FARM AND ORCHARD

Notes and Instructions from Agricultural Colleges and Experiment Stations of Oregon and Washington, Specially Suitable to Pacific Coast Conditions

SEEDTIME AND HARVEST.

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With such wonderful weather for the earliest plowing and seeding as only Oregon can offer—every sower of seeds is already looking forward with the highest expectations to a most prosperous harvest.

But just a moment, friend! You remember well the scriptural warning "Whatsoever a man soweth, that shall he also reap." No prohecy ever uttered, perhaps, has received so universal acceptance from humanity in all the ages as this, possibly because it is founded upon a most primal literal truth.

From remote times man has been first of all a sower of seed and every recurring harvest in its dearth or in its plenitude has driven home the unalterable truth of this maxim. Yet the farmer of today, who of all men should give most heed to the literal accuracy of this text and its direct application to his industry—seems often more heedless of this first step toward a bountiful harvest than were his forebears ages ago.

For failure because of carelessness in the quality of the seed used, there seems little excuse nowadays. If "scientific agriculture" has done aught it has first of all increased the farmer's opportunity to secure crops of the highest quality, and repeatedly it has emphasized the need of so doing. Everywhere the state experiment stations and the federal agricultural authorities have eagerly extended the helping hand to aid the farmer in procuring good seed, and year after year has the wisdom of these efforts been amply demonstrated.

The farmer of Oregon seems less progressive in this matter than those of any other section of the country. Out of all of the samples of seed received and tested at the cooperative seed testing laboratory at Corvallis last year only twenty per cent were sent in by Oregon farmers. Yet the need for most careful examination of seeds before purchase or sowing is constantly being demonstrated by the results of the work done in this seed testing laboratory. This need is evident especially in the grasses, clovers and alfalfa. For example, in the tests of alfalfa seed alone since January 1st of this year forty-two per cent of all samples examined by the seed experts contained dodder, and in sixty-one per cent of this infected alfalfa, the dodder was the most dangerous species known to agriculture. One sample of alfalfa seed examined and reported only last week contained 15.1 per cent dodder. Yet 1 per cent of dodder is sufficient to destroy the alfalfa crop. Alfalfa seed having 1 per cent of dodder would contain about 4,000 dodder seeds in every pound of alfalfa and seeded at the rate of 16 pounds of alfalfa per acre 400 dodder seeds would be sown on every square rod of the seed bed; enough under ordinary conditions to so thoroughly infest the crop with the parasite as to destroy the alfalfa in a single season.

Alfalfa is one of the most important crops in the state and in the Northwest. Dodder is a parasitic weed, the seed of which when sown with the alfalfa germinates in the ground. After germination the slender tendrils of the dodder vine reaches out, fasten upon and coil about the alfalfa stalk. The soil roots of the dodder then die and the pest thereafter obtains its sustenance directly from the growning tissues of the alfalfa plant, sapping it of life in a few weeks. Having destroyed the alfalfa plant the dodder vine blossoms and seeds most prolifically, the seed scattering upon the ground, quickly germinating and attacking new alfalfa plants, thus rapidly spreading and ultimately destroying the crop, there being practically no remedy where the dodder once gets started.

The only means of preventing infection from this dangerous pest, the seed of which so closely resembles alfalfa seed as not to be easily detected except by experts, and which cannot be separated from the alfalfa seed by any cleaning device now known—is by the refusal of the buyer to purchase or sow alfalfa seed containing even a minute precentage of dodder seed. Free of charge, the seed expert at the cooperative seed testing laboratory at Corvallis will examine and immediately report upon any sample of alfalfa or other seed sent in by any farmer or seedman in Oregon or the Northwest. If free use were made of this laboratory there is little question that dodder in the alfalfa fields of the northwest, and in the seed harvested therefrom, would be on the decrease instead of increase as it is now.

