

AGRICULTURAL HINTS

Summer Treatment of Milk.

During hot weather the best means of caring for milk designed for the creamery is to run it through a separator a few moments after milking. Cool the cream as much as possible with the coolest well water available. Put the cream into eight-gallon cans and keep it at as low a temperature as well water will hold it. Deliver when convenient. If the well water is 54 degrees or less, the cream will keep in good condition.

Capturing Squash Bugs.

The old-fashioned squash bug is not as easy creature to destroy. It cannot be reached by the ordinary poison sprays, as it takes its food by sucking the plant and does not eat the foliage. Kerosene emulsion, soap solution and tobacco decoction have been recommended and used with some success; but hand-picking is most satisfactory. The bugs can be decoyed under pieces of boards, such as barrel staves, etc., if laid on the ground with one end slightly raised, among the vines. Clustering under these boards for shelter and protection, the pests can be collected and destroyed a couple of times daily, until their numbers are greatly reduced.

Advice to Beginners in Farming.

Beginners in farming, especially those with limited capital, should endeavor to produce early and late crops, so as to have cash coming in all the time, if possible. One of the essentials for quick returns is poultry. The hens should lay every day, with good management. One or two good cows will also be found serviceable, as milk, butter and eggs are cash at all seasons. Small fruits, such as strawberries, currants, gooseberries, raspberries and blackberries, soon give returns, but grapes and orchard fruit require more time. On a small farm it may not pay to depend upon the cereal crops. Stock, fruit and vegetables give better profits and bring in cash long before the harvest comes for corn. There is nothing that will give larger and quicker profits in proportion to capital invested than fowls, and as they multiply rapidly the number can be increased every year. The fowls will also consume much waste material that cannot be otherwise utilized.

Cultivating Fine Tomatoes.

Producing fine tomatoes is quite an art, and one that it pays the grower to master if he expects to make much money out of the crop. Professor Massey says that he formerly entertained the opinion, still held by some, that heavy applications of nitrogenous manures made the vines too rank and the fruit more crooked; but persistent efforts in improving the character of the fruit and the modes of culture have convinced him that with a good strain of seed no amount of manuring will make it any more irregular, while a poor strain will be irregular in any event, and that a rank growth of vine, induced by heavy manuring, simply indicates the need of more room for the plant and a heavier crop of big tomatoes, and that heavy manuring on the hill is the best way to insure a vigorous growth of vine and a corresponding vigor and perfection in the fruit.

I have also learned that small fruits grow from seeds of small fruits, and vice versa; that trimming and training the plant to a single stem leads to a smaller production of blossoms, less pollen and a smaller crop; that the largest crops are always on the plants which are allowed to take their full natural development and grow at their own sweet will on the ground; that healthy tomatoes lying on the ground are no more liable to rot than those trained off it. No fruit is more rapidly improved by careful selection, and none more rapidly deteriorated by carelessness than the tomato. Like Indian corn, the tomato is best when the seed is produced in the same latitude and climate where the crop is to be grown, and it seldom does its best the first season when taken far north or south of its native locality. The improvement of the tomato should therefore be carried on in the locality where the crop is to be raised.—Vick's Magazine.

The Grasshopper Pest.

Nature has ordained that an endless warfare should prevail among her creatures, to the end that one species should not increase too fast, and crowd others out of existence. The growth of microscopic plants in certain insects, causing their death, is an example of this. Most of these plants belong to a family that the botanists call empusa, from the Greek word meaning "ghost."

A striking peculiarity about the plants is that they can grow only on certain kinds of insects and always while the insects are alive. There is a kind, for example, called the empusa gryllii, that grows only on the grasshopper. One can find many dead grasshoppers, in the autumn, clinging to fences, tree-trunks or buildings, several feet above the ground. Break open the bodies, and you will find a white substance that seems to have burned up the living tissues, and turned the insects into mummies, which cling, life-like, long after death. This white substance is the spores of the empusa gryllii.

