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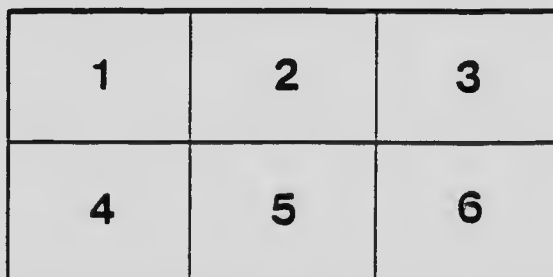
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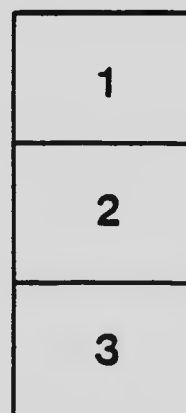
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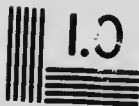
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Bulletin No. 15

DEPT. AGRICULTURE
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Revised, February 15th, 1915

INSTITUTE BRANCH
Manitoba
Boys' and Girls' Clubs

Motto—VOCATIONAL EFFICIENCY



Boys' and Girls' Club Fair at Neepawa, Manitoba

CONTESTS

- | | |
|------------------------|--------------------------|
| 1 FAPM MECHANICS | 5 POULTRY RAISING |
| 2 FODDER COP'N GROWING | 6 BREAD BAKING |
| 3 PIG RAISING | 7 SEWING |
| 4 POTATO GROWING | 8 CANNING AND PRESERVING |

Manitoba Agricultural College

EXTENSION SERVICE SECTION

WINNIPEG, CANADA

Published by the authority of Hon. Geo. Lawrence, Minister of Agriculture and Immigration

374.9

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Manitoba Agricultural College

(Extension Service Section)

Any of the following may be obtained free upon request from the Extension Department.

HOME ECONOMICS LITERATURE

Food:—

- Lesson 1—Theory of Foods.
- Lesson 2—Cost and Adulterations
- Lesson 3—Fruit, Vegetables and Cereals.
- Lesson 4—Proteid Foods.
- Lesson 5—Flour Mixtures.
- Lesson 6—Bread and Buns.

Home Nursing:—

- Lesson 1—Rules to Observe.
- Lesson 2—Nurse's Routine Duties.
- Lesson 3—Comfort of Patient.
- Lesson 4—Symptoms of Sickness.
- Lesson 5—Home Treatments.
- Lesson 6—Accidents and Emergencies.
- Lesson 7—Contagious Diseases.
- Lesson 8—Feeding the Sick.
- Lesson 9—Maternity Nursing and Baby Hygiene.

Cookery:—

- Lesson 1—The Principles of Cookery.
- Lesson 2—Effects of Heat on Food Materials.
- Lesson 3—Bread, Cereals, and Vegetables.
- Lesson 4—Combination of Food Stuffs.

Laundry:—

- Lesson 1—Equipment—Water—Some Common Alkalis.
- Lesson 2—Soap, Soap Substitutes, Blueing.
- Lesson 3—Fabrics (Cotton and Linen).
- Lesson 4—"The Family Wash" (Part 1) "Starch."
- Lesson 5—"The Family Wash" (Part 2) "Special Washing."
- Lesson 6—Ironing.
- Lesson 7—Muslins, Lace.
- Lesson 8—"Silk"—"Disinfectants."

Sewing:—

- Lesson 1—Equipment, Shirtwaists and Skirts.

Personal Hygiene:—

- Lesson 1—The Human Machine.
- Lesson 2—The Running of the Machine.
- Lesson 3—Care of the Machine.
- Lesson 4—Proper Attitude of the Body.

Manitoba Boys' and Girls' Clubs

INTRODUCTION

During the past quarter of a century remarkable changes have taken place in the economic conditions of the country, but the change that has had the greatest effect on the home industries was the introduction of modern machinery which has practically eliminated the useful training which home requirements furnished. To provide for this loss, various plans have been tried from time to time, and have generally proved impracticable.

It was with the hope of solving the problem that Boys' and Girls' Clubs were organized, and so successful have they proved that within three years over 1800 boys and girls in Manitoba, and almost a million in Canada and the United States, are taking part in this work, and it has proved to be one of the most practical and popular movements yet inaugurated for giving to the people of the rural districts vocational education that is closely related to their actual occupations.

Clear, definite, well tried instructions are given for the purpose of teaching the boy or girl how the best results may be obtained in each of the different lines of work to be undertaken by the members of the club, and in order that these instructions may be carefully studied, contests are arranged for at Boys' and Girls' Club Fairs, held in the fall.

In carrying out these contests the pupil makes a practical application of the knowledge acquired. He studies not only the directions given in the bulletin, but all other available literature dealing with the subject, because he knows that in order to win out he must study the subject from every angle, and in doing so he has learned many valuable things about the business of farming. It has increased his knowledge, self-reliance and ambition, and led him to see that in agriculture there are possibilities for the man of thought, energy and judgment equal to, if not better than, in any other industry. The greatest thought in modern educational development is the suggestion to unite the home, the office, the farm and the community in one great effort for vocational efficiency.

ORGANIZATION

In order that a community spirit may be aroused and with it the loyal support of a very considerable number of people, it is very necessary that a fairly large area be included in the district represented by a club. The whole of a municipality or eight or ten school districts surrounding a central town or village will not prove too large. Each local district or school can arrange for a small local fair with its own prizes and judges, where every member of the club may exhibit the results of his labor, after which the best exhibits may be sent to the central fair for the final contest.

It is not necessary that all members of the club be in attendance at school. There are many boys and girls who for some reason or other cannot get to school, but are anxious to supplement their knowledge of farming by entering into the work of the Boys' and Girls' Clubs. To these we are glad to be of assistance any time.

The splendid success of Boys' and Girls' Clubs in the past owes much to the co-operation of the business men in the towns, the pastors of the various churches, the school trustees and teachers, the secretaries of agricultural societies, and above all to the excellent support and encouragement given by the farmers themselves, and the various other public spirited men and women in the community, and we again solicit their hearty co-operation.

