

## FARM AND GARDEN NOTES.

### ITEMS OF INTEREST ON AGRICULTURAL TOPICS.

**Seeding Without Grain—Thinly Planted Corn Best—The Cultivation of Corn—Some Minor Plant Diseases—The Raspberry Sawfly—Etc., Etc.**

#### Seeding Without Grain.

Experiments conducted at the New Jersey station as to the practicability of securing a good stand of grass without a nurse crop of grain showed that, where the land was in good heart, or was fertilized at the time of seeding, a good catch of grass was secured without any trouble. The tests were made in old sod, after oats and potatoes, and after oats.

#### Thinly Planted Corn Best.

A few years ago I planted a three-acre field of corn with two to four grains to the hill. After it came up, it looked very thin and everyone told me that the yield would not amount to much. By the time the corn was laid by some hills had only one stalk, but each bore a good-sized ear. This field yielded very much better than drilled corn, and other fields which had a greater number of stalks to the hill. According to experiments made at the Wisconsin station, the fields in which there was only one stalk to the hill produced 39 bushels per acre. Where there were two stalks the yield was 48 bushels, where there were four stalks 39 bushels. According to this and my own experience, the heavier yield is usually produced when each hill contains about two stalks. This will vary with the season. If the season is very favorable, most land can stand three stalks to the hill.—C. C. Beals, in New England Homestead.

#### The Cultivation of Corn.

In cultivating corn the cultivator should be set to run about three inches deep. This is deep enough to destroy the young weeds and is not deep enough to injure the young roots of the corn, as they are about eight inches deep when they first reach the middle of the row. As the corn grows the roots come nearer the surface; hence the older the corn is the shallower should be the cultivation. There is no danger of injuring the corn plants by cultivating three inches deep at any season of its growth, if it is cultivated frequently. Shallow cultivation favors the preservation of moisture, by the creation of a mulch with the loosened dirt, and thus preventing the loss by capillarity. Everyone has noticed how damp the soil is under a bunch of straw. This is not because more rain fell on the straw than elsewhere, but because evaporation was prevented by the straw. The loosened dirt acts in the same way.

#### Some Minor Plant Diseases.

In Bulletin 104 of the New York Agricultural Experiment Station (Geneva) several plant diseases of minor importance are discussed. These include the bacterial rot of onions which was so destructive in Orange County in 1898, the Baldwin fruit spot, powdery mildew on field grown cucumbers, dodder on cucumbers under glass, a leaf spot of carnations and a fungus on barley seedlings. The onion rot is of considerable importance as it causes "slippery onions," onions "weak in the neck" and onions "rotten at the base." It spreads only in wet weather, on water-soaked, weed-covered fields or in onions stored too wet. Thorough drainage and clean cultivation of fields and dry storage houses will prevent most of the damage. No cause has as yet been found for the Baldwin fruit spot; but it is not due to fungi or bacteria.

#### The Raspberry Sawfly.

When the larvae have been present any season and have not been destroyed before going into cocoons, the ground between the raspberry rows should be thoroughly cultivated late in autumn to bring the cocoons to the surface, when the larvae will be killed by cold weather. The mature insects are very small, but careful examination of the young leaves in spring will reveal the light spots above and the eggs beneath and the holes in the leaves produced by their feeding. The period of their activity is short, only about two weeks. If the infested patch is a small one, the larvae can be jarred off by striking the canes lightly with a heavy switch or a brush from a pine tree. The larvae are so small that they find it difficult to return, especially if the ground between the rows has been thoroughly cultivated.

Ordinarily, however, it is found cheapest to spray the canes with some arsenical poison, as suggested by the New York experiment station bulletin 150, but if the fruit is developing it is probably best to use hellebore, as there is some danger of spoiling the sale of fruit by spraying with arsenic when the fruit is forming. Hellebore may also be dusted on by simply mixing it with twice its weight of plaster or cheap flour. Apply in the early morning while the leaves are damp. In the experiments made at the New York station, arsenic of lime and hellebore applied with a sprayer so that both surfaces of the leaves were thoroughly drenched completely eradicated the pest. Unsprayed plants were entirely stripped of their leaves and but little fruit was developed.

