

Oh the Farm.

CARE OF POULTRY.

One dollar's worth of feed will fully provide a hen for a year, and if properly handled she should produce one brood of chicks, and double the value of her food in eggs, and be left herself to tell the tale.

There is no doubt of the profit in poultry, but like any other crop it must be handled intelligently to bring the best results.

There is a malady connected with the hen business which as yet has not been diagnosed. It is the inclination to possess all the hens on earth as soon as we become interested. To keep a large flock of hens is an art that can be acquired only by experience.

The most important factor for handling hens on the farm is the house for their accommodation. Any old shed will not do, for the reason that eggs in winter are the eggs that pay, and to assure their production the hen must be protected from the cold, because the food she consumes must go to sustain life first, heat second, fat and eggs being the consideration.

Next to the proper housing comes the secret of all success, cleanliness. Don't think for a moment that cleaning out in the fall and spring will do; the hen house must be kept as clean as the cow barn or stable. The same attention should be given to the nest box as to the main pen or crate.

Fresh earth under the roost is a perfect deodorizer, and will not fly about at the least provocation, and both the eyes of both hen and attendant, as the lime does; the earth is pleasant to handle, and can be secured at an expense. When the earth and droppings are cleaned up, they should be kept from sunshine and rain, under shelter or in barrels, until needed for deposit upon the land.

It is believed by some who don't know, that draft horses are all sluggish and slow. While there are some such, as in all breeds, there are also some as high-spirited as thoroughbred. We well remember one mettle, rather nervous colt, that at first harnessing could not be induced to leave the stable until a quick move rattled the harness; then his conclusion to go was so sudden that no one went with him.

The value of any horse is increased or lessened by his education or training. Many colts are ruined in "breaking." Many are never broken at all. There are three classes of men who "break" colts.

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What, asked the man who had been away for a long time, ever became of that homely Griggs girl - Fanny Griggs, you know—the one with a face like a dream that makes you glad it wasn't so when you wake up? Fanny Griggs replied the old friend: "Oh, I married her. Come in, Fanny, here's somebody wants to see you."

Where limited space is available in cellar or cave, the vinegar will keep just as well, if not better, if the barrels are buried. The only difficulty is ventilation. This can be easily provided for. Dig a trench so that the barrel will rest in it with the part containing the bung hole only a little above the surface of the ground.

The latest use to which bicycles have been applied is tiger hunting. A paper published in British India gives an account of this startling innovation. A pig, it appears, was carried away by a tiger from a coffee estate at Castlewood in the State of Johore.

Foreman, quarry gang—It's dead news Oh' ho' fur yes, Mrs. McGarraghty. Y'r husband's new watch is broken. It was a foine watch, an' it's smashed all to pieces.

Foreman—A tea ton rock fell on 'im. Mrs. McG.—Dearie me! How did that happen? Foreman—A tea ton rock fell on 'im.

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Slack a June farmer because he never gets started at outdoor work until a month or so after the others.

Jim Jones is a jolly fellow, and since he came back from the Klondike he says he is living on the "interest of what he spent," thinks the man who has pluck enough to find gold in the far north will find enough of it here with less risk, and he proposes to push the farm this year for all it's worth.

She—I can sympathize with you. I was married once myself. He - But you weren't married to a woman.

He—Man has a perfect organ of speech. She—Well, so has woman. He—Oh, no, she hasn't. Here is made without stops.

Oh! well, remarked Missam, after his fifteenth unsuccessful shot at the birds: Live and let live is my motto. I am writing for posterity, said the poet. And I am taking in plain sewing for a living, said the poet's soulless wife.

A Term of Comparison.—She—I wish you wouldn't call me dearest, Henry! He—It implies that there are others.

The Enthusiast—Beautiful! Exquisite! Her voice has matchless timber! The Realist—Timber! It sounds to me like a whole sawmill.

The Cook—I do be thinkin' if we women should vote. The Chambermaid—Shure, ye forgot ye'd have to live in one place for thirty days.

Is that young woman quick at repartee? I guess she must be, answered Miss Cayenne. She doesn't seem to have a friend in the world.

Isn't it odd that whenever Mr. Dinmore makes a present it always consists of gloves? said Miss Goutherpe. He wants his presents to be always on hand, replied Miss Witterforce.

Hit the target if you can; if you miss it be a man. Of your mark or gun be mute—Frankly own you couldn't shoot.

