Efficient Farming

SIMPLE RULES FOR CULLING.

We know that is every flock that has been laying heavily throughout the winter and spring the production begins to drop off quite materially in July.

Among well cared for hens this falling off in production is due to one reason only, and that is that the naturally poor birds, the nonproducers, quit laying early, but the naturally heavy-laying hens keep right on laying throughout the summer and into the early fall.

The problem of culling is to eliminate from the flock these poorer birds as they stop laying during the summer months.

The problem of culling simply resolves itself down to one question, is she or isn't she laying?

It has been found that the appearance of the hen is closely influenced by egg production. The birds change their appearance very materially when they are in heavy-laying condition, as against their periods of nonlaying, so all we have to do then in order to determine the cull birds is to determine the appearance of those external characters which indicate non-production and production.

The art of culling is simple, but if one wishes to go into it and make a very careful study, it is possible to predict with great accuracy, not only whether a hen is laying or not, but how she has been laying, how long since she stopped laying, about how many eggs she has laid and about how long she will continue to lay.

These more technical problems, however, require long study and experience. To the every-day poultry keeper, certain simple rules and relations are all that are necessary.

By far the simplest character to study in culling is that of the comb. When the ovaries are active and eggs are being produced in abundance the comb is large, swollen, bright red in color, warm to the touch and has a tendency to stand erect.

This is due to the large quantity of blood which is circulating through it.

When, however, ovarian activity ceases, the comb shrinks rapidly in size, it becomes cold and dry to the touch and it becomes shrunken and covered with a whitish deposit, which is dead skin tissue.

So, if you are looking to eliminate the culls, look first at their combs. Those which have the small, dry, shrunken, thin, cold combs, are surely not laying.

All pullets as they are coming into maturity, if they are of the yellow-skinned and yellow-shanked variety, and have been well grown, have an abundance of yellow pigment on their bodies. This is evidenced in the beak, in the skin color, in the shank color, and, in the white ear-lobed varieties, in the ear lobe itself.

As this pullet comes into laying condition and begins to produce eggs rapidly, it has been carefully observed that this yellow color disappears first from the skin, especially in the vicinity of the vent, then from the ear lobes. At the same time it disappears from the flesh immediately around the eye ring and then gradually it disappears from the beak. Lastly it recedes from the shanks and after months of heavy laying the shanks will be absolutely free from any yellow pigment. Just as soon as the bird stops laying, color again appears in these sections. First it appears in the vicinity of the vent, then in the ear lobes and eye ring, followed quickly by the return of the color to the beak and finally, after a few weeks' rest, the shanks will begin to take on their rich yellow color again.

The degree of pigmentation can be used then as direct evidence in culling. If the vent and ear lobes are bleached and white, the bird is in all probability laying.

If, however, the vent is surrounded by yellow skin and the ear lobes are yellow in the white ear-lobed varieties and the beak and shanks yellow, the bird is resting and has been resting for some time.

So, use the degree of the yellow pigment in these sections then, as an indication first of present laying and also of past performance.

One of the best evidences of laying or nonlaying is the condition of the vent. In periods of reproduction the vent is much enlarged. It is soft, moist and oval in shape, whereas in periods of dormancy or nonproduction the vent is shrunken, the skin is hard-layered with fat, it represents more of a circular shape and is dry.

Just take a couple of birds, of which you think one is laying and one not laying, and examine the vent carefully to see how pronounced this difference is.

When eggs are being produced rapidly, the abdominal section of the bird's body is enlarged. It is soft and pliable to the touch. There is a considerable spread between the pubic bones or the lower thin points of the pelvic arch. There is considerable distance between these pelvic bones and the rear of the keel. The skin is soft to the touch.

When any bird ceases to lay, the ovaries become contracted and inactive, the abdominal section seems to shrink and shrivel. The skin becomes dry, thick and hard.

Just lay your hand on the abdomen of a heavy-laying hen and with the tips of the fingers feel the looseness and pliability of this section, and then compare the same condition in the nonlayer, and you can feel what you cannot see in the difference between a layer and a nonlayer.

The heavy-laying hen along in the summer will have all of her old feathers intact. She will show no pin feathers or the appearance of new plumage. The old feathers will be dry and rough to the touch. They will be soiled and dirty. Many of them may be broken off, especially around the top of the head and the tips of the tail feathers.

A bird with this old worn plumage with no appearance of new feathers, is in all probability laying heavily at that time.

But if you find a bird that is molting and its body is covered with pin feathers and she has grown in any new feathers, especially on the body or wings, she has rested a considerable time while these new feathers were being grown, or she has quit for the summer. In all probability the latter is true.