#### Dampness in the Hen House.

If you must have a cold hen house, have it, but never have a damp one. In other words, a damp house is a hundred times worse than a cold house.

It is the damp house that always has ailing inmates. Colds and roup make sad havoc there. In short, there never has been and there never will be a damp hen house in which the bird will be at all satisfactory.

Sick, moping fowls never are able to do anything in the way of filling the egg basket. So, my friend, if your hen coop is not situated upon a dry site, at your earliest opportunity proceed to rectify the error. Dig out the dirt from the bottom, say a foot or two in depth, then fill in with rocks, large ones first, then smaller and smaller ones, cover top with a few inches of gravel, and then you will have a dry house, providing any outside water has a good chance to drain away.

Frequent use of dry coal ashes will serve to absorb any moisture accruing from the droppings of the birds, the coal ashes also serving to fix ammonia and therefore keep the air of the house pure and wholesome. Too often we find the coop or run where the little chicks are penned, from one cause or another, sadly damp. This will not do. Chicks, even more than hens, require dry quarters. And even ducklings and goslings in their first tender days are peculiarly susceptible to dampness.

We, as poultry keepers, must keep dampness at bay, or we shall fail of success in poultry culture.—M. Sumner Perkins, in National Rural.

#### Dealing With Heavy Soils.

Nothing is more aggravating, and often unprofitable, too, than to have a heavy muck or clay soil retain the moisture and frost so late in the spring that early plowing is out of the question. When other soils are in condition for plowing and cultivating, the heavy soil is muddy and sticky, so that it is impossible to do much with it. Of course, the advice of some would be to give up such soil, but when we consider that the heavy muck soil is often the richest, this would hardly do. What we need is some intelligent plan to improve the mechanical conditions of such heavy soils so they will be less likely to give trouble. The chief fault to be found with heavy soil is that there is not sufficient porosity in it to permit water to percolate through it. In other words, the natural drainage of the soil is poor, and artificial drainage of some kind must be resorted to.

There are several ways to accomplish this. The most sensible is to add such coarse material to it that there will be a breaking up of the sticky mass. This will sometimes effect such a cure that drains will not be necessary. But the supply of coarse material must be kept up continuously and not abandoned after one year. This would be rather expensive and unsatisfactory if it were not at the same time fertilizing and improving the soil. It is by utilizing the right kind of crops that we can improve a thick, mucky or clay soil. First of all, however, it may be necessary to dress the land with lime in order to sweeten the soil for the proposed crops. The land has the indigestion, as it were, and fermentation has made it sour so that some crops could not thrive on it; 20 or 40 bushels of water-slacked lime to each acre may first be needed to sweeten the soil so that ordinary crops will grow.

There is no better crop to raise the first year than Indian corn, which can be planted quite late in the season when the soil has dried up. The corn roots are coarse feeders and will break up the soil to a large extent, and the fall corn should be cut early, and a crop of buckwheat or winter grain of some kind should be sown, to be turned under with the plow the following spring. By adding rough plant food to the soil in the shape of manure the soil will be further improved. In plowing the subsoil should be broken up as much as possible. By cultivating each year crops that have deep roots and are coarse feeders, we keep breaking up the soil so that it has less chance to get together into thick, compact masses. There is nothing better for this than coarse manure and green crops turned under every year, plowing them down as deep as possible into the subsoil.—C. S. Walker, in American Cultivator.

#### Short and Useful Paragraphs.

Pruning is not studied by farmers as it should be.

Soil culture is the best means of warfare against weeds.

Prepare the seed-bed properly and thus have your garden started right.

When thinning out fruit always select the wormy, diseased and inferior fruit.

It might be termed a waste of the raw material to throw away good feed on a poor animal.

Make pets of all the stock on the farm and you will find they can appreciate the kindness.

Good tillage, a good rotation and liberal manuring are generally followed by a bountiful crop.

If you didn't feed the cows you wouldn't expect any milk. The same rule applies to the land.

In selecting a foundation for a flock of sheep soundness and vitality are the principal considerations.

Keeping up the fertility of the farm is a profit not always accorded to dairying and sheep raising.

