

The Ontario Agricultural Gazette

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Ontario Agricultural College.

Announcements concerning the College work will be published weekly under this head.

FEEDING THE HEN FOR EGG PRODUCTION.

By L. G. JARVIS, Manager and Lecturer Poultry Department.

When you wish hens to lay, you must, of course, be prepared to furnish them with the material wherewith to make eggs. They must be comfortably housed and given plenty of opportunity for exercise. They must, in fact, be compelled to work, and work hard for their food. How this work is to be done must depend on circumstances, but work they must in order that they may be in good condition for laying. Exercise is just as necessary as food in this direction. Unless they work they will grow fat, and this condition is not conducive to egg production. Too much stress cannot be laid on this. To have your hens in the best condition for laying, let your motto be, work, and make the hens adopt that motto. To do this all grain food should be thrown or scattered among chaff or cut straw on the scratching pen floor.

To obtain an abundant supply of eggs, as well as exercise they must have a variety of food, which should include meat bone, vegetable food, some green and some boiled, mixed with the soft food occasionally in the morning. Do not use any condition powders or drugs of any kind, but plenty of good, clean wheat, buckwheat, barley, oats and corn. A mixture of ground oats and barley, equal weights, with their weight of bran added, and the whole moistened with milk, sweet or sour, makes up the morning meal. To this add boiled vegetables two or three times a week, or cut clover hay steamed, when the vegetables are not used. Give skim milk for drink with a supply of good, pure water. Never use musty or impure food of any kind, as it is injurious to the health of the fowls, and it will also impart a bad flavor to the eggs. The object of feeding green food is to improve and keep in order the digestive organs, thereby increasing their power to assimilate more of the heavier foods which are necessary for egg production.

Fowls must be comfortable at night, as nothing retards the process of egg formation so much as worry and discomfort. Their perches should never be any higher than two feet from the floor; size of perch, 3x3, rounded at top. They must also be kept free from vermin. I find nothing better as a preventive from vermin than using kerosene oil on their perches, and occasionally in their nest boxes, and sulphur and insect powder in their dust baths. It is impossible to give full directions for caring for poultry, or lay down a set of hard and fast rules for everybody's guidance, as circumstances alter cases in this as in everything else. Some experience is needed, and that of the kind which can only be acquired by personal observation and practice. But there are some

rules which are good at all times, a few of which I give below, especially directed to beginners:

- (1) Select the best breed or breeds best adapted to your requirements and locality.
- (2) Provide them with clean, comfortable, dry quarters.
- (3) Admit plenty of sunlight into their feeding pens.
- (4) Provide as varied a diet as possible.
- (5) Do not feed too often or too much at a time.
- (6) Always supply plenty of clean, hard water.
- (7) Keep everything clean and avoid vermin.
- (8) Never allow stagnant water to remain where fowls can get at it. Much disease is contracted in this way.
- (9) Never keep hens for egg production after their second year unless they have proved excellent layers, when it would be advisable to breed from them.
- (10) Never allow a male bird with the laying stock after you are through breeding.

EXPERIMENTS WITH LUCERNE HAY.

By R. HARCOURT, B.S.A., Assistant Chemist.

With the object of determining, if possible, the best time to cut Lucerne clover to obtain the maximum amount of digestible matter, we had, during the summer of 1897, three cuttings of clover made at different stages of ripeness. These cuttings were carefully cured as hay and the fed to a shearing wether to determine the digestibility.

The first cutting was made when the blossoms were just appearing; the second, eleven days later, when the plants had nearly reached full bloom; the third, thirteen days later when most of the blossom had fallen. There was an increase in dry matter until full bloom was reached, after which there was a decrease, which can be at least partly accounted for by the large number of leaves which had fallen previous to the third cutting. Not only was there a decrease in dry matter as the plants matured, but the percentages of the most valuable food constituents also decreased as shown by the following table:

Percentage Composition

	Fat.	Protein	Nitrogen Free Extract	Fibre.	Ash	Amides.
First cutting	4.09	20.12	37.88	28.47	5.51	3.73
Second cutting	2.89	15.54	42.90	31.57	7.08	4.51
Third cutting	1.98	13.78	37.54	40.46	6.22	2.88

It will be noticed that as the plant matures the percentage of protein decreases, while the percentage of crude fibre increases. The protein is the most valuable constituent of the plant for food, and the fibre that which is of the least value. It must follow that Lucerne deteriorates as it matures.