The average hen does not change her plumage and lay at the same time. There may be exceptions to this rule, but they usually occur in the case of late molting hens in the fall.

After the Strawberry Harvest.

In Ontario most strawberry patches are kept in fruiting two years. The condition of the patch after the first crop, with the plants crowded closely together, the ground weedy and packed by pickers, calls for some system of renovation or cleaning out.

The renovation or cleaning up of the patch is merely to allow for a system of cultivation and fertilization which will build it up for the next summer's crop. The quantity and quality of this crop depends largely on the cultivation and fertilization following renovation as will be shown later.

One of the best methods of handling the patch, after harvest, is to mow the leaves with a scythe or mower and rake them, together with straw or other covering material which may have been used as a mulch, off the patch. This is burned, but if the mulch is to be used a second year it is raked off before the leaves are cut. In the latter process the crowns of the plants should not be injured. To reduce the number of plants the rows have all except a narrow margin on one side plowed away. This is more satisfactory than plowing a furrow away from each side of the row because the latter method leaves the old plants to reform the patch rather than the younger vigorous plants on the outer edges of the row.

Following plowing the ground is worked down and constant cultivation kept up until fall. In the colder districts it is advisable to cover the plants after the ground freezes with a mulch of straw or strawy manure. This is raked between the rows in the spring, helping to conserve moisture and keep the fruit clean.

It has been shown that the buds which produce the fruit clusters of strawberries are formed in the late summer and early fall preceding the crop. Thus it follows that any practice which will help to strengthen the plants and aid the formation of these buds will increase the next year's crop. It is evident then as before mentioned that the time to get this effect will be after the renovation or with a new patch from July or August on. This does not mean that the new or old patch is to be neglected earlier in the season but to stress the need of constant later cultivation and point out that fertilizers to have any effect on the crop must be available the fall preceding. As far as practical experience or experimental evidence goes no effect has been secured from spring applications of fertilizer, although until recently many thought that the spring treatment of the patch largely influenced that year's crop.—D. A. Kimball, O. A. College.

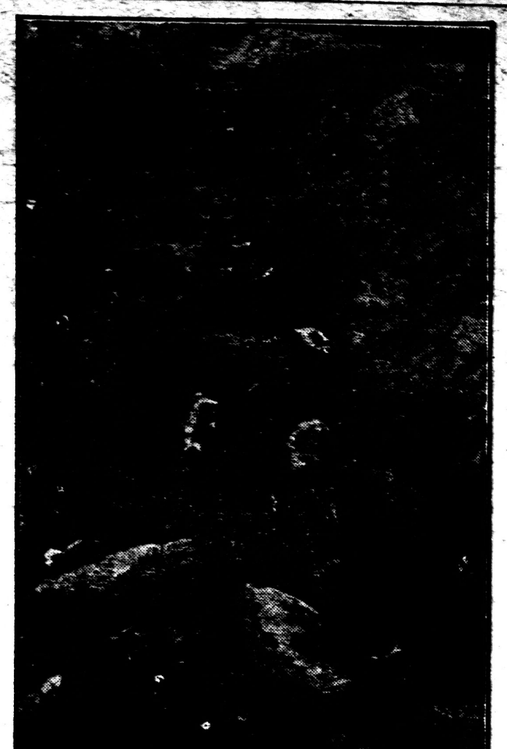
Breaking Up the Broody Hen.

A couple of years ago I kept a small flock in a part of my barn; adjacent to it I made a roomy yard.

Having merged this flock with another, the place is vacant. The nests are covered and now when Mrs. Hen becomes broody she is placed in this roomy enclosure, where she has every convenience a hen might want, except an opportunity to sit. I am careful to remove them to this place before they have remained in a broody condition any length of time. They enjoy getting into the yard and "dusting" or "ruffling" in the dirt. Change of surroundings doubtless contributes to a change of mind. They do not lose weight, are contented, and usually forget about being broody in about three days.

Why not give the flocks large, roomy yards when there is an abundance of land? It pays. Many times, with land going to waste, the flock is kept in a prison-like yard in which grows no living thing. I have yards large enough to admit of something growing in them all the time, and I never saw a more happy-looking bunch of hens.—E. C.

When prices for farm products are down, as good returns can be had from the farm of 120 to 140 acres as from larger farms, since the large farms multiply losses unless they are properly stocked with efficient animals and well managed.



Hogs on premises where Foot and Mouth Disease has been found are killed and buried.

TRAINING OUR CHILDREN

BY IRENE AVERY JUDSON.