Now it is suggested that one of the best ways to get rid of the grass-

hoppers in the west, where they do so much injury to the crops, is to infect some of them with the empusa gryllii, and thus cause an epidemic among them. Those who have studied the question say that the plan is wholly feasible, for the spores of the plants are blown from the body of the dead insect in every direction by the wind, and if even one..... on a live hopper, it is likely to grow, and as surely as it grows, it will kill the hopper.

The way the farmers now try to rid themselves of the pest is to drag over the fields, by hand or by horse power, a broad wooden trough, partly filled with water having petroleum on the surface. Back of the trough is stretched a cloth, against which the grasshoppers fly, falling thence into the oil. This device, however, is only partially successful, and the empusa infection would supplement it, even if it would not render it wholly unnecessary.—Philadelphia Record.

Preparing Wool for Market.

To get the full value for our wool it must be washed. The difference between washed and unwashed wool is so great that it pays the grower every time to wash it. Good delaine wool will not shrink one-third, which prices quoted in the market seem to indicate. There are many ways of washing, however, which do not prove successful. I have seen some housed breeding ewes washed so that the discoloration which appeared only in patches before the operation was distributed all through the wool, practically injuring its quality to a considerable extent. By distributing the color all through the wool it was given a dingy appearance which immediately excited the suspicions of the buyers.

Nevertheless, the careful preparation of the wool for market is an essential today as any other feature of the business. In the northern wool-growing sections cold weather and cold water often make the work late in the season, and this sometimes proves quite a disadvantage. Probably what is needed as much as anything else in every good wool-growing section of the country is a co-operating scouring house. This would solve the problem and save to the farmers a considerable part of the profit that now goes to the commission men. It would cost little to send the wool to such a house and have it scoured ready for market. Scoured wool sells so much higher that the profits in some instances would be increased from 20 to 50 percent. Such a scouring house could be conducted in almost any good sheep raising district on the commission plan. It would pay both the farmers and the commission men. The two could agree on a fair commission for scouring the wool, and the farmers could easily keep such a house running. In fact, it would draw upon a wide neighborhood, for it would pay the growers to have their wool scoured at home on a fixed basis, and then ship it to market in this condition. As it is now, the unscoured, unwashed wool is always purchased at such low prices that there is a very wide margin of profit left for somebody to make before the wool is finally made up into cloth. There are too many middlemen who must get their pay. By disposing of a few of these the grower would receive more, and the consumer would actually be charged less for his manufactured product. A good scouring house would save washing, which is sometimes an expensive process, and also save loss in other ways. A house of this kind located right in the heart of a wool-growing country could easily calculate upon handling from 10,000,000 to 15,000,000 pounds of wool annually.—W. E. Edwards in American Cultivator.

Poultry Points.

A poultry farm is a photo of the poultryman. Low, level roosts are preferable to high, sloping ones. Plenty of fresh water placed in the shade is always in order in the poultry yards. Camphorated balls are recommended for keeping lice from the nests of laying and sitting hens. Keep the little chicks busy. If they are taught to hustle for a portion of their food they will grow fast and look thrifty. Don't let cats and dogs worry the hen with young chickens. Many of the little fellows are permanently injured by being trampled. As soon as the goslings are about feathered, put them out in a pasture with plenty of grass and water, and they will be no more bother until picking time. A quart of corn, or its equivalent, is estimated as being sufficient for 10 hens one day. But some hens eat less and some more. Besides, it is hard to make the "equivalent."

Raw corn meal should not be fed to small chicks. If it must be given, mix it with one-third shorts and bake. Give the fowls plenty of cool, fresh water and keep the drinking vessels under shade. There may not be anything in show but there is a whole lot in looks when it comes to poultry. A neat-looking egg basket is more apt to have good eggs than a dirty one, and the customer will have his eye on it, too.

Every conscientious poultry raiser will be careful not to send stale eggs to market. If the egg is doubtful do not sell it, for your neighbor to eat. Gather the eggs every day and use china nest egg. Leaving an egg for a nest egg should never be tolerated on any poultry farm.

SCIENCE AND INDUSTRY.

Ice melts at 32 degrees, water boils at 212, lead melts at 594, and the heat of a common coal fire is 1140.