Ralph—Suppose a fellow's best girl gets mad when he asks for a kiss? Curtis—Take it without asking, Ralph. Suppose she gets mad then? Curtis—Then he's got some other fellow's girl.

Boy—You are going to fight against the English, aren't you, Capt. Brown? Capt. Brown, indignantly—Fight the English! What on earth put that into your head? Boy—Why, daddy said you were a horrid Boer!

Irate Female—See here, do you mean to tell me that I have such an ugly nose as that? Photographer—But my apparatus cannot see, madame. Irate Female—Then, for goodness' sake go and get one that can.

They say, he said, that it is no longer fashionable to attach to wedding presents the cards of the people who give them. Then, she declared, "I'm going to take back that \$50 picture I intended to give Nell Watterson and get her a solid silver teaspoon."

Lady—I'll take the first volume of the Browning love letters. Attendant—That lady going out the door has just taken the first volume. Lady, much irritated—She has! Well, give me the second volume. I'll get even with her by keeping it an awfully long time.

BACTERIA HELP FARMERS, RECENT DISCOVERIES AS TO THE NUTRITION OF THE PLANTS.

The Needed Nitrogen supplied in the Soil By Colonies of Minute Organisms—Methods Found of Attracting These Colonies—Experiments at Lord Rosebery's Farm.

Science is learning more and more about the important part for good or evil played in the world's economy by those insignificant organisms, bacilli and bacteria. Some interesting experiments in scientific farming have been in progress recently at Lord Rosebery's Scottish estate, Dalmeny Park, under the direction of John Hunter, F. I. C., F. C. S., to determine the part which bacteria play in the nutrition of plant life and the best methods of promoting plant growth.

The experiments were begun in 1895 and were the outcome of observations upon plant life which Mr. Hunter and Prof. McAlpine began about eighteen years ago when they were both lecturers in the Edinburgh agricultural curriculum. Mr. Hunter was a chemical analyst and lecturer on agricultural chemistry, and brewing science and Prof. McAlpine was lecturer on botany and botanical adviser to the Highland and Agricultural Society of Scotland.

Mr. Hunter's researches into the mysteries of the fermentation of beer naturally turned his attention to the importance in such chemical processes of having present only the proper forms of actuating organisms and when he and Prof. McAlpine discovered that the nodules on the roots of leguminous plants were the homes of colonies of bacteria it struck them that it might be as important to cultivate in soils the right crops of soil bacteria as it is to have the right ferments in beer. By means of a careful

they were able to demonstrate that the bacteria of the root nodules possessed the power of absorbing free nitrogen from the air fixing it and rendering it available for the nutrition of the plant. The importance of this discovery lay in the fact that whereas plant life absorbs large quantities of nitrogenous products from the soil and these are carried away in the crops and lost, they are the most difficult and costly of the soil elements to replace.

The atmospheric air contains about three parts out of four of nitrogen, but science has not yet found an artificial way of catching and fixing it, although many persons have expended much time and money in the search. The nitrate beds of South America and the ammoniacal products of the coal gas retort are the chief sources of the world's supply of nitrates for agricultural use outside of the barnyard manure bed and these have not met the losses of the fields. Millions of acres of lands have gone barren for lack of nitrogenous manuring, when all the other elements of soil life were present in their soil.

Could bacteria be set at work making nitrates the great problem of fertilization would be practically solved. At their first discoveries, Mr. Hunter and Prof. McAlpine proceeded to carry out an investigation regarding the nitrifying bacteria. They found that there were several distinct sets of these organisms, and succeeded in isolating and cultivating a number of them. These did not all produce nitrates in the same way or through the same process, some of them being denominated nitrous germs by the investigators, while others were called nitrate germs. The former did the nitrification under ordinary conditions, but the latter could not induce the organisms to produce nitrates in any of the ordinary mediums of cultivation.

Upon the addition of lime in the form of a dust, that the latter oxidized them, they found that the bacteria produced nitrates. The practical application of these observations appeared soon in their lectures. They denounced the plan then prevalent with many farmers of applying heavy dressings of from four to six tons to the acre of hot lime, declaring that the caustic lime

KILLED THE USEFUL BACTERIA in the soil, and they recommended in its place an annual or biennial dressing of lime compost or carbonate of lime to the surface soil where it would aid the bacteria to produce the needed nitrates.