Nor is it in dangerous impurities that inferior seed is constantly being discovered. Using alfalfa as a further illustration, germination tests of all the samples received at the laboratory since January 1st of this year showed the following:

20 per cent of samples germinated	90-100	per cent
29 " " "	80-90	"
25 " " "	70-80	"
14 " " "	60-70	"
10 " " "	50-60	"

Yet good alfalfa seed should germinate ninety-five per cent or over. That good seed can be secured, however, is shown by the fact that 20 per cent of the samples tested had a satisfactory germinating power — were good, live seed. The farmer must search for such, however.

Using alfalfa as an illustration of what is even more common in the grasses and similar seed, it appears perfectly evident, that both in purity and viability, the bulk of the seed now being sown by farmers in the Northwest is decidedly inferior, and with absolute certainty this prophesies the harvest.

The grass seed samples tested show even greater need of minute examination before purchase of seed. So far this year only two samples of Red Top have been received that were up to standard in purity. Two-thirds of all the Orchard Grass samples examined were below the standard of purity that it is possible to obtain. The best sample of Kentucky blue grass examined contained 61 per cent of pure seed, while the standard of purity for this species is 80 per cent. The standard of germination for Red clover is 95 per cent, yet the average germination of the samples so far examined by the laboratory this year is 73 per cent. To illustrate how dangerous it may be to sow seed containing a small percentage of impurities, the exact analysis of a sample of what was sold for a mixture of timothy and alsike is given as follows:

Timothy, 66 per cent; alsike clover, 14 per cent, other cultivated grass seeds, 5 per cent; trash, 9 per cent; foreign seeds, 6 per cent.

Although the amount of foreign seeds is only 6 per cent, and may possibly be considered of no consequence, yet a list of the weed seed contained in this 6 per cent of foreign seeds follows:

Plantain, Cinquefoil, Black-seeded plantain, mouse-ear chickweed, sorrel, pepper grass, evening primrose, witch grass, shepherd's purse, small crab grass, night-flowering catchfly, sedge, slender spike rush, lamb's quarters, amaranth, brown-eyed Susan, woolly panicum, crab grass, May weed, dodder, syperus, small-seeded false flax, hedge mustard, nerved manna grass, green foxtail, white vervain, curled dock, sporobolus sp., three-seeded mercury, forked catchfly, sleepy catchfly, yellow-wood sorrel, sinuate-leaved evening primrose, Canada thistle, horsemint, lyespus sp., rush. Total weeds seeds per pound of sample, 13,500.

Although the farmer received only eighty-five cents' worth of good seed for every dollar he paid out, yet, when the weed seeds he has sown on his farm are considered, it is not hard to realize how enormously unprofitable his seeding will prove at harvest time. It is this seeding of the land to worthless plants and noxious weeds that is causing the farmers of the Northwest the loss of thousands of dollars annually from the inferior crop produced and the labor wasted. Nor can the dishonesty of the seedsmen in the Northwest be considered the cause of this enormous annual waste. The seedsmen of this region are, for the most part, trying to do their best, but if the farmer accepts and pays for inferior seed as readily as for the best, little encouragement is given to the honest seedsman to search out seed of high quality and refuse to sell anything else.

Only by insisting upon pure, viable seed will the farmer secure, and finally force the seedsman to carry nothing else. Farmer and seedsman alike have at their immediate service, free of all cost, the co-operative seed testing laboratory at Corvallis, which has but the one purpose, that of aiding both dealer and grower in securing and sowing high-quality seed.

Hence, my friend, look well to your seeding, so that in the golden harvest time your present expectations may not be discounted. Begin at the beginning. Use naught but seed of quality, pure and of high vitality, and as logically as effect follows cause, so certainly will come to you at harvest the opportunity to reap in profit that which you have sown with precaution.

Tale of a Bird.

A little four-year-old boy living in a country town disturbed and took some eggs from under a sitting hen belonging to a neighbor. The neighbor complained to the boy's mother, who later called her boy to her and began to reprove him, when he broke in with the question: "Who told you?"

The mother said: "A little bird told me. Now, tell me, how many eggs did you take?"