The sun's surface is known to be subject to greatly increased disturbances every 11 years, known as the sunspot period. Auroral displays and disturbances of the earth's magnetism have a similar period.

In a German experiment eggs packed in various ways in June gave the following results in February: Covered with vaseline, or kept in lime water, or in potassium silicate solution, none spoiled; in wood ashes, varnished, or treated with potassium permanganate, 20 percent; painted with collodion, or with potassium silicate, 40 percent; dipped a few seconds in boiling water or alum, 50 percent; kept in salt water, all spoiled.

In a paper read recently before the Royal Meteorological Society, on "The Cyclicality of Cyclic Winds," Mr. Rupert T. Smith states that from his observations made in the neighborhood of Birmingham during the years 1874-1890, "the equinoxes do not appear to be very stormy periods, but that the greatest frequency and force of cyclonic winds occurs some two weeks before the spring equinox and some three weeks after the autumnal equinox."

A Vermont scientist has made a very extensive collection of microscopic slides of now crystals. Perfect crystals are by no means always common in snow storms. A whole winter may not yield more than a dozen opportunities to photograph complete and perfect crystals. These are most common in widespread blizzards, while local storms often produce imperfect granular forms. It is very possible that the character and extent of a storm may, eventually, be predicted by an examination of the snow, and that a new aid in weather prediction is at hand.

In science J. B. Dandeno finds that at the maximum density of water the water in the cell of a plant begins to expand while the cell wall continues to contract as cooling goes on. This contraction will extrude water into the intercellular spaces. When the freezing point is reached the water in the intercellular spaces freezes first because less dense than the contents of the cell. The crystallization outside the cell gives off latent heat, which tends to keep the cell contents from freezing for a considerable time. Finally also the cell contents may be frozen, but only after nearly all the water has been expressed into the intercellular spaces. If now the temperature be raised the ice melts first in the intercellular spaces and gives the familiar wilted appearance of a frozen plant when suddenly warmed. If, however, the temperature is very gradually raised the cell will reabsorb the water as fast as formed and no injury result. If the cell contents be completely solidified permanent injury results.

Liquid Air for Blasting.

Liquid air may be the blasting agent of the future. A paper recently read before the British Institution of Mining Engineers by A. Larsen, described some tests recently made in the Simpson tunnel with cartridges which consisted of a wrapper filled with a carbonaceous material, and placed bodily in liquid air until it was completely saturated. The cartridges were kept in the liquid, at the working face of the rock, until they were required for use, when they were lifted out, quickly placed in the shot holes and detonated with a small gun cotton primer and detonator. It was found that, owing to the rapid evaporation, the useful life of the cartridge was very short. The cartridges, which were three inches in diameter by eight inches in length, had to be fired within 15 minutes after being taken out of the liquid air; otherwise there was danger of a misfire. It was chiefly on this account that the tests were discontinued. The disruptive effects, however, were said to be comparable to those of dynamite.

The Origin of Baseball.

The origin of baseball—"our national game"—is not definitely known, but the first club organized to play it was in New York, in 1845. Singularly enough, this club, like the one first organized to promote rowing, was called "The Knickerbocker club." After 1851 other amateur baseball clubs began to organize, including the Atlantic Mutual, Union, etc. In 1857 a convention of delegates from 16 clubs in and around New York and Brooklyn was held. About 10 years later, at the annual convention of the National Association, in 1866, 202 clubs from 17 states and the District of Columbia were represented. The college baseball associations were started about 1862 or 1863. Amateur baseball throughout the Union was at its height in the years 1865, 1866 and 1867. Professional baseball was recognized in 1868, and the first games were played in 1869.—Harper's Bazar.

The Winter Months.

In this country December, January and February are called the winter months. In no country is March considered a winter month; we think that November, December and January are or used to be the winter months in England.—New York Sun.

Patented processes have been devised in Germany for converting sawdust into charcoal and other products.

Gordon Graham's Business Philosophy.

Baron Munchausen was the first traveling man, and my drummers' expense accounts still show his influence. Adam invented all the different ways in which a young man can make a fool of himself, and the college yell at the end of them is just a frill that doesn't change essentials. It's the fellow who thinks and acts for himself, and sells short when prices hit the high C and the house is standing on its hind legs yelling for more, that sits in the directors' meetings when he gets on toward forty.