They also found that these lime compounds in the surface soil served a further important purpose by preventing the soluble silicates from being taken up by the roots of the plants and thus making the stalks of grain hard, brittle and lacking in feed qualities. Their teachings met with much opposition, and it was not until 1895 that Mr. Hunter got a chance to put them to the test of practical experience. A Mr. Drysdale an old pupil of Mr. Hunter's, had become land agent at Dalmeny Park, and began some experiments on his own hook, and finding these satisfactory, he interested Lord Rosebery and in the spring of 1895 a well equipped laboratory was fitted up and Mr. Hunter was put in charge of the work. Part of the station was devoted to testing the relative productiveness of different kinds of grain, potatoes and other crops, part to bacteriological research and the remainder was worked as a miniature farm on the four-course rotation, each section being subdivided into sixteen plots, which were all differently manured on a regular system.

In the first season the beneficial results of a small dressing of ground lime were so marked that the system of applying to every field on the farm of an annual dressing of four

hundred weight of lime was begun, and this has been continued ever since. At first this was applied in a compost form, but it was found that it could be applied hot when the land was being worked, as the quantity was not enough to kill the bacteria, and it was rapidly converted into the carbonate of lime in the soil. The lime used was burned shells, mechanically ground to a powder. Besides the good results thus produced by stimulating the production thus limed the crops were much better where the sulphate of ammonia had been used than on land supplied with nitrate of soda. The experiments have also emphasized the

IMPORTANCE OF POTASH in the soil for every crop, and particularly for the potato and other root-crops, and for the leguminous plants. With a moderate dressing of farmyard manure, supplemented with four hundred weight of ground lime, applied at the time of working the land, the soil was the great and indeed the only agents employed. It is now a proved scientific fact that the decomposition of organic matter in the soil due to bacterial action—the action of the various groups of soil organisms.

It is also a proved fact that the wart-like excrescences on the roots of leguminous plants—clovers, beans, peas, vetches, etc.—are the camping grounds of myriads of bacteria which possess the property of being able to absorb the free nitrogen of the atmosphere, and render it available for the use of the plant. Bacteriological science has also proved that caustic lime will destroy the nitrifying and other advantageous soil organisms, where the carbonate of lime, such as is found in lime compost, is highly beneficial to these advantageous soil organisms, and in fact a due proportion of lime compounds in the surface soil, where the organisms are found in greatest numbers and in greatest activity is absolutely essential to the due discharge of their functions. The bringing about, therefore, in the soil of those conditions which favor the development and action of the nitrifying and other advantageous organisms is the great aim and end of scientific manuring, for the farmyard and other manures applied to the soil are got taken up directly by the plants, but go in the first place to feed crops of soil bacteria, which in turn provide the highly elaborated materials to be absorbed by the roots of the plant."

KAFFIR AND HIS BRIDE. His Novel Method of Moving and His Life of Ease When Married.

The Kaffir who works in the gold mines of Johannesburg or the diamond fields of Kimberley receives at a week and his board. There are thousands of him in peace time in the two towns named. Generally he contracts to work for a certain number of years, usually five, and as a rule, labors faithfully, knowing that he is laying the foundation of his fortune and future ease.

When the stipulated time expires he buys a little tin box, in which he puts a store of carefully-saved money, and resumes his native name. At the mine he may have been known as "Tin Can," "Shilling," or anything else that suited the whim of the foreman when he entered him on the pay roll. Now the "boy" resumes the patronymic his father gave him, and returns to his native home—Basutoland, or Swaziland it may be.

There, with the gold he earned from the white man, he buys cattle meanwhile looking out for a likely bride. Having made that important discovery, ready for use has just been heard of, he bargains unromantically for her. He may offer the stern parent four oxen; the old man will probably insist on more, and usually gets his own way. The little transaction completed, the dusky wooer calls upon his bride-to-be. Without uttering a word he lights a candle and immediately takes his leave. After an interval he returns. If the candle is still burning it means acceptance; if not, rejection. In the former case, the bridegroom after the marriage leads a life of ease; never another stroke of work does he do.

NEW COLT GUN. In view of England's recent exportation of the new quick-firing Colt gun to the Cape an interesting series of experiments for testing the time in which the destructive weapon can be taken to pieces and reconstructed ready for use has just been held in London before a large company of interested experts, an engineer managing to accomplish the feat in six extraordinary time of 1 minute 39 seconds. The hours do not possess special merit of this gun, which only weighs 40 pounds and fires between 300 and 400 shots per minute. The range of the gun is nearly two miles.