JOHNNY AND THE COMPANY.

Company was coming. The atmosphere of Johnny's home was tense; the very shininess of woodwork and furniture, the forbidding spick-spanness of every room, even to the nursery, caused the tired eyes of Johnny's mother to glow with satisfaction and the round orbs of Johnny to overcloud with gloom.

Two busy days of preparation had brought the heavy droop to the shoulders of the mother, who little realized how many irritable words had been thoughtlessly, impatiently directed to the defenceless laddie. And now when all was ready and the guests were due, the fresh, crisp linens that gave Johnny such a smartly starched appearance merely heightened the uneasiness that filled the boy's heart.

The company arrived and there was a flood of warm embraces; the strain, alas! was very hard on Johnny.

Then the long anticipated visiting began, and who could wonder that the general relaxation caused all the pent-up steam in Johnny to burst forth most shockingly?

The laddie's mother, near distraction, thought not of the reason for it, but remembered only how fatigued she was from much unnecessary work. Too weary to think clearly, she punished him—it little matters how—before the strange, onlooking crowd.

Terrible Humiliation bore down upon Johnny, and caused the fair young head to droop with shame. The world was black indeed, filled with harsh indifference, and the cruel people in it smiled behind their hands! O, if he had just been punished where they could not see—those eyes now so amused at his distress! Then he and his mother might have kept it all a secret. He need not have lost his boyish self-respect.

Yes, if she had but thought a moment, and given him a chance to quiet that excited little mind in the seclusion of his room, later to come forth from there rested, self-controlled, then he could have met their faces with a frank boyish purpose to disturb no longer. That would have spelled a victory for Johnny. But as it was, in silent mortification, he slunk away from everyone, and the memory of that day was never bright.

Bruise not the fine stem of the flower, O Mother! lest it lift its face less frankly to the light.

The old idea of slapping youngsters on the back and telling them to "stand like a soldier" is inaccurate, say posture specialists. "Erectness with ease is the idea," they say.

Growing Breeding Males.

After the surplus cockerels have been sold as broilers and the best youngsters selected to be grown into future breeders either for sale or for home use it is a problem on many farms how best to take care of these young roosters.

If only a few are to be grown it is often especially difficult to find a suitable range. Where large numbers are to be raised it is best to put them in flocks of not over fifty each in large runs that are well shaded, with one old cock to boss the lot.

This old male will solve many of the problems that otherwise come up, as he seems to have a very quieting influence on the youngsters.

Another big help is to have plenty of outdoor roosting poles in the runs so that any rooster that is being chased can get away from his tormentors. They can follow him up on the pole but they can not stage a very successful fight on a small pole three or four feet above the ground.

Weighing a Spring.

A spring which furnished a water supply by gravity became so low during a protracted dry spell that the flow of water was interrupted daily, it being impossible to obtain water from a tap for an hour or more at a time. To overcome the difficulty five galvanized iron bushel baskets were placed on the surface of the water in the spring and loaded with stones, each basket being weighted with all it would hold without sinking. The displacement made by the weighted baskets raised the level of the water and increased the pressure to such an extent that a normal flow of water was available during a dry period when the supply of water would have been too low to keep the pipes filled.

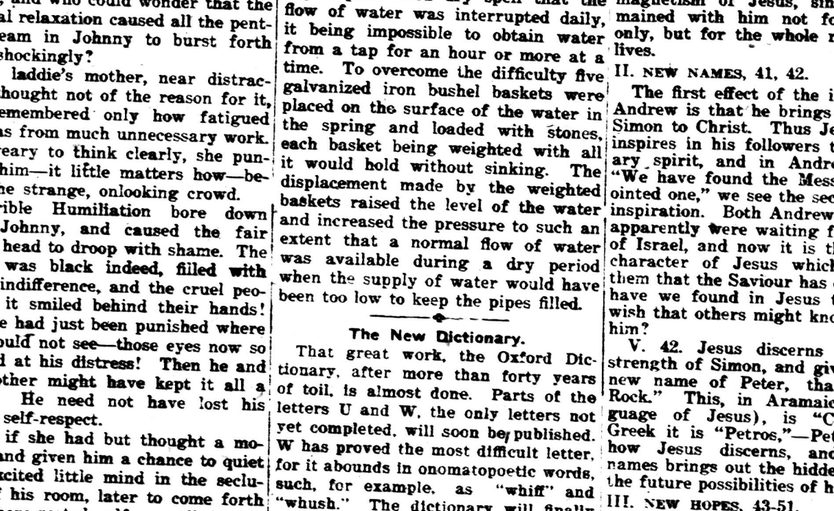
The New Dictionary.