Which would you rather do? Give the birds humane protection or the vegetables and plants insect protection.

The farmer with a brook or a spring is fortunate, but the one who keeps fish in either of these is a fortunate hunter.

Don't let the weeds get started. If you do there will surely be trouble ahead not only for you, but for the neighbors.

A flower garden is not a great deal

of trouble and it adds considerably to the beauty and valuation of a farmer's home.

It is claimed that washing seed corn and oats in a solution of four ounces of blue vitriol to a gallon of water will kill all smut spores.

Feed has a value and a high one at that. Isn't this a good reason for keeping only the best of stock that gives the highest returns for the food consumed.

According to statistics there has been a steady decrease in the production of fine wools since 1885. The sheep will be the best paying stock in the farm before many years have past.

Whether to raise or buy cows to replenish the dairy is a matter of opinion, but there is much about it, that if you raise your own calves you know exactly what kind of calves you have got.

Perhaps farming is not as remunerative as it was at one time, but wherever you see a farmer who keeps up to the times and uses a little scientific knowledge, you generally find a prosperous man.

Potash gives color, flavor and firmness to the fruit. No good fruit can be raised without it. In selecting a fertilizer for the orchard select one that has eight or ten per cent. of potash. This will give the best results.

#### IT WAS HIS GREATEST TREASURE.

**Modest Choice Which an American Made of a Sword.**

Somebody was telling, just the other day, of a wonderful Eastern relic, which is in the possession of an ex-Minister to Siam. It was when the ex-Minister was a full-fledged representative of the majesty of a free people that he was invited out from his legation to visit a prince, or a sultan, or some other provincial ruler under the dominion of the King of Siam. He was right royally entertained, and when the time for his departure drew near his host desired to load him down with costly presents. The American Minister refused, again and again, to take the valuable gifts passed upon him, but at last, seeing that to go away empty handed would be mortally to insult his princely host, he decided to take the smallest and least valuable of all the things shown him. He looked about the treasure room and saw hanging on one wall a perfectly plain old sword. Its scabbard was not jeweled, and its hilt was quite plain. Surely he might take so small a gift as that. He signified his desire to possess the weapon, and it was given him.

When he went back to the capital his Majesty the King expressed a royal curiosity to know what the Prince had given him. The sword was shown him. His Majesty fairly bubbled with excitement. That sword! Why, he had been trying for years and years to get possession of it. He had offered the Prince its weight, and double its weight in gold and precious stones, but the Prince had always refused to part with it. It was a historic sword, a sacred sword, and scarcely less precious to the Prince than his crown itself. It was hundreds of years old, and the King would have given his eye teeth for it.

The American had asked for something vastly more precious than any of the gorgeous jewels he had refused to accept, and Oriental politeness had granted his request. He had brought away with him something that all the power of the mighty monarch himself had not been able to obtain.

#### Old Stage Effects.

We are apt to consider that stage effects are an invention of the present century. This may be so in some cases, but many of them are very old. The lime-light is probably the most valuable accessory for modern stage effects. It was introduced some time around 1837 or 1838, and was regarded as a great curiosity. Its expense, however, prevented its being used to any extent for a long period. In 1840, intricate machinery was regularly used in religious plays for the simulation of various natural phenomena. Earthquakes always seem to have been the most pleasing and taking of effects, and we hear of them as far back as 1692, when Evelyn refers to a puppet show in which an earthquake effect was used. The old paper snow for winter effects was largely abandoned, and in France waste clippings of glove manufacturers are used instead. The white glove clippings fall better in the air than small pieces of paper, and they cling better to the scenery and to the actor's garments as they descend. The ordinary nautical effects are of considerable antiquity. Full-rigged ships were in use in Paris as far back as 1713.

#### The Proportionate Number of Churches.

In New York city, according to the report of the Charities Organization Society, there are no less than 3,356 organized religious and philanthropic agencies at work, while 1,003 churches, one for every 2,458 persons, cast their benignant shade on twenty miles of New York streets. Our other great cities do still better than New York city, and the country districts doubly better than they. St. Louis has a church every 2,800 persons; Chicago, one for every 2,081; Boston, one for every 1,600; Minneapolis, one for every 1,054, but in the United States as a whole there is one church for every 387 persons, one Protestant minister for every 800, one Christian worker for every 48, and one communicant for every 5.—Salvation.