HER POINT OF VIEW. Darling, exclaimed the happy husband, after the minister had pronounced them one, I am not worthy of your love. Of course you're not, she replied, but at my age a girl can't afford to be even an opportunity like this go by.

REASONABLE SUPPOSITION. As I understand it, said Cumsio, oleomargarine is made of beef fat. You are undoubtedly right, replied Cawker. I should think that the manufacturers would make it of goat fat. Why? Because the goat is a natural butter.

Young Folks.

A LITTLE HOUSEMAID. Wanted—a little housemaid. Just to help mamma to-day; Hair tucked neatly in a braid, Aproned, capped, and smiling gay— Here she comes—as prompt and neat As a household fairy sweet!

Chairs in every round and chink Shall be dusted perfectly; Hearth swept clean before you think Baby's scattered tops will be Quickly put away in place By this fairy household grace. Then she has her wages paid— Promptly, every penny, too— Trusty, winsome, little maid! She gets paid in coin so true— Praises, kisses, loving words, Till she's happy as the birds!

TWO GIRLS. Who does not enjoy looking at a beautiful landscape, a beautiful flower, a beautiful picture? Who does not like to see a beautiful face, especially if its possessor has a beautiful soul as well?

A beautiful girl should be glad and thankful, and use her God-given gift to increase the happiness of her kindred and companions, should use it so that people may see God-likeness shining through her face.

The beautiful girl does not always do this. It is a pity that she does not. But there are at least half a dozen ordinary or plain-looking girls in the world to one that is really handsome. Sometimes these girls feel very sensitive and make themselves and everybody about them unhappy because they are not a "bit good looking."

I knew one girl who took a common-sense view of the matter, and said she was thankful she was not "so homely as to attract attention in a crowd."

The advantages are by no means all on the side of the pretty girl. Not infrequently the plain girl has the better mind, not infrequently she has qualities far more valuable than beauty alone. I knew twin sisters years ago, Margery was pretty, but Marian was plain. Their wise mother dressed them exactly alike from babyhood, exercising great care to select colors and fashions that were becoming to Marian for Margery looked well in anything.

Marian was the brighter of the two and when they were old enough to go to school she always had well-prepared lessons. As she was kindesthearted and thoughtful she was a favorite both with teachers and pupils. Their mother was just; as she was careful concerning Marian's dress, she also never grieved. She was successful in keeping in the class with Marian.

Margery was witty, as well as pretty; and, of course, was admired. As they grew older each girl had her regular work at home; but whenever company came Margery would take advantage and "slip out" of all she could, while Marian quietly did her own work and that which Margery left undone. She was so thoroughly trustworthy and reliable that he father once remarked, "If you have anything you are very particular to have done, give it to Marian; she will never fail you."

When the twins were about seventeen years old, Margery said, "I don't see why we must dress just alike, there is a real pretty dress that looks well on me; I'm tired of going without things just because they are not becoming to Marian."

Sometimes mothers think best to let daughters have their own way and learn the lesson that follows. The mother of the twins so decided in this case, and Margery was allowed to select her own clothing.

It wasn't long before she had another grievance. She wanted to go with girls a little older than herself, those who could "help her along," when she was out in company. Poor Marian certainly did blunder sometimes, and Margery was very much discomfited on those occasions, and found fault with Marian afterwards. Of course Marian felt it keenly, and tried her best not to make mistakes. She did not, however, allow herself to become sullen and envious; but improved her opportunities to add to her knowledge and usefulness and to deserve friends. And she succeeded. As time went on the kindness in her nature was written upon her face and she was better looking than Margery, for vanity and hatefulness had left their mark upon her.

Just before the twins were twenty years old their oldest sister was married. Marian had raised a lot of chickens that summer and whatever they sold for was to be hers. She insisted on furnishing the chickens for the wedding feast.

Upon the approach of cold weather the married sister, who had not forgotten this act of generosity, said to her husband, "Marian will need a new hat this winter, I would like to give her one."

and he was handicapped from the beginning, and had not sufficient force of character to overcome his temptations. Soon after her marriage Margery discovered that he was intemperate. She was so proud-spirited, however, she concealed the fact from her father's family as long as she could.

Her husband was poor as well as weak, and for a time they were obliged to live with his parents, and the treatment she received from the tyrannical father and silly mother was very humiliating.

After a time they managed to live by themselves in a very humble way, and Margery took in washing to help eke out a living. Had she been asked to work one-half as hard in her father's house as she worked now, she would have considered herself the most abused person in the world.