It is a matter of every day experience that only a part of the food eaten is actually made use of by the animal. It is, therefore, of importance to have a knowledge, not only of the chemical composition of the Lucerne but also of

the amounts of the various nutrients which are capable of being assimilated. Consequently a digestion experiment was made with each cutting, the results of which are given below:

Pounds of each Constituent Digested per 100 Pounds Fed.

	Dry Matter.	Protein	Fat.	Nitrogen Free Extract.	Fibre.
First cutting	60.62	28.97	71.49	70.63	37.11
Second cutting	59.47	20.78	41.69	70.50	50.39
Third cutting	49.38	17.68	48.02	61.71	36.45

It must be borne in mind that these figures are the results of single digestion experiments, and for that reason too much stress should not be put upon them. At the same time they indicate clearly that there is a deterioration in digestibility as well as in composition as the plant matures.

Using these digestive co-efficients and the weight of dry matter cut from the several plots we get the following as the pounds of dry matter digested per acre: 1st cutting 1,932 lbs., 2nd cutting 2,271 lbs., 3rd cutting 1,654 lbs. These figures indicate that the maximum amount of digestible matter is obtained when the plant has nearly reached full bloom, and that there is a very rapid deterioration from that time on.

Farmers' Institute Department.

Reports concerning the work of the Farmers' Institutes in Ontario will be published weekly under this head; also papers prepared for this department by Institute workers. Secretaries and officers having announcements to make are invited to send full particulars to the Superintendent.

The following note has been received from C. A. Zavitz, B.S.A., delegate to Division I.

Since starting out on our Institute trip Mr. Thompson and I have attended every session for which we were advertised. So far, we have attended twenty-two sessions, and have ten more to attend. On the whole the meetings have been large, lively, and interesting. At some places the Institute has done well in mixing in local addresses, while at others no local papers were given. I must say, however, that the discussions have been good throughout. The best meetings have been held in those places where the Institute work is the best known. In several of the afternoon meetings there was not sufficient seating capacity for those in attendance, and in the evening meetings some could not get entrance in the halls owing to lack of room.

THE DIGNITY OF WORK.

By Mrs. R. C. Tye.

"Work! work! work!" to the farmer, his wife, daughters, or sons must be no dreaded word. It is the greatest mistake, though we are often inclined to think otherwise, that a great scarcity of work would bring happiness. The decree to earn our bread by the sweat of the brow was not the worst but the best, in our present

state, for God ever seeks man's best interest. Therefore let us be of those who are determined to do something useful, that whatever may be prepared for us hereafter or happen to us here, we will at least deserve the food God gives by earning it honorably, and that, however fallen from the purity or far from the peace of Eden, we will carry out the duty of human "dominion," and dress and keep the wilderness, though we may no more dress and keep "the garden."

A young lord was once visiting at a friend's in one of the large cities of this country. After being there some time his friend asked him how he liked the country. "Oh, very well, but I notice you have not many gentlemen." "What is your definition of a gentleman?" asked his host. "Why, one who has no work to do." "Oh, we have plenty of them, but here we do not call them 'gentlemen,' we call them 'tramps.'" I honor our young and stalwart Canadian farmers, who, though toilers, can be gentlemen, and especially would I offer to the veterans my highest tribute of respect.

I do not undervalue recreations for pleasure, but that we should take pleasure in our work also. Generally we are under the impression that a man's duties are public, a woman's private. But this is not altogether so. A man has a private duty relating to his home, and a public work or duty, which is the expansion of the other, relating to the state. So a woman has a private duty relating to her own home, and a public work or duty. Now, a man's work for a home is to secure its maintenance, progress and defence; the woman's to secure its order, comfort and loveliness. These duties are to be expanded into public work by both man and woman, but there is no arbitrary law in reference to these duties. A man may seek to make his home lovely; a woman may seek its maintenance and progress. These gentlemen (the speakers) do not come here merely to play a harp for us to dance to. No; what they tell us means hard and painstaking work. If we think new methods will bring a surcease of toil, we are much mistaken. Many of the new ways of working involve more labor than the careless habits they are intended to supersede, but it is because of the results brought about by the better methods that they are so insisted upon, for we require the best results obtainable in handling farm produce, in order to secure the maintenance and progress of our homes and nation, for on agriculture a nation's welfare largely depends. The careful experiments and intelligent application of what has proved to be the best, has brought about a much-needed change in many things connected with farm life. But all have not yet learned. Take, for example, buttermaking. I fancy our merchants could tell us there is yet a great difference in the samples brought to them. Yes, as much as there is in a recitation given by a cultured elocutionist and one given by the ordinary school-boy.

*Paper read at a Farmers' Institute meeting in Haysville, Waterloo County.