OFFICERS

In order to make use of the experience of the older members of the community, it is a good plan to have Honorary Officers who stand ready at all times to offer suggestions and encouragement to the real officers who are chosen from among the boys and girls themselves. The following officers should be elected:—

- 1—The Club Organizer or Honorary Secretary.
- 2—Honorary President.
- 3—President.
- 4—Secretary.
- 5—Treasurer.
- 6—An Executive Committee of from three to five members.
- 7—If there are several districts forming the central organization, the secretary of each district will become a member of the Executive Committee and represent his district on this committee.

After the club has been organized, the names of the officers together with the application for enrolment, and a list of the contests chosen by each member, should be sent to the Superintendent of College Extension Service of the Agricultural College as soon as possible after March 1st., so that sufficient material may be obtained in good time.

WHO MAY ENTER

Provided twenty in the district join, any Manitoba boy or girl, between the ages of 11 and 17, inclusive, may become a member. Branches of a Club may be organized with six members. Only one member of each family may enter Contest One, but all members may enter any or all of the remaining unless the enrollment blank is properly filled out and returned to the Superintendent of the College Extension Service, Agricultural College, Winnipeg, Man.

FAIRS

One of the principal benefits of a Boys' and Girls' Club is the fall Fair. The Agricultural College will endeavor to send judges for the various contests who will fully explain why awards were placed, and the principal features taken into account in judging in each class.

When the judging has been completed, interesting lectures will be given on the best methods to follow during the coming year, and on other subjects of vital interest in making farming a success.

For this purpose the province will be divided into judging circuits about the 1st of May, but the Fairs will not be held until the latter part of September or the beginning of October, when most of the corn, potatoes, etc., will be mature.

PRIZES

The matter of prizes is of great importance. While the contests are organized mainly for the purpose of arousing greater interest in studying the conditions that make for success in several important phases of the farming industry, yet prizes have a very wholesome influence in stimulating effort. The boy or girl who has read carefully the directions for carrying out the work in each contest, and has taken the utmost pains to make it a success, is anxious to have some recognition and appreciation from the older people, and there is not the slightest doubt but that in later years he will look back to this souvenir of his having won in one of these contests with a great deal of pleasure.

The honor of winning a prize appeals to both old and young, and as an encouragement, the Department of Agriculture will, in addition to sending judges to the fairs, offer silver and bronze medals as well as diplomas in some of the contests. And local interests will not be slow in offering prizes that are well worth trying for.

NOTE BOOK

It is now universally recognized by farmers as well as business men that if success is to be attained in any class of work, it is a decided advantage to have some system of keeping records. These records are given various names, i.e., accounts, records, diaries, day books, statements, books, etc. It is always an advantage to jot down such particulars as: dates on which work was done, time worked, cost of material, etc., and to record observations rather than to try to remember details without such notes.

For the above reasons we are asking each member of the Club to use the note book we supply for the purpose and to mark down all the possible information in connection with the work done in these contests.

These notes and similar ones for each part of the work will be needed in making final reports, in writing up the history of crops and in making up statements. It will also give members the best kind of experience and practice in keeping accounts and in English composition. Notes may be kept in any form desired so long as they are clear, definite and complete enough to be readily understood and readable.

UNIFORM CHARGES

In order that all competitors may have a uniform charge for labor, etc., the following schedule of rates is given and this members are expected to use:

1—Value of work for 1 horse, per hour.....	\$.10
2—Value of work for 2 horse team, per hour	.20
3—Value of work of contestant, per hour	.15
4—Value of each load of manure.....	1.00
5—Other expenses at actual cost.	

CONTESTS

CONTEST No. 1—Farm Mechanics

The object of this contest is to encourage the boys to make many of the articles which they need on the farm, and which they can make with a few tools and the kind of material which is available on most farms.

This year five projects are included, and carefully prepared

plans for each of the following contests will be supplied to those who wish to compete.

- 1—Feeding rack for poultry.
- 2—Poultry exhibit coop.
- 3—Poultry fattening crate.
- 4—Farm gate.
- 5—Milking stand.

CONTEST No. 2—Fodder Corn Growing

This contest will consist in growing a prescribed amount of each of three well known varieties of corn suited for fodder production in Manitoba.

Practically every farmer in Manitoba who has grown corn for fodder is pleased with the results obtained, and invariably continues growing it as a rough feed for feeding live stock. More tons of feed per acre can be obtained from fodder corn than from any other crop. It is the hope that this course will demonstrate to those taking part that corn can be successfully grown in every district in Manitoba, and that it is a valuable feed for live stock.

The three varieties to be grown this year are Longfellow, North Western Dent, and Gehu.

Rules for Fodder Corn Contest

1—Each member will be supplied with about one hundred and fifty kernels of each of the three varieties mentioned in the outline of the course.

2—This corn must all be planted, and grown strictly according to instructions. Preferably, the varieties should be planted in separate rows.



Part of a large acreage of Fodder Corn near Winnipeg

3—Notes must be kept as outlined in paragraph on "note book."

4—From the notes a composition of not more than two hundred words outlining the methods followed in growing the crop, must be written.

5—Observations on the growth at different times, also comparisons of the growth and appearance of the different varieties at various stages of their development must be taken and recorded in the note book. From these notes an outline of not more than one hundred words must be completed and forwarded according to rule seven.

6—From the note book a statement shall be made out giving the number of hours of work required in producing the crop, charging the necessary work at the specific rates.

7—The compositions specified in Rules 4 and 5, and the statement in Rule 6, must be forwarded to the Superintendent, Manitoba Boys' and Girls' Clubs, Manitoba Agricultural College, Winnipeg, not later than four weeks previous to the fall Fair.

8—Each member will be required to exhibit at the Fair, a sheaf, consisting of ten stalks, of each variety of corn.

9—The weight of each variety should be estimated at time of cutting, by weighing either a part or the whole of the crop.