The little boy, stammering, said: "Well! Well! Why didn't the bird tell you the whole of it?"

NOTES OF THE SHEEPFOLD.

The greatest profit is realized by doing things right.

Sheep are nature's dependable aids in restoring and increasing soil fertility.

Sheep will thrive neither with wet feet or with damp, soggy fleeces.

The lamb that cashes in the most money for its owner is not a product of poverty.

Circumvent the large feed bills by producing better roughage and grain on your own farms.

To allow feeders to eat all the corn they can stow away after reaching the farm is disastrous.

A little flock well tended on the small farm well tilled will rarely disappoint the good shepherd.

Throwing a Fit.

"What is the athlete in that piece of statuary doing?"

"Throwing the discus."

"What sort of a fit was that?"

SWINE PRODUCTS OF WORLD

Other Countries Besides United States Increasing Hog Production—Bacon Neglected.

Fred Sawyer, of Swift & Co., recently returned from an extended European trip, says the Live Stock World. Mr. Sawyer was surprised at the extent to which countries abroad are increasing the production of hogs since prices in America have been too high to admit of exportation on any considerable scale. Countries that have always been dependent upon others for hog meat are finding out how easy it is for them to produce pork. The biggest hogs he saw were in Hungary. They are sold there in pairs and a very common weight for a pair is 1,100 pounds. These hogs are skinned and frequently produce 150 pounds of lard apiece. Bacon cuts almost no figure with many continental European countries and the production of fat seems to be the prime object. He had often wondered why there is no sale in France for breakfast bacon. He found the reason to be that they do not bother about breakfast, a cup of coffee and a roll being all they expect to have before noon. However, the best hotels in Paris, of course, are catering in this as in other respects to the American custom. England, however, is using heavier cuts of hog meat and even the people of Denmark, long famous for bacon production, are growing heavier hogs to meet the general continental demand. England is getting large quantities of hog products from Australia and New Zealand and Mr. Sawyer thinks that unless America gets so she can produce more hogs at less cost she will soon be shut entirely out of the markets of the world. America has started them all to raising hogs.

TAKING CARE OF ROADSIDES

Unsightly Brush Should Be Removed and All Ornamental and Shade Trees Protected.

No matter how smooth and well constructed the traveled road may be, if the roadsides are not cared for, the highway as a whole will not give a good impression. All rubbish should be removed; the excavations should be filled and embankments smoothed and planted with grass wherever it will grow. Unsightly brush should be cut and grubbed out. Sometimes, however, the brush and small trees, if suitably trimmed, add to the attractiveness of the roadside.

All trees that are ornamental or which have value as shade trees should be preserved and protected, unless they grow so close together as to make a dense shade. In hot, dry climates particularly, and, indeed, in most places, trees are a considerable factor in reducing the cost of maintenance, since they lessen the evaporation of the moisture from the macadam. In exposed places where the sweep of the wind would be otherwise unbroken they serve to prevent in a measure the blowing away of the binder from the road surface. Unfortunately in such places it is often difficult to make trees grow. Care in the selection of the kinds of trees best suited to the locality is important.

Market for Farmers.

City people would rather deal direct with the farmers when they are sure they will get pure, fresh and wholesome stuff, says a writer in an exchange. One of my neighbors has for the past four years sold all the eggs off her farm to city people. She is sending about 50 dozen a week to Chicago this winter and gets five cents above the retail cost. She has averaged 38 cents per dozen for her eggs, the consumer paying express charges, while the average price at our home town has been about 23 cents. Pays, doesn't it?

This woman never buys eggs except from two neighbors whose reliability she knows, but she takes all they sell and makes a profit of about 15 cents a dozen on them. Of course, she does not tell anybody what she gets from the city consumers. She packs the eggs in paper boxes with partitions forming a little compartment for each egg. She usually ships from four to six dozen in a box.

Green Feed for Chicks.