That great work, the Oxford Dictionary, after more than forty years of toil, is almost done. Parts of the letters U and W, the only letters not yet completed, will soon be published. W has proved the most difficult letter, for it abounds in onomatopoetic words, such, for example, as "whiff" and "whush." The dictionary will finally contain approximately four hundred and twenty-five thousand words and two million quotations.

A "canning budget" enables the housewife to put up just about enough of each vegetable.

From the standpoint of value, dairy animals are the most important class of live stock on the Canadian farm.

It is declared that our eyes are the primary contributing agent for about seventy per cent. of our muscular activity. This should impress upon us the need of looking well to the preservation of this sense.



Shooting contact sheep on infected farms—Foot and Mouth Disease.

The Sunday School Lesson

AUGUST 3.

The First Disciples of Jesus, John 1: 35-51. Golden Text—Jesus saith unto him, Follow me.—John 1: 43.

ANALYSIS.

I. NEW EXPERIENCES, 35-40.
II. NEW NAMES, 41-42.
III. NEW HOPES, 43-51.

INTRODUCTION—One of the first acts of Jesus was to gather round him a circle of young men who should be the witnesses and supporters of his ministry, and to whom, in course of time, he might communicate the divine secret of his Messiahship. What had come to him in his baptism must one day be published to the world, and for this the proper instruments could only be men whose hearts he had won, and whose souls he had led step by step into the light. All our Gospels mention the calling of a group of disciples at the beginning of the ministry, but only St. John records that certain members of this group had previously belonged to the ranks of John the Baptist. As men who had come under deep religious impressions during the mission of John, the latter were specially prepared to receive the call of Christ. At this time Jesus himself would, to the outward eye, appear only as a disciple and assistant of John. Gradually, however, the assistant attracts more followers than the master, and John, himself recognizing this, gladly hands over to Jesus the choicest of his associates.

I. NEW EXPERIENCES, 35-40.

The first followers of Jesus began their discipleship with new experiences which attached them to Jesus for the rest of their lives.

V. 35. The names of the first two disciples are not given here, but from v. 40 we gather that one of them was Andrew. It is generally concluded from the silence observed with regard to the other that he was no other than John, the source of the special teaching of this Gospel.

Vs. 36, 37. The Baptist points the two disciples to Jesus with the words: "Behold the Lamb of God." These words represent the aspect under which the disciples finally came to understand the mysterious calling of Jesus. They came to see him as the sin-bearer, who on the cross laid down his life, thus taking the place of the Passover-lamb, which in the older days supplied the "blood of the covenant." At the beginning they did not understand this mystery, but it was gradually revealed by Jesus.

Vs. 38, 39. The disciples ask timidly where Jesus dwells, and on receiving the invitation "come and see" they join him. It was now the tenth hour, which, reckoned from 6 a.m., would be 4 p.m., and the disciples remain with their new-found Master for the rest of the day. What did he teach them? Where did he have his dwelling? Does the evangelist mean that he had his dwelling-place in God, and that this was the secret which his first disciples discovered? Certainly the disciples became at once aware of the spiritual magnetism of Jesus, since they remained with him not for that day only, but for the whole rest of their lives.

II. NEW NAMES, 41, 42.

The first effect of the interview on Andrew is that he brings his brother Simon to Christ. Thus Jesus at once inspires in his followers the missionary spirit, and in Andrew's words, "We have found the Messiah, or anointed one," we see the secret of their inspiration. Both Andrew and Simon apparently were waiting for the hope of Israel, and now it is the spiritual character of Jesus which convinces them that the Saviour has come. What have we found in Jesus to make us wish that others might know and love him?

V. 42. Jesus discerns the future strength of Simon, and gives him the new name of Peter, that is, "the Rock." This, in Aramaic (the language of Jesus), is "Cephas," in Greek it is "Petros,"—Peter. Notice how Jesus discerns, and by such names brings out the hidden strength, the future possibilities of his disciples.

III. NEW HOPES, 43-51.

Vs. 43-45. Jesus and his disciples now leave for Galilee, and there a fourth disciple is added in the person of Philip. Philip in turn brings Nathaniel by declaring that Jesus is no other than the Prophet foretold in the Law (Deut. 18:15), the Messiah promised in Isaiah and elsewhere in the prophetical books.

