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AGRICULTURAL.

WHY MEN FAIL.

There are circumstances and events which occur to drag men to commercial failure which are unavoidable cannot be distributed but that a majority of individuals are possible for their own failure is equal. Where one man is ridden down by the inspiring of natural causes, a large number scuttle their own craft and go under the storm brought about by their own mismanagement and greed. The old-fashioned plow, given by careful and experienced men, to hasten slowly, is not heeded as it should be. An innate greed for gain pushes men to reason, and the candidate for commercial honor and a place in the business world rather than grow slowly and surely will hazard all on the cast of a die to the wall. Many firms are seeking to do much business on a capital of \$10,000 which could be done with \$50,000, and when of hard times comes, they read the writing on the wall and are found wanting. This does not apply alone to merchant manufacturers, but will find a nearly every farm house to hang on. The farmer is seeking to own a larger tract than his neighbor. He will sow more wheat, plant more corn, breed more stock in a word, seek in everything to out-compete his neighbor regardless of merit or results. What might be called the polyculture is a study that is not sufficiently understood by farmers, and the results are laid down to be obeyed are followed by too many. What does it signify to plant fifty acres of corn and only to get as much as might be obtained from ten acres where good seed is selected and given care and attention. The income from the remaining twenty acres would be put the thirty acres in condition to produce more than from the entire fifty acres in the usual way. The instances are where thrifty, sagacious farmers are getting more net profit from fifty acres of economically managed than others are getting from four times the quantity, for no other reason than that the large tract is half cultivated and is more extensively managed in every way to own and manage. The student of business studies his trade; he knows the seasons and crops; knows the natural causes have prevented average success, and will naturally reduce the scale of trade and the standard of reality; does not try to sell furs in winter or straw goods in winter. There is a lesson in which experience teaches that the qualities can be sold, and others they cannot. All these things are the result of thoughtful, sagacious, successful management of business. Can as much be said of the farmer? Year after year he plants wheat, and each year realize a crop; if corn is his hobby, he plants his acres only with corn and mourn that only yields him half a crop, and thinking there are laws governing the science of agriculture that must be obeyed, that the chemistry of the soil, the influence of the climate and other natural

causes may defeat every effort made in the direction he is working.

The old story of the girl who put all her eggs in one basket, when going to market, is repeated over and over again. She dropped her basket and her little fortune was gone. Had she divided and carried them in two separate quantities, half would have been saved for her. So with the farmer; if instead of all wheat or corn, or any other one kind, he will divide his crops and plant some of each there will never come a season when all fail.

Let the husbandman introduce a good breed of cattle and hogs, plant his cultivated acres with wheat, corn, oats, rye, etc., taking care to select good seed, study the average, and know by experience which is the most sure crop, and give most attention to that that has rewarded most surely, and he will be approaching a standard of judgment and excellence in his calling that will be gratifying to himself and improve his credit and standing.—*Factory and Farm.*

VALUE OF PLOWING IN FALL—INFLUENCE OF FREEZING.

Much benefit may commonly be realized from a careful preparation of land for planting and sowing. The physical preparation of the soil for the reception of seed is a matter of much importance, for whenever the land is not mellow, a considerable portion of the seed is likely to fail of germination, and thereby to be lost.

There are other benefits which are naturally conferred upon ground by plowing at other times than when it is required for the reception of the seed. But the various kinds of soils are quite unlike in that which relates to the benefits they are likely to derive from fall and winter plowing. A soil that abounds in sand is not capable of receiving anything like the same measure of benefit from plowing in fall or winter as one that contains a large proportion of clay.

Sand has but feeble, if any, capacity that is appreciable, for absorbing any of the fertilizing gasses (of which ammonia is the most important), while clay, and especially when dry, has the most remarkable capacity for absorbing and retaining this fertilizer, of any of the materials that naturally belong to soils.

Clay, that belongs to a compact soil, or when it is filled with water, has no important value for this purpose. But whenever it is thrown into ridges, so that a large portion of its particles are exposed to the atmosphere, and to the influence of frost, it is rendered peculiarly valuable, and on account of the facility which is furnished for the absorption of gasses from the atmosphere. Some of the clay soils, or the loams that contain a large proportion of clay, sometimes remains very compact, or in large lumps, even after they have been often plowed. This is often on account of the presence of a small quantity of some mineral substance. This condition may sometimes be readily changed, or by natural processes, which are secured by mere exposure of the soil to the atmosphere. The most common of these substances is the prot-oxide of iron, which is changed to a per-oxide.

There are no available agencies that are as effective for the reduction of a compact soil to a mellow condition as the frosts of a cold winter and the free success of air which they ultimately secure. Whenever such land is thrown into ridges by deep plowing in autumn or early winter, frost is likely to act as a disintegrator of such soil. In addition to this benefit, when the warm season arrives it is in the most favorable condition for the absorption of the fertilizing gasses from the atmosphere, in addition to its other influences.

The question that relates to the extent which nitrogen of the atmosphere is capable of conferring benefit to soils or to growing plants seems to remain unanswered. Some persons have suspected that inasmuch as this element is so abundant as a natural

constituent of the atmosphere, and is so necessary as a food for plants that it might, in some undiscovered way, be expected to contribute to this natural requirement of many plants. But there seems to be no evidence that it is thus useful. It is well known that oxygen of the atmosphere is an important agency in changing soils and manures, and in fitting them for the uses of plants, as their natural foods.