10—The dried fodder should be fed to cows, and observations made as to whether they relish it or not. Also note the effect upon the milk flow.

11—The following score card will be used in placing the award:—

	Points
1—Best three sheaves	60
2—Composition	30
3—Statement of expenses	10

Instructions for Growing Fodder Corn

Form of Plot.—The three varieties provided may be planted in three plots, but we advise planting in parallel rows, putting one variety in each row. The seed supply of each variety is sufficient to plant a row about seventy-five feet long.

Preparation of Seed Bed.—The land to be planted to corn should be rich and should contain a large amount of moisture as corn is a gross feeder and requires abundance of water for best growth. For this reason land that has been summerfallowed the previous year is best. While garden or root land is also good. In every case well rotted manure should be supplied. If the land has not been fall plowed, plow early to the depth of about six inches, and give frequent



cultivation to keep down weeds, and conserve moisture until planting time.

Planting.—Plant in long rows if possible, putting the kernels about six inches apart in the row and from one to one-and-a-half inches deep. The rows should be from thirty-six to forty-two inches apart. Between the 20th of May and 1st of June is the best time to plant corn in Manitoba. Pack the soil if necessary.

Cultivation.—If convenient the land may be harrowed once or twice after the corn is planted and before it is up. After the corn plants appear above ground, and the rows can be followed, a horse cultivator may be used once each week. The keynote of efficient cultivation is to do it frequently and shallow, thus killing the young weeds and checking the rise of moisture and preventing its loss by evaporation from the surface. Cultivation should not be continued after July 15th, unless on account of weed growth or the surface soil being packed by rains. Late cultivation tends to induce continued growth, thus preventing sufficient maturing for good fodder. The more nearly matured the plants have become when cut, the larger will be the percentage of dry matter in the cured fodder, thus making it a more valuable food.

Harvesting.—Cut just before early frosts, tie into sheaves, weigh each variety or estimate the weight as accurately as possible and put up into large stooks which may be held together by tying binder twine around the upper part of the stook.

In preparing the sheaves for the fair, make a sheaf of each variety. These sheaves should have ten stocks each. The longest stalks are not necessarily the best, but they should be leafy, not too coarse and mature. Tie the sheaves in three places and have them uniform.

CONTEST No. 3—Pig Raising

With good prices for pork there is an increasing interest being taken in hog raising in Manitoba. Beef is high priced and scarce, and is likely to remain so for some time. This will have the tendency to keep the prices of other meats up even with increasing production. This will apply especially to pork, as it will be used in place of beef to a large extent until the supply of that commodity is increased and the price reduced.

Pork can be produced at a profit, if judgment is used in caring for the pigs. There is, however, considerable differ-



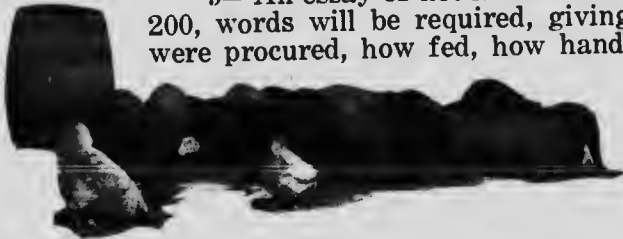
ence in the type of management under which hogs are produced and also a corresponding difference in the profits received from the undertaking. A realization of these facts suggested the idea of putting on this contest, which has the following objects:—

Objects of the Contest

- 1—To stimulate an interest in swine production in Manitoba.
- 2—To teach the boys how to raise hogs with the best results and largest profits.
- 3—To arouse in the boys a realization of the importance of making a study of the breeding, feeding, and management of all live stock on the farm.
- 4—To teach the boys how to judge hogs, and how to select them for breeding or market purposes.
- 5—To instil in the boys a love of animals which will result in their taking a greater interest in farm life.

Rules for Contest

- 1—This contest is for boys only (age the same as for other contests.)
- 2—The contestants must procure a pair of young pigs, between five and eight weeks old.
- 3—He must feed and care for them from the time he procures them (which will likely be weaning time) up to the day of the Club Fair.
- 4—The weight of each pig shall be taken at the time the contestant starts to feed them.
- 5—A record must be kept of the amount of feed used.
- 6—If possible, procure milk or slops to feed, and keep a record of it by measure.
- 7—Make the best use of pasture, and estimate in terms of acres the amount fed.
- 8—If possible weigh the pigs every month in order to find at what age the largest gains are made.
- 9—An essay of not more than 400, and not less than 200, words will be required, giving in detail: how pigs were procured, how fed, how handled; also a statement giving cost of work and feed from which the cost of production can be obtained.



10—Charge all feeds as follows:—

Milk and slops @.....	2c. per gall.
Shorts and grain chops @.....	1c. per lb.
Pasture @.....	\$10.00 per acre.

11—The pigs must be shown at the Club Fair.

12—The awards at the Fair will be based on the following score card:—

1—Pigs.	Points
General appearance	35
Average daily gain	25
(when cost is considered.)	
2—Essay, including statement	20
3—Judging hogs	20

Instructions for Pig Raising

The following instructions are not given as hard and fast rules which must be followed, but are simply given as suggestions to help the members in their work. The contestants are expected to get all additional information on this line, as much as possible.



It is hoped that they will aim to become proficient in this line of work.

Points in Economic Pork Production

In raising hogs as in any other class of live stock the object of the farmer is to make as much money out of them as possible. In order to do this the cost of production must be cut down by observing every precaution to eliminate loss and unnecessary expense. The following points indicate places where special attention is required in order to get the best results:—

1—Select sows of a desirable type, which were produced from large strong litters.

2—Brood sows must be properly wintered; that is, fed rationally on feeds that are not too fattening, and allowed free range or abundance of exercise.

3—Avoid loss at farrowing time. The two preceding points, if observed, will eliminate loss at this time, to a large extent. However, it is advisable to have the sow accustomed to the presence of an attendant previous to this time in order that he may go into the pen and give the young attention if necessary.

