damage done to the trees by freezing is due to the excessive moisture that collects in the soil in the fall. The soil is thick and heavy, and water collects in the soil and cannot escape. Then, when cold weather comes the roots of the trees are frozen up in solid cakes of ice. It is this, and the alternate thawing and freezing, that injures the trees of our orchards. The remedy is very plain. By giving perfect drainage to the soil in the fall of the year the surplus water will run off, and when cold weather comes the roots will not be frozen up in the ice. Then if a mulch is placed around the trees to keep an even temperature there is little chance of injury being done to our hardy orchard trees.

There are plenty who wrap protecting material around the trunk of the trees, and bandage them up generally like mummies, and entirely neglect them the rest of the year. The damage is always done below the ground and not above.

BREEDING FANCY POULTRY.

Breeding fancy poultry is a fascinating science, and those who follow it carefully and use fair intelligence can make it a paying industry. The trouble often is that people take it up without adequate knowledge of the work. There is science in all poultry breeding, but far more so in raising fancy breeds than the ordinary farmyard fowls. There are several points that the breeder must keep well in mind. It is shade and feathers that he is breeding for, and not for the qualities which make ordinary poultry valuable. Without perfect shape and appearance the fancy birds would be of little use in a show, and it is for exhibition qualities that he must strive for. One may ignore the exhibitions of poultry when raising the birds for market, but he cannot do that if fancy fowls are his object.

In order to understand the business one must read and study upon the subject of fancy fowls. He must have the shape of his breeds firmly fixed in his mind. Half the battle depends upon the shape of the bird. By conforming to the ideal shape one lays the foundation for all other successes. No matter how perfect the carriage or markings of a bird may be, if the shape is poor they will never come up to the standard set by the exhibitors of fancy breeds. Good shape generally indicates the rest of the essential points. But not always. Otherwise it would never be necessary to breed for carriage and plumage.

A well-shaped fowl will usually have a good carriage, but occasionally this can be improved by selecting for further breeding the birds that are stately and graceful in their walk and deportment. Breeding for plumage is not the least fascinating part of the fancier's work. It probably yields more genuine pleasure than any other part of the labor. Starting with birds of excellent constitution and shape, it is remarkable what changes can be made in the markings of the feathers without in any way destroying or injuring the type. But it takes long years of careful selection and breeding to accomplish this in a way that gives satisfaction. It is a work of love as well as wages.

SOURCES OF PROFIT IN DAIRY-ING.

Too often it is looked upon that the only profit in it is from the sale of the dairymilk the butter alone, but we must give due credit to the fertilizing material returned to the soil, the value of the skim milk as food (in connection with grain) for calves and hogs, as well as the calves themselves for the continuation of the dairy work.

The proper handling of the manure, returns to the farm half the actual value of the food consumed. It has been proven by experiments that ten pounds of skim milk is equal in feeding value to eight pounds of whole milk. In rearing calves on skim milk in the place of whole milk, it is demonstrated that under favorable conditions that one pound of growth can be obtained with two and one-half cents' worth of feed in skim milk, flax seed meal and hay.

If all the by-products of the dairy are properly handled the profit will equal that of the butter, which in one

county alone last year in Minnesota amounted to a little over one million dollars in the sale of the butter.

TREATING BARBED WIRE CUTS.

On this subject an exchange says: The first step to be undertaken is to stop the flow of the blood. This may be accomplished by the following methods: First, by picking up the ends of the arteries and tying them; second, by a compress over the wound; and third, by bringing the edges of the wound together with stitches, etc., when the coagulation of the blood will usually prevent further bleeding. The first method requires the services of a surgeon and except in special cases is not necessary. The second and third methods, however, are within the power of everyone who will follow these directions. Suppose in the first case that the wound is not a large one and it is not deemed necessary to stitch, but that it bleeds profusely. Take a bunch of cotton or oakum, large enough to cover the cut, dust it with iodoforn, place it over the wound and bind it firmly in place with an ordinary muslin bandage. If this is left on from twenty-four to thirty hours there will be no further danger from bleeding. After removing the compress, which should be done gently, do not attempt to sponge the wound for the first few days, but dust it twice a day with iodoforn or wet it several times a day with a wash composed of sulphate of zinc six drams, lead one ounce and water one quart; mix and shake well before using. A preparation that answers well in winter months is the following: Raw linseed oil, six ounces; oil of tar, two ounces; and tincture of benzoin, two ounces; shake and apply twice a day. The great objection to oily preparations is that they afford opportunity for dirt to adhere to the wound. The first thing to be done when the wound is a large one is to stop the escape of blood and get the edges of the wound as nearly together as possible. To do this a common way is to stitch the edges together, making the stitches about one inch apart, using a surgeon's needle and either wire, silk, or strong linen thread. Another method and a good one is to run pins through the skin on either side of the wound from one to two inches apart and then wind thread around them in the figure eight. In any case where the wound is drawn together, an open space should be left at the lowest part to permit the escape of pus. After the stitches have sloughed out as they will in a few days, the remedies recommended may be applied. Wire cuts usually heal by granulation. Three or four days after the wound has been made, little elevations like pimples will appear in the bottom and all over the surface. These are the granulations and are nature's method of filling up the gap and connecting the dividing tissues. From the time these little elevations appear, providing proper treatment has been given, the process of healing is rapid.

OLD ORCHARDS.

The value of an old orchard must depend upon the character of the trees as much as upon their cultivation and production. There are many old orchards planted with varieties of fruits that have long ago ceased to have any market value, and the sooner such trees are replaced by new ones the larger the profits will be. Successful grafting of new varieties on old trees may pay where the stock is not too old, or shows signs of unusual vitality. But old trees that are beginning to display signs of decrepitude are fit only for the wood pile. They begin to decay in numerous places in a short time; and they harbor insects and vermin, besides spreading fungous diseases around in the orchard.

Well preserved orchards, however, have trees in them that will continue to produce fruit in paying quantities many years to come, and if they have been grafted with good varieties of apples all the attention bestowed upon them will be rewarded. The pruning of old trees should usually be quite severe, unless the work has been attended to annually, and not many useless branches have been permitted to grow. A lot of dead limbs and growths manage to accumulate in old orchard trees, and these should be cleared out at once. No large limbs should be cut away. Let them produce their crop of fruit even if they are not what one would allow to grow on young trees. All old bark and worthless twigs removed, the large suckers should be favored and allowed to develop.

Then harrow the land, scratching it deep enough for clover seeds to catch. Sow the clover seed early in the spring, and later spread over the soil unbleached wood ashes, about 100 bushels to the acre. The wood ashes can be applied in May, and they will then be taken up by the trees during the fruit forming period. Still later, or when the clover gets started well, turn pigs loose in the orchard and let them feed on the grass. They should have movable shelters and places, for if allowed to roam at will over the whole orchard, they will kill as much clover as they will eat. In the fall they will eat all the fruit that falls, and thereby destroy worms and other insects. By this treatment an old orchard can be made to produce much better results than is usually the case.

It is stated that 90 per cent of the common contagious diseases are carried from house to house by the domestic pets of the world.

A Pennsylvania kodak fiend was instantly killed while attempting to get a snapshot of a blast as it exploded.