Have tender green feed for the early chicks. Young collards and tender lettuce will be eaten readily by them. The chicks may help themselves from the growing plants or the latter may be cut up with a sharp knife. Both these plants stand low temperatures, and will give green feed early if planted soon enough.

Care for Setting Hen.

Setting hens should come off the nest once a day, preferably at the same time each day. Feed them on whole corn and supply clean fresh water and grit. A good "dust bath" of moist, fine, sandy loam will be appreciated. It is a lot better than real dust that is "bone dry."

Getting Best Stock.

Some breeders claim to get their best stock from April or May hatched pullets which have been kept back from egg production until nearly time for setting eggs for incubation.

Lack of Exercise in Sows.

When sows kill and eat their pigs the common cause is pampering and especially the lack of exercise. The sows become fat, costive, nervous and cross.

IMPORTANCE OF ERADICATING INJURIOUS CATTLE TICK

Southern States Need More and Better Live Stock and Larger Dairy Industry—Objects be Promoted by Destroying Pest.

The eradication of the cattle tick from the southern states is a problem of prime importance to the agricultural interests of that section. Moreover, the good that would result from the elimination of the tick would not be entirely confined to the region directly concerned, and thus the matter assumes to a certain degree a national importance.

The south needs more and better live stock and a larger dairy industry, and these objects would be greatly promoted by the destruction of the tick. The increased production of live stock by reason of its important bearing in maintaining and improving the fertility of the soil, would be of distinct benefit in increasing the yield of field crops. An incidental though important advantage of stock raising and dairying would be found in the distribution of the farmer's income throughout the year, enabling him to live on a cash basis. It can thus be seen that the benefits which would accrue to southern agriculture from the extermination of the cattle tick would be very great and far-reaching.

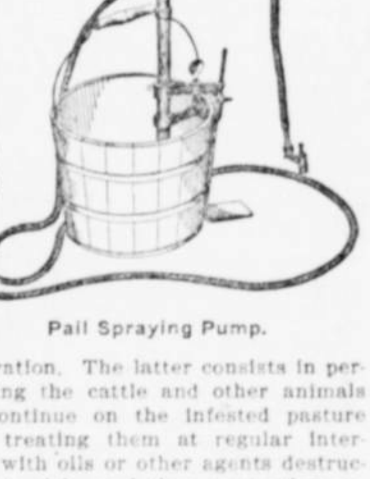
There are several species of cattle ticks, but the chief one is commonly called the "cattle" or "Texas fever" tick. It is the one most frequently found on cattle and is much more abundant than the other species. When the losses occasioned by this parasite are once thoroughly understood by farmers and stockmen there will be little need for arguments in favor of tick eradication. Some of the losses are not directly noticeable and consequently make little impression, while other losses properly chargeable to the tick are frequently attributed to other causes.

Various writers have estimated the annual loss due to the tick at from $40,000,00 to $100,000,000. These figures should be ample argument, even to the most comprehensive, for the eradication of the pest.

In getting rid of the tick, it may be attacked on the pasture and on the cattle.

In freeing pastures the method followed may be either a direct or an indirect one.

The former consists in excluding all cattle, horses and mules from pastures until all the ticks have died from



Pail Spraying Pump.

starvation. The latter consists in permitting the cattle and other animals to continue on the infested pasture and treating them at regular intervals with oils or other agents destructive to ticks and thus preventing engorged females from dropping and reinfesting the pasture. The larvae on the pasture, or those which hatch from eggs laid by females already there, will all eventually meet death. Such of these as get upon the cattle from time to time will be destroyed by the treatment, while those which fail to find a host will die in the pasture from starvation.

Animals may be freed of ticks in two ways. They may be treated with an agent that will destroy all the ticks present, or they may be rotated at proper intervals on tick-free fields until all the ticks have dropped.

Spraying is probably the most convenient and practical way of treating cattle on the majority of farms. A good style of pail spray pump will be sufficient for treating small herds. About 15 feet of 3-3 inch high-pressure hose is required and a type of nozzle furnishing a cone-shaped spray will be found satisfactory. A nozzle with two small an aperture should not be used.