4—Avoid a set back in the development of the young pigs. If young pigs are neglected for a week it will take a month of extra feeding in the fall to make it up. Particularly at weaning time there is danger of them becoming stunted unless they have been taught to eat previous to that time. Use feeds at all times that are suited to the requirements of the growing pig.

5—Make the best use of pasture in order to produce cheaply.

6—Do not market until in good condition and weighing about two hundred pounds.

Selecting the Young Pigs

A great deal of the profit realized in producing pork depends upon the class of stock selected. They must be of a type that will indicate thrift and vigor. In buying your young pigs you can judge somewhat as to these conditions in the little pigs themselves, but at the same time you should be sure that they are produced from the right kind of stock. No matter if it is lard or bacon type you should have pigs that are strong in constitution or deep bodied and uniform in width of body from back to front. They should have good length of body with a strong, slightly arched back. They should have indications of quality by being evenly covered with firm flesh and reasonably fine in the bone, yet with sufficient strength of bone to support the body. The pasterns should be strong and standing straight. Quality will be indicated in a clean cut face which should not be unduly short nor long, but free from coarseness.

Feeding the Pigs

Having obtained a good pair of pigs your next consideration is to make them grow as rapidly and economically as possible. To get these results the feeder must get fixed in his mind the fact that a pig must not be allowed to have a set back at any time during its development, but must be kept growing and thrifty from the time of its birth until maturity. The first time that pigs are likely to be stunted is at weaning time, unless they are taught to eat, preferably a slop of shorts and milk, before this time. Keeping them growing at this time means a great deal in the early development of your pigs. Skim milk is of special value to young pigs; in addition to containing valuable nutrients

it has the property of assisting the digestion and assimilation of the other feeds. The grain feed should consist of a slop of shorts and milk, at first thin, and later increasing in thickness. To the shorts can be added a gradually increasing proportion of sifted crushed oats, barley, or finely ground wheat screenings. If the other feeds are plentiful the shorts can be discontinued at the end of three months, while good results will be obtained by continuing with about one-third of the feed consisting of shorts up to the final fattening period. For fattening, a feed consisting of oats and barley, half and half at first, gradually decreasing the oats and increasing the barley until barley alone is being fed for the last two weeks. All grain should be ground, and there is some advantage in having it soaked for about thirty-six hours before feeding.

Pasture for Pigs

Pasture is one of the cheapest feeds we have for growing pigs and our object should be to make the best use of it for the entire summer. It is found from experimental feeding that hogs when on pasture should be fed about one-half a full grain feed. Pigs could probably be raised on pasture alone, but this would be false economy. If too much grain is fed you will not realize the full profit from the pasture. The amount of grain it is advisable to feed while the pigs are on pasture will be a point for you to make some observations on.

Rape makes the earliest pasture as it can be sown quite early, in drills or broadcast and it will be ready for pasturing in about five weeks. Oats and barley or any grain crop will produce very good pasture but would be improved by adding some field peas. This will make good pasture for later in the summer. There is probably no crop that is equal to Alfalfa for pig pasture, and if you have access to some it would be a good plan to try some of it and make comparisons as to results. In districts where corn will ripen fairly well they follow the practice of having a small plot of corn in which the pigs are allowed to run in the field. They will harvest the ears and do exceedingly well if the corn becomes fairly mature. Squaw, Gehu or Free Press corn are about the only varieties that we can be sure of ripening in all districts, while many other varieties will yield more if you can ripen them. Peas are another crop that hogs will harvest with good results, as this form of feeding is cheap and the peas make a good feed for the young pigs.

A few suggestions on how to pasture might not be out of place. You can grow your crop near the pen and supply the pigs by cutting some each day and throwing it into the pen. This increases the labor cost, and for that reason it is advisable to allow the pigs to pasture it. To do this you could have some

portable hurdles or some hog wire which can be shifted as more pasture is required. For a small number such as you will be feeding, a small square portable pen would answer the purpose—say, a pen about twelve feet square with sides made of four, one by four, boards placed a few inches apart. This will be light and can be shifted along each day or as it is required. After the pasture is frozen off in the fall a few turnips fed each day will take its place and will help to tone up your pigs and increase their appetite.

Preparing for the Fair

The pigs should be in fairly high condition for the Fair, and in order to have them in shape you will need to feed very carefully for the last three weeks. The pork packers in the city say that farmers as a general thing do not have their pigs fat enough, so we would like to see yours in good condition.

During the day of the Fair we purpose having a talk on selecting hogs for breeding and market purposes, after which those who are entered in this contest will be asked to judge a class of three pigs and will be allowed for this work according to the score card on page 16.

CONTEST No. 4—Potato Growing

The contest in potato growing will be work with a well-known and desirable variety.

The potato originated in America and has grown to be one of the most important of food plants. The potato is eaten the world over more than any other crop except rice. It is grown very extensively now as a garden vegetable, as a truck crop, and in many sections of the country as a valuable field crop. Although the potato is adapted to a wide territory, certain varieties are best suited to particular climates and soils. Hence in selecting varieties special attention will be given to locality and soil texture.

Rules for Potato Growing Contest

1—Every member of each local branch of the Club will be supplied with ten pounds of a desirable variety of pure bred potatoes.

2—All potatoes must be planted and instructions must be followed as closely as possible.

3—Notes must be kept as outlined in paragraph on "note book," from which a composition of not more than two hundred

words is to be prepared, giving the history of growing the crop. Credit will be given for this composition in placing the awards at the Fair.

4—From the note book each member must prepare a financial statement showing value of time expended in growing the crop. Rates are specified on page 4.

5—

6—Each member must exhibit at the Club Fair, one bushel of selected potatoes from the crop grown.

7—The "marketable" must be separated from the "un-marketable" potatoes and each weighed, and weight of each recorded in the financial statement.