Pay day is always a month off for the spendthrift, and he is never able to realize more than sixty cents on any dollar that comes to him. But a dollar is worth one hundred and six cents to a good business man, and he never spends the dollar.

If you gave some fellows a talent wrapped in a napkin to start with in business, they would swap the talent for a gold brick and lose the napkin; and there are others that you could start out with just a napkin who would set up with it in the dry goods business in a small way and then coax the other fellow's talent into it.

I always lay it down as a safe proposition that the fellow who had to break open the baby's bank for carefare toward the last of the week isn't going to be any Russell Sage when it comes to trading with the old man's money.—Saturday Evening Post.

The Bad Temper of Divers.

"One of the strange effects that diving has upon those who practice it," said a diver to the writer recently, "is the invariable bad temper felt while working at the bottom, and as this irritability passes away as soon as the surface is reached again it is only reasonable to suppose that it is caused by the unusual pressure of air inside the dress, affecting probably the lungs, and through them the brain. My experience has been that while below one may fly into the most violent passion at the merest trifle, for instance, the lifeline held too tight or too slack, too much air or too little, or some imaginary wrongdoing on the part of the tender or men above, will often cause the temper to rise. I have sometimes become so angry in a similar way that I have given the signal to pull up with the express intention of knocking the heads off the entire crew, but as the surface was reached and the weight of the air decreased, my feelings have gradually undergone a change for the better, until by the time I reached the ladder and had the face glass unscrewed I had forgotten for what I came up."—Washington Star.

A Luxurious Traveler.

Mr. Cecil Rhodes never does anything by halves. When he came over to England by the last mail from South Africa, besides other specially provided comforts, he was accompanied by his own chef, his own poultry and his own cow!—The Outlook, London.

Dinner Talk.

The London Lancet impresses an old lesson by saying man should not dine alone. It is not good to think much while eating, so the great medical authority advises conversation because "most people do not think while talking."

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The inhabitants of Ontario write more letters than those of all the rest of Canada.

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During the last summer season the accent of Mount Blanc was made by 141 tourists.

I am sure Pisco's Cure for Consumption saved my life three years ago.—MRS. THOMAS BROWN, Maple St., Norwich, N.Y., Feb. 17, 1900.

Algeria has four zones in which petroleum occurs. One of them is 125 miles long.

The Elm-Leaved Goldenrod.

It is well known that when a plant grows in shady places it is likely to have a greater leaf area than when it grows in the open sunshine. It must have a larger surface to collect the light when the latter is comparatively dim. Now most of the goldenrods live in the open fields, having rather narrow leaves; but the exquisite elm-leaved goldenrod lives in woods and copses, where the shadows are thick and direct sunshine is a fleeting thing. And so we find that this species has the broad, thin leaves of a shade-plant, leaves with well-developed stems, but otherwise so similar to those of the elm-tree as to give this goldenrod its distinctive name. But it gives a touch of color to the somber shades of the woods that we would not willingly do without.—Clarence Moores Weed, in the Woman's Home Companion.

Manufacture of Pens.

The manufacture of pens in the United States is confined to only four companies, although one might suppose there were many more. That does not include the making of gold pens, which is a separate industry, but pens of steel, brass and German silver. The steel for these pens is brought chiefly from Sheffield, England, as is the best blade steel. Many experiments have been made with steel manufactured over here, but it never has sufficiently stood the test.

English and American Patents.

The United States grants 25,000 patents a year, England only 8000, Canada grants 4000 a year.

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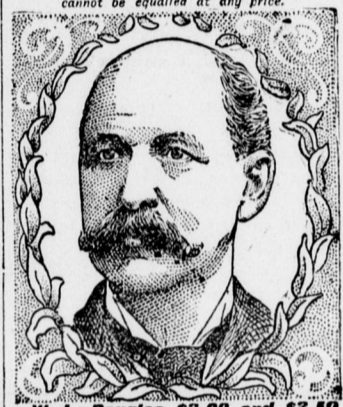
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