Every portion of the body should be thoroughly treated, special attention being given to the head, dewlap, brisket, inside of elbows, thighs and flanks, the tail and the depressions at the base of the tail. Crude oil alone may be used, but in general a 20 to 25 per cent. emulsion will be better.

All the cattle should be sprayed every two weeks and the treatment should not be discontinued simply because the ticks have become scarce or seem to have disappeared.

In localities where ticks commonly occur on cattle in considerable numbers during the winter time it will be advisable to continue spraying. In localities where ticks disappear or are present in very small numbers during the winter, the cattle should be inspected carefully each week to remove and destroy any ticks that may be present. When warm weather comes, it will be well in all cases in which spraying has been discontinued during the winter to begin spraying and continue until it can be determined with certainty that eradication has been accomplished. The spraying should not be delayed until ticks show again in considerable numbers. One tick destroyed in the early spring will save the trouble of destroying thousands a few months later.

MEXICAN STYLE OF FARMING

Most Primitive Methods of Agriculture Are Still Carried on in Many Parts of the Old Republic.

(By VICE-CONSUL R. M. STADDEN.)

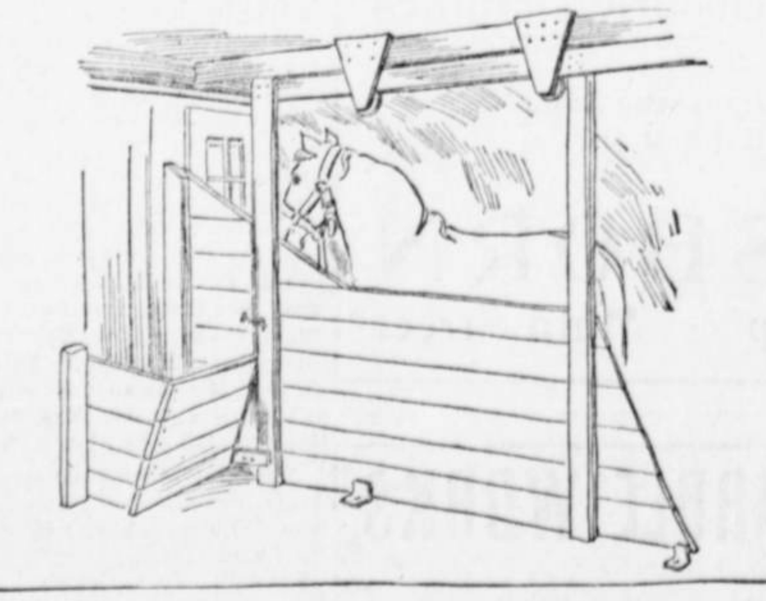
The most primitive method of farming is still carried on in many parts of Mexico. The plowing is done by the old-time bull tongue, which is a crooked stick with the point covered with an iron shoe, which only scratches the soil.

Corn is planted by hand, a man following the plow, dropping the seed and covering it with his foot. It is cultivated with the same plow, which gives very poor results in destroying the weeds. The fodder is gathered by pulling the leaves or blades from the stock, which are made into bundles and carried from the fields by pack mules.

Rice is planted, after the native plow has scratched over the land, by being thrown broadcast, and covered by hauling a bunch of brush over the land. When the rice is about one foot or 18 inches high it is cut down with grass hooks; not even a scythe is used for this work. This cutting back is said to make the rice grow more bunchy and enables the rice plant to get the best of the weeds, whereas, if the land had been properly plowed before planting, there would be no weeds and this cutting back would not be necessary. Some eight or ten days before cutting or harvesting time the water is shut off from the rice fields to allow the rice to ripen, when it is cut with the same grass hooks. It is then piled up for three days, when it is threshed by being hand beaten on a rock, by which process five to ten per cent. of the grain remains on the straw. During the eight or ten days the field is drying out a loss of about 40 per cent. of grain occurs from various causes.