One battleship's full supply of shot and shell costs about \$400,000.

## NOTES AND COMMENTS.

Kansas is now storing its surplus wheat and corn in the empty jails.

It seems a little strange that the golden sands at Cape Nome should be found near Greenland's icy mountains.

A cargo of American coal has been landed in Japan. A few plumbers and ice men would complete the task of reminding the young giant of the Orient that it costs money to keep up with modern institutions.

One of the most interesting features of Manila industrial life is the wonderful skill of its lapidaries and gem-setters. These are the women of the population, whose tastes and workmanship have far surpassed the powers of the men.

In three months the school attendance in Cuba has been increased from 4,000 to 80,000. This tells a story of advancement that needs no emphasizing. The American public school will do the work of modernizing the Queen of the Antilles quickly and thoroughly.

A French naturalist quoted by Popular Science News asserts that "if the world should become birdless men could not inhabit it after nine years' time, in spite of all the sprays and poisons that could be manufactured for the destruction of insects. The bugs and slugs would simply eat up all the orchards and crops in that time."

A person with a mathematical mind recently announced that in a program of twenty waltzes, four polkas and two quadrilles a dancer covers nearly twelve miles. Young women should make a note of this, so that when old fog parents advise sweeping as an exercise they can triumphantly quote the mathematician to prove that dancing excels it by far.

Now that bacteria are twice as numerous in the sweepings of streets that are sprinkled as of streets that are dry we may look forward to a far hygienic future where sprinkling carts are loaded with microbe-killers. When our streets are as scientifically clean as the floor of a modern surgical ward life will be rosier and grip will be nowhere.

The free lectures to the people of New York under the auspices of the Board of Education have been extended by the opening of three new centers. The establishment of the City Island course is a step toward the completion of a plan to supply the isolated communities in the northern part of the city with the same class of lectures enjoyed by residents of the crowded districts.

New Mexico's population is generally approximated at 250,000, mostly composed of miners. The Territory has invested in public buildings, territorial county, city and school, over \$1,500,000, or \$6 for each one of her inhabitants. She has a university, two normal schools, an agricultural college, a school of mines, a military institute, a penitentiary, an insane asylum and a capitol, which will compare with any similar institutions throughout the West.

The use of the "khaki" uniforms is like the act of the savage who greases his body and smears it with sand and earth, so that it takes the hue of the ground on which he lies, and is therefore not easily visible. That, in turn, is a mere development of the gift of color granted by nature to many beasts, birds and insects, by which they are enabled to harmonize themselves with their surroundings, either for protection or for ambush. The principles of successful warfare are the rudimentary principles of savage and brutal strategy and force.

A writer in a medical publication of the Johns-Hopkins University describes a case which, he says, "is interesting because it suggests a new operation—hepaticocholecystostenterostomy." Every one will be relieved to know that the treatment so eloquently described is only an advanced method of dealing with colic, by which it will be seen that science in its march is encumbered by the baggage it carries. Caesar called it impedimenta, which has taken a modern sense that seems appropriate in this case.

The regular soldier is expected to be a model of obedience, patience, courage; but it appears he is also a pattern as regards thrift. The statement is credited to the chief paymaster of the forces in the Philippines that sixty-five per cent. of all the money sent there to pay the regulars is either deposited with the paymaster, to be kept until the end of the soldier's enlistment, or is sent back to the United States in the form of paymaster's checks. Our Tommy Atkins is clearly not absent-minded; he does not forget home connections and obligations.