8—The following score card will be used in placing the awards:—

	Points
1—Value on basis of yield.....	35
2—Quality as shown by exhibit of one bushel..	40
3—Written history of growing the crop (Not more than 200 words).....	15
4—Financial statement showing value of labor expended in growing the crop.....	10



Instructions for Potato Growing

Choosing the Plot.—A light, sandy, loam soil is generally the best for potatoes. Avoid a heavy, wet, or cold soil. The potato partakes to a great extent of the soil in which it grows. However, much can be done in preparation of soil and in cultivation to overcome some conditions which are not favorable. Do not select soil where potatoes have grown the previous year. This will avoid scab and other diseases left by last year's crop. It is advisable to plant in long rows so that a horse cultivator may be used.

Preparation of Soil.—Prepare the soil well to make a mellow and fertile seed-bed. Treat land with well-rotted barnyard manure; plow deeply and then harrow and disc it until a good deep, fine, mellow seed-bed, free from trash, is made. This will provide just what the potato needs for a good start, and a good finish too.

Selecting Seed Potatoes.—Plant only good, healthy, well shaped potatoes. The slightly flattened, oval shape, shallow eyed, form of potato is preferred. They should be free from scab or other diseased condition and should have a healthy appearance. Strong seed helps to make strong plants and strong plants are necessary to get good yields.

Cutting Seed Potatoes.—The best size of seed piece cuttings is a question that has not been definitely settled. When seed potatoes are very high in price it generally pays to make the smaller cuttings. Two good eyes to the seed piece, or good sized potatoes cut into fourths, divided according to location of eyes, are the general rules under ordinary price conditions.

Planting.—Potatoes should be planted from three to four inches deep, according to soil and weather conditions. Usually it is advisable to plant potatoes between May 9th and 24th. If the plot is to be cultivated with a horse cultivator, the rows should be planted from three to three and one-half feet apart and of reasonable length. If in a rich garden plot and cultivation is to be done by hand, the rows may be planted closer and in hills in the row instead of in a continuous row as they would be if planted with a plow. In planting small samples it is advisable to plant with a hoe and press the soil down firmly with the hoe or the feet, while for field work the plow or potato planter is satisfactory. When in a continuous row a set should be dropped every twelve or fifteen inches. It is a slight advantage to place the set with the cut side down.

Cultivation.—The principal part of the cultivation should be done before the potatoes are planted. If the seed-bed has been properly prepared before planting, cultivation is then required

only to keep the weeds out and the soil mellow and free from crust on top. Harrowing until the potatoes come up will generally keep the weeds down and the top soil mellow. The first cultivation may be quite deep if necessary to loosen the soil or to cover weeds, but following this, care must be observed to prevent injury to the potato plant roots which spread from the rows. The frequency of cultivation depends largely upon the season. When the ground dries off after a rain and leaves a crust, the soil should be stirred as soon as it can be worked well. Weeds should be destroyed whenever they appear.

Spraying.—Watch for the potato beetle or “bug” as we sometimes call him. Do not let him get the start of you. Fight him with Paris green. It pays to spray potatoes. Do not wait until the potato beetles have large families to feed on your plants. Meet them early and as often as necessary to keep your potatoes free from the effects of their greedy appetites and from later visits of their extensive families.

Harvesting.—Wait until your potatoes are fully ripe. Harvest any time before frosty weather and when the soil is dry enough to handle well. Separate the “marketable” from the “unmarketable” potatoes, and find the exact weight of each. Store potatoes in a cool, dry place, and be prepared to exhibit one bushel at the Fall Club Fair.

CONTEST No. 5—Poultry Raising

The object of this contest is to stimulate an interest in poultry raising among the people of the Province. In addition to enlisting the help of our boys and girls, we hope to encourage our farmers to raise better poultry and get more eggs. Poultry keeping is one of the best paying branches of farm work and a little money spent for improving the farm flock will result in a larger egg production and a better class of dressed poultry. We hope to see all our farmers go in for poultry keeping on a larger scale during the next few years, and with our splendid markets, plenty of good, cheap feed, and proper methods, the industry has a very promising future.

Rules for Poultry Raising Contest

1—Each boy or girl will be supplied with one dozen eggs from a bred-to-lay strain of White Wyandottes, White Leghorns, Buff Orpingtons, Barred Plymouth Rocks, or Rhode Island Reds from the Poultry Department of the Manitoba Agricultural College.

2—The eggs must be set under hens.

3—All the eggs must be tested between the ninth and the fifteenth days, and the number of fertile and unfertile reported.

4—Method of testing to be followed is given on page 17.

5—A full report of the hatch must be submitted as soon as the chicks are hatched. This must include the number of fertile eggs, infertile eggs, rotten eggs, and eggs that failed to hatch.

6—Each member will be prepared to state (in a composition of not more than two hundred words) how the setting hen was handled, and how the chicks were raised, the same to be mailed at least four weeks before the fair, to Director, Manitoba Boys' and Girls' Clubs, Manitoba Agricultural College, Winnipeg.

7—All the chickens raised from the dozen eggs supplied shall be exhibited at the Club Fair.

8—The awards will be made on the following basis:-

1—The number exhibited the same as the number hatched	40 pts.
(Two points off for each chicken missing.)	
2—General appearance of chickens as regards size, age, weight, health and condition	35 pts.
3—Composition, age of member taken into consideration	25 pts.
Total	100 pts.

Instructions for Handling the Setting Hen

Take a fair sized box, put a few inches of earth in the bottom of it and cover it with some straw or chaff. Make a nice nest and put in a few china eggs. Put this box in a darkened place where the hen will be all by herself and away from other hens. Select a hen that has been broody for a few days. Dust her thoroughly with insect powder, then put her into the box with the china eggs. Drop a bran bag over the front of the box to make it dark. Leave her alone for a day and then if she is sitting all right, place the dozen good eggs under her. Provide clean grain, pure water, and also some ashes for her to dust in. Take her off the nest every morning and let her eat, drink and dust herself, then see that she goes back to the nest again. Should any eggs be broken during the hatching period, the nest should be cleaned properly and the dirty and soiled eggs should be washed. Keep the rats away from the nest.