Although ammonia is so important as a food material for plants, it is not useful for this purpose while it remains in the condition of a compound gas. It parts with its nitrogen portion or element to serve this purpose. The method of plants for separating and appropriating the nitrogen of ammonia has not been as well determined, as with regard to the separation and appropriation of the carbon from carbonic acid, both of these compound gasses being received by the plant through the medium of the atmosphere. Growing plants are capable of receiving carbonic acid for the building up of their carbon materials and of parting with the oxygen, which is returned to the atmosphere.—*Prairie Farmer.*

PROTECTING AGAINST FROST.

M. G. Vinard proposes a method for protecting vines against frost in spring, which embodies the idea of smoke as a blanket to secure the earth against the influences of extreme cold. The plan, which is said to have proved successful, and to be of easy application, is described as follows: It consists in carefully mixing gaster with sawdust and old straw, and piling up this mixture into large heaps in the vineyards. The mixture remains easily inflammable in spite of rain or weather, for more than a fortnight. When required for use, smaller heaps are made of the large ones, or about two feet in diameter, and are distributed in and about the vineyard. If there is a little wind, these heaps burn freely for about three and a half hours, and produce a very dense smoke. The artificial cloud which thus envelopes the vines considerably decreases the radiation from the ground, and with it counteracts frost, which is greatest toward the morning of calm spring nights, and which does so much harm to the plants.

This method of protecting vines and trees from frost by smoke, has been tried successfully at O. C., by using scraps of tom leather procured at our trap factory, and put in heaps near vines and ignited when danger threatened from frost. These can be used to advantage by growers of fruit, especially peaches and plums. During a cold winter there are generally a few days of extreme cold weather which frequently destroys the entire crop of fruit by the killing of buds. If growers would be watchful and vigilant by procuring a quantity of leathers, which cost but little and burn a long time and produce a dense smoke, they would, with little trouble, by burning them when the proper time came, save their crop of fruit, and during harvest time would realize much more than those who took no precaution in the time of need.—*Farmer's Advocate, Canada.*

PRINCIPLES OF GOOD FARMING.—First—The farmer who would succeed well, and derive pleasure as well as profit from his calling, must manifest an active and abiding interest in his vocation. It takes heart-work to make hand-work pleasant.

Second—The farmer must study how best to increase and maintain the fertility of his soils. There is no inertia in agriculture. There must be motion, either forward or retrograde.

Third—The farmer must strive to increase the quality as well as the quantity of his crops. It is the quality that determines the price.

Fourth—The farmer must seek with a watchful eye to improve his market facilities. It is transportation that eats up the profits.

Fifth—The art of raising better stock is not as well known as it should be. Keep no

more animals than you have the facilities to feed and care for well. Sixth—The farmer must seek to improve his social, intellectual and financial condition.—*Ex.*

AGRICULTURAL ITEMS.

Illinois raised 270,000,000 bushels of corn this year; Missouri, 200,000,000.

Farmers in Panola county, Texas, have succeeded in cultivating rice in their locality.

An Iowa farmer employs nine elk with success in the cultivation of his farm.

In Michigan, wheat was sown early, and is now reported as looking very promising.

One hundred bushels of Kansas corn to the acre has been grown in Rock county, Wis., during the present season.

A farmer at Milford, N. H., raised one hundred and forty-five large pumpkins from a single vine the past summer.

The year's yield of rice in South Carolina and Georgia is 75,000 terces, or about five per cent. more than any rice crop since the war.

The apple market is flat this season—too big a supply for the too little demand. Some apple dealers have got their fingers burned.

Colman & Co., commission merchants, of St. Louis, received and sold, the day before Thanksgiving, three tons of dressed turkeys.

Japan is going to send an agent to this country to buy sheep. It will be rather a hot country for them—but they will thrive there.

The Necedah cranberry company, of Neenan, Wis., has gathered from its marshes about 2,000 bushels of cranberries. But for the flood resulting from the extraordinary heavy rains, the company would have harvested 5,000 barrels this season.

DOMESTIC ECONOMY.

Best Pudding.—To two coffee cups of flour with a heaping teaspoonful of baking powder stirred thoroughly through it, add one coffee cup of finely chopped suet; one teaspoonful of salt; one well beaten egg; one pint of sweet milk. Grease a tin pail, pour the mixture into it, cover, set it in a kettle of boiling water, and let it boil constantly two hours. Renew the water as it evaporates with boiling water from the teakettle. Send to the table hot. Serves with wine sauce, or lemon sauce.

Buckwheat Cakes.—At night take sufficient warm water for a little more than the amount of batter required. Thicken this with buckwheat flour, a little graham meal in addition, stir in a teaspoon of fresh yeast and let it stand till morning to rise, when it will be fit for use. Leave enough batter to mix in again at night without yeast. After a day or two the batter will require a-half teaspoon or so of soda to sweeten it, put in just before baking. It is nicer to mix your batter in a stone jar and pour off every morning what is required for use and not put the soda into the whole. The addition of a little milk will make the cakes brown if desired.

The batter should be occasionally renewed. Now as to baking cakes it is one of the fine arts. Some heedless cooks use so much grease to keep the cakes from sticking to the griddle that they fill the room full of smoke to the discomfort of all concerned. A cloth sewed fast to a fork is the most convenient greaser and just as little grease should be used as possible. The fire should be neither too hot nor too slack. Nothing is better relished on a cold winter morning than well prepared cakes of this kind.

To Salt Beef.—For a piece of beef of eight pounds, rub well in half an ounce of saltpetre and half pound of salt; strew over the top two ounces of brown sugar; turn and rub the meat every day with the pickle.