The Russian Government has a manner peculiarly its own in the meeting of emergencies. It is apt to appear drastic, but it is singularly effective. At present it is dealing with the overproduction of medical practitioners. This would be a complex question in any other civilized country. Not so in Russia, however. The Minister of Education has simply issued a decree restricting to a fixed number the admission of first-year students by the several medical faculties throughout the empire. The University of Moscow is limited to 250, Kiev to 200, Charkow to 175, Dorpat to 150, Tomsk to 120, and Kasan and Warsaw

## THE INDIAN CONGRESS.

### Cherokee Senators and Councilmen Know the Ways of the Lobbyist.

Wade Mountfort writes as follows in Ainslee's Magazine:

"The congress of the Cherokee Nation, in appearance, is an improvement over the councils of the other tribes, but it is by no means a body of very great dignity. It probably consumes more chewing tobacco per capita than any other body of lawmakers in the world. The lower house of the Cherokee Congress has forty members, and it is presided over by J. S. Davenport, a white man, who is a member of the bar at Vinita. The president of the Senate is John L. Gunter, the quarter-blood son of one of the oldest of the Cherokee families. The forty Councilmen of the lower house, when in session, occupy a room similar to the Senate chamber, and the body is not impressive of dignity, although its sessions are frequently very earnest, and some of the laws it has enacted are indeed creditable.

"The session of the council of the Cherokee and the other nations are always attended by a swarm of lobbyists. The little hotels in the capital towns present a busy scene on these occasions. The lobbyists never tire of drafting bills for claims against the United States, and offering to collect these claims for a contingent fee. The Indian, however, is usually as quick to discern an opportunity for a claim as the shrewdest lobbyist. Politicians who are familiar with the politics of the United States are more closely posted on the doings and affairs of the Congress of the United States and the departments at Washington, than some of the full blood Indians of the Cherokee tribe. Shrewd old Wolf Coon boasts that he is familiar with every bill that the United States has adopted with relation to Indian matters in the last twenty-five years.

"The Indians are very sagacious lobbyists themselves, and they understand dealing with lobbyists fully as well as the legislators of some of the States. An instance of this was shown during the term of Samuel Houston Mayes, as chief of the Cherokee. Chief Mayes submitted to the council an application from a railroad company for the right of way through the nation's lands. The council took no notice of the document, and the chief adjourned the session. When he had done this, some of the full blood senators and councilmen went to him and asked:

"Why did you not give us time to pass the franchise bill?"

"You had plenty of time," the chief replied.

"But we were waiting for the railroad company's lobbyists to see us," said the senators in chorus."

### The Art of Swimming.

Few persons know how to swim. By this statement I do not mean to imply that there is not a strong minority among the residents of a seacoast or a river or lake front who can keep their noses above water for a time, and even propel themselves along at a moderate rate of speed. But of the whole population of a country these swimmers make up only a small fraction, and even among them there are very few who are properly expert in the water. How many men who deem themselves good swimmers can keep afloat an hour with their clothes on? How many are there who do not exhaust themselves with useless movements so that they must leave the water or sink long before their power ought to give out? How many who can support themselves and another person besides in the water? Not many.

Again, how many women can swim at all? For a lover of swimming there is something pathetic in a visit to a popular seaside resort, where hundreds of women venture waist-deep into the sea, and, seizing the ropes, churn up and down, screaming partly with pleasure, partly with fear, while a dozen damsels, "good swimmers," make triumphant progress to the raft a hundred feet beyond the line of breakers.

This state of affairs is wrong. Swimming is not a difficult art. Every healthy person, man or woman, can learn, and ought to learn, to keep afloat in the water; most men and a large proportion of women can learn to sustain themselves fully clothed, even to their shoes and most persons properly trained, are able, under ordinary conditions, to save another person sinking.—Capt. Davis Dalton, in Putnam's.

### Kitchener and the Donkey.

In his book upon the Sudan campaign Winston Churchill, the war correspondent in South Africa, tells this story about Gen. Lord Kitchener:

He ordered a field telegraph to accompany the flying column to Abu Hamed.

"But," said the officer in charge, "we have no spools to unroll the wire from, no saddles to carry it; no—"

Without a word Kitchener walked to where the coils of wire lay. Some donkeys stood near by. Selecting the smallest he took the little animal's hind legs in his left hand, and put them into the coil. He lifted the wire up until it passed around the donkey's back, hanging between the fore and hind legs. He caught the loose end of the wire and smacked the donkey with the other hand. The beast moved forward, tripping and stumbling over the wire, which began to unwind.

Then, still without a word, but with a wave of the hand that said: "There's your field equipment," Kitchener walked away.