Instructions for Testing Eggs

The eggs should be tested on the ninth day. Use an ordinary lamp in a dark room. Place a heavy black cloth or large piece of

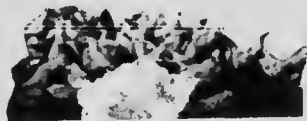


Champion Case of Cockerels at Brandon Dressed Poultry Show

tin in front of the lamp with a small opening about one inch across, directly opposite the flame. Then by holding an egg up to this opening its condition can be noted. The fertile egg will have quite a large air space at the larger end of the egg, and the rest of the egg will be quite dark. You will also see rich red blood veins in the egg. An infertile egg appears almost clear and has no blood veins and a smaller air space than the fertile egg.

Instructions for Feeding and Rearing the Chicks

Dust the hen with insect powder before putting her into the coop with the chicks. Feed the chicks on bread crumbs and hard boiled eggs with a little charcoal mixed in. Also give them crushed wheat, pinhead oatmeal, or chick food. Give them milk to drink if you have it. Feed them at least five times a day. Move the coop every few days. Make the coop tight so that the rats cannot get in and kill the chicks. Feed the chicks on dry mash in a small pan four or five times a day. The dry mash is made of finely ground barley, wheat and oats, with the hulls sifted out. Add a little charcoal to it. Give them plenty of sand or fine gravel. Feed them on wheat or wheat screenings when they are a few weeks old. Keep them healthy and in good growing condition. Have the coops clean. Give them as much variety in their food as possible.



CONTEST No. 6—Bread Making

The object of the work is to arouse in every girl in the Province the desire to be capable of making a nutritious loaf of bread, as well as to inculcate the spirit of industry in all affairs pertaining to the home. Good bread and good butter will please every member of the family, and send them out to their several duties in the best spirits.

1—All members of the Boys' and Girls' Clubs are eligible to take part in the contest.

2—Each contestant must bake not less than fifteen loaves of bread in the three months preceding the contest. One loaf not less than twenty-four hours old should be entered.

3—All work done on bread must be the work of the contestant.

4—The bread will be judged according to the score card given.

5—Each entry must be accompanied by a composition of about 300 words, giving recipe used and stating observations according to outline given.

The following score card will be used:—

SCORE CARD

The Standard Loaf

Flavor	20	points
Baking (lack of doughiness)	20	"
Texture and grain	20	"
Lightness	15	"
Sweetness	10	"
Color	5	"
Crust	5	"
Shape and size	5	"

Explanation of Score Card

Flavor.—The flavor of bread should be much like the flavor of freshly cracked nuts. It should not taste of yeast, and it should not taste sour or musty.

Baking.—Cut the bread through the middle of the loaf when it is at least twelve hours old. Press it lightly with the finger. The bread should be soft enough to press easily, but the imprint should spring back to the level surface. Roll a crumb of the loaf between the fingers. If it is not sufficiently baked it will form a lump of dough; if well baked, it will always crumble.

Texture and Grain.—Bread should have a fine grain, with small uniform holes, or air sacs, all through the loaf.

Lightness.—Bread should be equally light all through—a texture much like a fine sponge cake. If too light it will crumble and break when cut. If not light enough, the texture will be close and heavy.

Sweetness.—The bread should have no sour smell or taste.

Color.—Bread should be a good cream color. It should not be grayish or greenish in color.

Crust.—The crust should be a golden brown on top and bottom and sides. It should be evenly browned.

Shape and Size.—A loaf is more easily baked in a pan that is about ten inches long, four inches wide and five inches high. This makes a fine-looking loaf that is not too large to bake well. The loaf should rise evenly and be of uniform height in all parts. It should not rise high enough to bulge over the side of the tin.

Bread Making

The ingredients to be used in bread making are flour, yeast, salt, water or milk, or some of each.

Flour, yeast and salt each have a little history which is interesting. Usually boys and girls are anxious to know something about everything they see, and so they ask questions, so many sometimes that it seems difficult to answer them. So before you begin to use yeast or flour, you may enjoy reading a story about them.

Flour, one of the common materials used in the preparation of food in the home, is not clearly understood by people.

Years ago people used a heavy hammer with which wheat was pounded, thus breaking the outer coats which hold the white substance known as flour. Flour made this way was not white as we buy to-day. The bran was mixed with the white substance or starch, and so made it look brown.

To-day the flour is made in the mills and the process is called "milling." There are many grades of flour, depending upon the class of wheat taken to the mill. The strength of flour is hard to determine, even the millers find it difficult to mix grades of wheat so as to produce flour exactly the same strength. This causes some difficulty when making bread at home, as each grade of flour requires different treatment, sometimes more water being necessary, or again less water is used.

To understand thoroughly why there are so many differences, it is necessary to study carefully how much sunshine there was when the wheat was growing, and how much rain.

The milling processes are very different. You may be able to read about milling processes or visit a flour mill some day when you wonder what you will do because of loneliness.

The grocer buys a flour which is used only for cakes or pastry, and so it is called "Pastry Flour."

Sometimes boys and girls are fond of chewing wheat and making "wheat-gum." This gum is called "gluten." This is necessary in bread flour, but in pastry flour it is not essential. Bread flour then contains much gluten and a great deal of starch, while pastry flour has very little gluten and much starch. The best bread flour has much starch.

Rub bread flour between your fingers and it feels granular and gritty, so will not pack. Pastry flour feels soft, will pack, and so leaves the print of fingers. This may be used as the test for flours.

Gluten:—

Mix one cup of flour with enough cold water to make a lump that will not stick to the hand. Place it on a bread board and knead it well with the hands. If the lump begins to be elastic after it has been kneaded for a few minutes, and if the bubbles of air begin to snap and crack as the bread is kneaded, you will know that the flour is a good bread flour.

If the lump of dough acts like a lump of putty and not elastic, the flour is lacking in gluten. It then is not a good bread flour. If you wish to see the gluten, put the dough in a bowl of water and proceed to wash the dough, changing the water frequently. As long as the water is milky continue to change the water. The starch is being washed out and the elastic substance left is the gluten.

Yeast:—

In the spring the farmer tests the seed he is about to plant, to be certain that it will grow when planted under proper conditions.