V. 46. Nathaniel is at first sceptical. The Jews had not a very high opinion of Galilee, for Galilee had originally a mixed population, and even at this time it was not so leavened with strict Pharisaic piety as Judea. Hence the mention of Nazareth affects Nathanael unfavorably. Philip's answer to Nathanael's prejudice is "Come, and have the sight of your eyes." Only an open heart, only a personal experience can prove what Jesus is.

Vs. 47-49. How markedly different from Nathanael's first word about Jesus, is the welcome of Jesus to Nathanael! Jesus received him as a pattern "Israelite" devoid of the "guile" which had characterised the ancient Jacob. Nathanael is astonished at the salutation, and still more astonished that Jesus had already read his thoughts as he was sitting under the fig tree, and he at once takes up the words of the other disciples, hailing Jesus as the Son of God, the King of Israel.

Vs. 50, 51. But Jesus promises Nathanael and the other disciples still greater discoveries. He assures them that they shall yet see him in his heavenly glory, as the true fulfilment of the vision which Jacob had once seen at Bethel, Gen. 28:12. They shall come to see that it is Jesus who truly leads men up from earth to heaven, and who is thus, "the way, the truth, the life."

APPLICATION.

1. *The Country Preacher.* In today's lesson we have the stimulating word-picture of one of the greatest preachers in the world's history, with a congregation of but two men. That sermon, by the uncouth country preacher, led the two young men to Christ. "One of the two was Andrew," the first of that famous group of men to whom we owe all our knowledge of Christ and the gospel. Let us be humbly grateful for the faithful testimony of "the voice in the wilderness."

2. *What Seek Ye?* This is a penetrating question, searching out not only deeds but motives. For what port are you bound? John's preaching made the young men in the story feel deeply the need of something they had not. It awakened a divine discontent.

3. *"Catch-my-pal."* One of the first principles adopted by General Booth in planning for the continuance of the great movement of which he was the founder was, "send a man after his own kind." This was the method of the first disciple of Jesus, who became at once the first missionary, and began in his own home. The greatest act of Andrew's splendid life was bringing his brother Peter to Jesus. If a man is not a Christian in his own home, it is doubtful if he is one anywhere. There is a story of a devout man who was concerned for his brother and prayed earnestly "O Lord, touch him with thy finger." Then in a dream he heard the voice of God say, "Thou art my finger; go and touch him." Having kindled our torches, let us hand them on to others. The modern brotherhood of St. Andrew, whose sole object is the spread of Christ's kingdom among young men and boys, has two rules—1. Prayer to pray daily for young men. 2. Service, —to make an earnest effort each week to bring one young man within the hearing of the gospel. Thus in ever widening circles does Andrew bring Simon, and John wins James, and Philip finds Nathanael. This is the way in which the Church has grown and will grow.

The Live Stock Market

There is a noteworthy feature in the Dominion Live Stock Branch market report for the week ending July 3, inasmuch as the top price for select bacon hogs at Toronto is quoted at $9.75 as against $9.35 for the same date last year, thick smooth hogs at $8.90 against $8.50, and heavies at $8.25 against $7.50. For other kinds the prices average unchanged. Lambs and light sheep also show an increase, the former of the good kind being quoted at $17 compared with $16, and common at $15.75 compared with $14, top prices. Heavy and fat sheep were a bit down, but lights are quoted at the top at $8.75 compared with $6.25 last year.

From January 1 to July 1 of the cattle shipped to England there were exported 35,820 compared with 21,694 during the same period last year, an increase of 4,126. The sales of stock at the principal stock yards of the country this year total 348,762 compared with 317,068 last year. 140,422 cattle against 119,998, 638,026 hogs against 520,708, and 75,237 sheep against 92,089.

Sweet Clover Milk.

Two years' tests at the Dairy Dept., O.A.C., on milk from cows fed on sweet clover pasture indicate that there is apparently no reason why cows fed or pastured on sweet clover should not produce satisfactory milk for the making of good Cheddar cheese. The average yield of cheese per 1,000 pounds of milk was 97.23 pounds for the sweet clover lots, and 92.33 for the non-clover lots. The percentage of moisture in the green and ripe cheese was practically the same. The average total score was 93.75 for the sweet clover lot and 93.6 for the non-clover cheese. There was practically no difference in the acidity at time of dipping between the sweet clover and the non-clover vats of milk.

Precautions in the Use of Paris Green.

If a double quantity of good, freshly slaked lime or hydrated lime be mixed with the Paris green and then the mixture made into a paste with water and allowed to stand in this form some little time before diluting and spraying, the lime will combine with the greater part of the free arsenious oxide and remove its leaf scorching property to a great extent, so says Prof. H. Fulmer, O. A. College.