Marian lived with her father and mother, making home bright for them, helping her sister look after the children, doing little kind deeds for her neighbors, helping in the church and Sunday-school work—always busy, always happy in helping others—when one day in a good, true man, quite unexpectedly her father asked her to become his wife.

He had been quietly studying her character for a long time, and he did as the men who make the best husbands do.

Instead of seeking one who had been admired by everybody and perhaps had half a dozen "love affairs," a really good man is looking for a wife who is modest and sensible, and he usually finds them in some quiet, sensible girl, rich in mind and heart. Such a man has prepared himself to make a good husband and he gives to his wife all he asks for. With him there are not two standards, one for a man and another for a woman. He would not marry a woman who used tobacco or drank wine, neither will he tolerate it in himself. His past record must be clean in every way as hers; nothing less will satisfy his sense of justice.

Such a man asked Marian to share his life and she, recognizing his worth, gave him her love and in course of time became his wife.

From a boy he had laid aside a portion of his earnings and so was able to take Marian to a modest home of their own. It was amid beautiful surroundings, among neighbors who were people of culture and refinement, within easy reach of good churches, good libraries and art museums.

Marian had been a home-maker and her husband thoroughly appreciated her efforts. He thoroughly appreciated her in every way, and she was heard to remark, "My wife's mother is a very fine woman, an exceptionally fine woman; and my wife is just like her."

This was years ago. Margery and Marian still live in the same house, but Margery has long since been punished for the sins of her youth. Marian is still enjoying the rewards of right living. The natural consequence of their doings abide with them both.

LONELY NATIONS. People Who See Strangers But Once or Twice in a Life Time.

Perhaps the most isolated tribe of people in the world is the Tshuktschi, a people occupying the northern portion of the peninsula of Kamshatka and the country northward toward Behring Straits.

These people are practically independent of Russia, which appears to have reasons of her own for letting them alone. They have practically no communication with the outside world and have only been visited two or three times—the last time by Major de Windt, on his journey through Siberia.

The inhabitants of the New Siberian Islands are also practically alone on earth, for they can only communicate with the mainland, and therefore with the rest of the world, once a year, and a succession of bad seasons isolates great Central African groups, if they then the forests. The pigmies of the Congo can be called a tribe, but are also a people apart. For years their existence was little more than legendary, and only two expeditions commanded by white men have ever penetrated into their remote.

CORRESPONDENCE CLASS. It seems a very strange fact that in these days of higher education for both men and women any woman seeking a means of earning a living should be able to make an excellent income teaching people how to write their letters properly. And yet such is the case, and the woman in question not only makes a fair living, but has more to do sometimes than she can attend to. According to the woman herself it came about like this: "I was hard pressed at one time for some way of earning an honest penny, and I had thought and thought of how I might do it, and there was no tangible results to be obtained, seemingly. One day a girl came to see me, and in the course of conversation said: 'Miss B., I would give anything in the world to be able to write as well as you do. You never seem to be fazed by any complication. You always write the proper thing in the right place. Do you know, I wish you were poor, and I would give you to teach me your art.' 'My dear,' I cried, 'I am poor, and at my wife's and to get some way of making money. You have put an idea into my head, and you may help me to make a beginning.' Let us form a 'correspondence class.' It was rather uphill work at first, but after the first class was formed another soon followed, until I have as many as 12 or 15 going at once. I find that a class is most beneficial, as the pupils correspond among themselves, and, by reason of their numbers, provide a greater variety of subjects. 'It does not necessarily follow that a girl is unintelligent or badly educated who is a poor correspondent. His gift comes naturally to some, while to others it is denied, and these latter unfortunates would do better to cultivate it than to be indifferent to their proficiency in the art of letter writing.'

JACO Medicine YESTERDAY, 1 KIDNEY 878

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Miss Myrtle last week with Miss Grace was the guest i Marshall, durin Cottage pray Maginiss on W Mr. John Kij at the school m Mrs. Peter spent Xmas wil

A baby boy a Mr. and Mrs. The Royal annual oyster evening and re Mrs. C. Chut Grand Rapids t with her sister,

Itching. Mr. W. G. P Hotel, 36 Welling says:—"While liv terrible shap w piles, I tried sere and was burnt an by their treatme spending a mint i Since coming to T Chase's Ointment, have not been trou shape or form sinc

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CAS For Infant

One dose of Milk headache.

One dose of Milk headache.