When making bread, a small plant is put into the flour and water; the plant being the yeast and the flour the soil.

Every farmer knows that the seed must be good, the soil good, and that he must work the soil thoroughly. The same is true when making bread. The yeast or seed must be good; there must be moisture, good flour, and the dough must be worked.

Yeast plants are so small that it is impossible to see them with the naked eye. When these plants have good food in a warm place, they begin to grow, but their growth is not the

same as plants, small buds form and these break off. The bud which broke off again sends out more buds, and soon the mass of dough in which the yeast is growing becomes a mass of bubbles.

Yeast is killed by a high temperature or it stops growing when the temperature is low, so you see it needs heat just as other plants need sunshine.

When yeast cells are dead a dark streak appears.

Thermometers:—

Many homes have thermometers in order to know how warm a summer's day may be or how cold it is in winter.

Again thermometers are used for butter-making, while a nurse always has a thermometer near, that she may tell the doctor about the patient.

These are not the only uses for thermometers. It has been found that yeast requires a certain amount of steady heat in order that it will grow the best. Find 75 or 80 degrees on the thermometer. Hang the thermometer where the mercury runs up to 75 or 80 degrees and then remains there for many hours. This is the place where the bread pan should be in order that the yeast will be able to be happy. Do not forget to use your thermometer each time, just as though you were a nurse.

CONTEST No. 7—Sewing

(11 to 14 Years)

- 1—Plain gingham apron.
- 2—Tea or fancy apron.
- 3—Initialed linen workbag.

(15 to 17 Years)

- 1—Shirt waist.
- 2—Gingham apron for kitchen use.
- 3—Dress of suitable design for use in housework.
- 4—White cotton nightdress.

Rules Governing Contest

1—Each entry must be accompanied by a statement to the effect that all the work was done by the contestant without assistance.

2—Each contestant must write an essay of not more than 300 words describing the growth of cotton and the processes involved in making it into cloth.

3—Each contestant must keep a record of the cost, including time and material.

Score Card for Sewing

	Points
Suitability of Material	20
Originality	20
General Neatness	20
Evenness of Seams and Stitches	20
Essay and Cost Record	20
	100

CONTEST No. 8--Canning and Preserving

This contest is included in order that the attention of the boys and girls may be drawn to the fact that vegetables may be canned as successfully as fruits, thus converting the surplus supply of corn, beans or tomatoes into wholesome, nutritious food for use in winter, when the only available supply of this kind is the high priced and often inferior brand of Canned Goods.

The germs that cause food to spoil are bacteria, yeast and molds. These little parasites are so small that they cannot be seen without a microscope. The yeast is easily killed by heat, and the molds are to a certain extent repelled by fresh canned vegetables, but the bacteria is to be found everywhere, in the air, water, and even on the cooking utensils, and requires extreme heat to kill them. The bacteria is easily destroyed by boiling, but the spores are not all completely destroyed unless boiled for an hour every day for two or three days.

If the following directions are carefully followed, satisfactory results will be obtained:—

The Method of Preparing Soil and Sowing Garden Peas.

Garden peas will thrive on practically any well prepared, well drained garden soil. The land, before sowing, should be deeply plowed, preferably in the fall of the year. The spring cultivation should consist of one or two successive diskings, followed by a couple of cultivations with the drag harrow. The seed should be sown about from the 10th to 25th of May. Sow in rows three feet apart and sow the seeds about two inches apart.

The cultivation during the summer should be frequent, at least once a week, during the earlier part of the growing season. As the pods develop cultivation can be stopped.

For the larger varieties some supports, in the form of a trellis, should be provided to keep the vines upright and allow the pods to properly develop.

Peas should be harvested before the pods become dry and when the pea grains are well developed.

A good variety would be "Nott's Excelsior."

To can beans by the cold pack method with sterilization on three consecutive days proceed as follows:—

1—Pick beans from stalk and do not take any that are old and hard.

2—Wash them well.

3—Pull the fibrous strings out of the back and front of the pods if the beans happen to be stringy.

4—Break the beans into pieces about two inches long.

5—Pack the beans into a pint fruit jar.

6—Add about one-quarter teaspoonful of salt.

7—Fill the jar with cold water.

8—Screw or clamp the top on, using a new rubber ring. Leave the top loose while boiling.

9—Put the jar in a pot or boiler in which you have fixed a false bottom of slats or anything to keep the jars about one or two inches from the bottom of the boiler.

10—Pour water into the boiler until it is half way up the jars.

11—Place a lid on the boiler and boil for one hour.

12—Screw the top down and leave for twenty-four hours.

13—After twenty-four hours loosen the top and boil for one hour.

14—Screw down the top and leave again for twenty-four hours.

15—Loosen the top and boil a third time for one hour.

16—Screw the top on tight while the jar is hot and place in a dark, cool place. The contents should keep for two years.

To can green peas by the cold pack method proceed as follows:—

1—Pick the green peas, choosing those that are not too old and hard.

2—If you have more than will fill one pint jar, separate the older pods from the younger ones and can each kind separately.

3—Fill the shelled peas into a pint fruit jar.

4—Add about one-quarter teaspoonful of salt.

5—Fill the jar with cold water.

6—Sterilize by boiling one hour on each of three consecutive days in the same way as outlined for beans in numbers 8 to 16 above.

Regulations Governing the Contest

1—Limited to Club members between the ages of 15 and 17, both inclusive.

2—Sufficient seed peas or beans will be supplied from which enough material can be grown for the contest.

3—Each contestant must agree to do all the work connected with the contest.

4—Must agree to follow directions both as regards cultivation and canning.

5—Must exhibit four one pint jars of canned vegetables.

6—Must write a composition of not less than 250 words, describing the different steps and processes.

TO THE BOYS AND GIRLS OF MANITOBA

The Agricultural College is especially interested in the development of everything pertaining to rural life, and each department of the College is carrying on experiments and investigations by which it is hoped to solve some of the perplexing problems that are met with in the business of farming.