This style of farming, without farm implements, could be continued through the long list of crops that are raised in that country.

SLIDING PARTITION IN STALL



The sliding partition shown in the accompanying illustration provides a safe way to approach the head of a kicking horse to feed it or put on the harness. It does away with the necessity of entering the stall from behind and the risk of being kicked. The partition reaches as far as the manger, and the entire framework and boards are carried on two rollers attached to a joist above. Small metal clips are fastened to the floor on each side of the partition to keep the bottom in place and guide it in sliding back.

DIVINE RIGHT OF KINGS

King James' Complacent Estimate of Royal Dignity as Expressed in Speech.

The state of monarchy is the supremest thing on earth; for kings are not only God's lieutenants upon earth, and sit upon God's throne, but even by God himself they are called gods. There be three principal similitudes that illustrate the state of monarchy. One taken out of the word of God and the other two taken out of the grounds of policy and philosophy.

In the Scriptures kings are called gods and so their power is after a certain relation compared to the divine power. Kings are also compared to the fathers of families; for a king is truly perens patriae, the politic father of his people. And lastly kings are compared to the head of this microcosm of the body of man.

Kings are justly called gods, for that they exercise a manner of resemblance of divine power upon earth; for if you will consider the attributes to God, you shall see how they agree in the person of a king. God hath power to create or destroy, make or unmake at his pleasure, to give life or send death, to judge all and to be judged nor accountable to none, to raise low things and to make high things low at his pleasure, and to God are both soul and body due.

And the like power have kings; they make and unmake their subject, they have power of raising and casting down, of life and death, judges over all their subjects and in all causes and yet accountable to none but God only. They have power to exalt low things and abase high things, and make of their subjects like men at the chess—a pawn to take a bishop or a knight—and to cry up or down any of their subjects, as they do their money. And to the king is due both the affection of the soul and the service of the body of his subjects.—From a Speech of James I. Before Parliament in 1609.

HOW TO DOCTOR THE TREES

Some Simple Directions for Treating Cavities Which Are Still Small.

Many of the so-called tree doctors, as well as the people who employ them, have become so elated over the idea of tree surgery that they find some cause for treating almost every and any tree, regardless of its necessities or the results of such treatment, or whether it is worth while to spend either time or money upon them.

A word of caution is therefore not out of place. If you feel that your trees need attention, look into the matter of tree doctoring, so that you may know something about it, and then call upon a responsible man with a good reputation to do your work.

When the tree has been neglected and cavities have formed in the trunk of the tree, something should be done to stop the increase of the opening, for, after it has become so large as to encircle the greater portion of the tree, or where the entire center has been destroyed, it is not worth the time and money it takes to properly treat these trees. In cases where the tree can still be treated the cavity should be scraped and cleaned of all dead wood, then give the cavity a thorough washing or spraying with a solution of copper sulphate. This solution, applied to all parts of the cavity, will kill all the remaining rot spores. Now the cavity is ready to be filled with a cement mixture, using one part of cement to three parts of clean, sharp sand. This is packed into the cavity, filling it to one inch of the finished surface, and then apply a covering of one part cement to one part sand. This is put on so as to bring the filling to a smooth surface, making it conform to the contour of the tree trunk. A coat of coal tar may be applied to discolor the cement and aid in making the filling water-tight.

Question of Disposition.

Dissatisfied Patron—Gentle disposition! Why, he wants to bite the head off every dog he meets. I've been swindled!" Dog Merchant — "You didn't ought to keep dogs at all, mister. The animals you ought to keep wiv your temperament is silkworms."—Punch.

The Limit.

"He absolutely lacks the business instinct." "Does he?" "Why, he'd have no more idea of business than to open a garage in Venice."—Chicago Record-Herald.

Force of Habit.

"Do you know, Dr. Knifem walked deliberately past me today and never spoke."

"Don't mind that, Emmy. He's so used to cutting people that he did it without thinking."