The Extension Service Section of the College was established as a clearing house for this information. As soon as ideas have been worked out and tested they are put into bulletin form and placed at the disposal of the Extension Service.

We want you to read the list that is given on the last page and send for any bulletin or circular that you think will be of service to you or to your parents.

The work of the Boys' and Girls' Clubs is intended to supplement the work of the schools, not to replace it. It has long been recognized that education should be more vocational in character. The girls should know how to cook and sew and keep the house in order; that boys should know more about the kinds of crops that are best suited to the land they have; what kinds of food produce growth, and what kinds put on flesh in the live stock work. Both boys and girls should understand all about marketing and keeping accounts, should have minds trained to think quickly, clearly and accurately, should carefully study ventilation and sanitary conditions. Motion study and labor saving devices are the keynote in the industrial world. Vocational efficiency will count for just as much on the farm as in the factory. Business methods are being followed now by all successful farmers and Boys' and Girls' Clubs affords the best possible place to begin this much desired accomplishment.

Teachers and parents have already experienced the benefit of the contests in bringing the home and school into closer relationship. The parents find that the boys and girls are getting practical work that actually relates to agriculture. The teachers find that they have more time for the other useful studies, and besides the practical work affords the best possible material for composition, arithmetic, spelling, history and nature study.

We hope that the boys and girls will not hesitate to call on the Extension Service Section of the College whenever they think that it may be of assistance to them.

**Extension Service Section,
Manitoba Agricultural College.**

BOYS' AND GIRLS' CLUB

Application for Enrolment

..... 1915.

Superintendent,
College Extension Service,
Manitoba Agricultural College,
Winnipeg, Man.

The..... Boys' and Girls' Club
hereby signifies its affiliation with the Manitoba Agricultural
College and the Department of Agriculture for the Province of
Manitoba, and desires to participate in the free distribution of
material for the several contests to be undertaken during the
year.

The Club agrees:

1—To exhibit the material produced at a Fall Fair, the date
of which will be set by the Extension Service Section of the Agri-
cultural College.

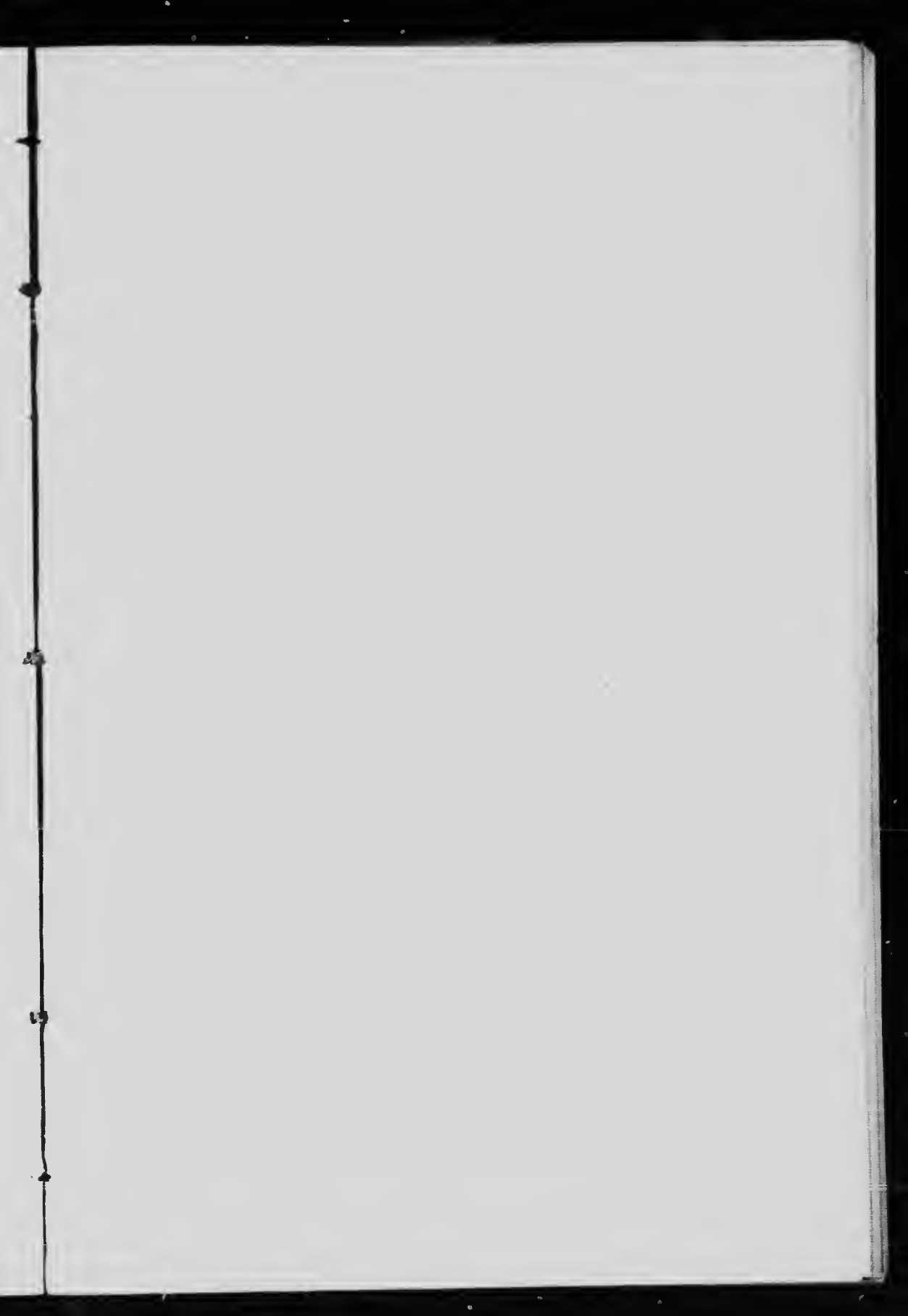
2—Will carry out the rules and regulations as outlined in
Bulletin No. 15 of the Agricultural College.

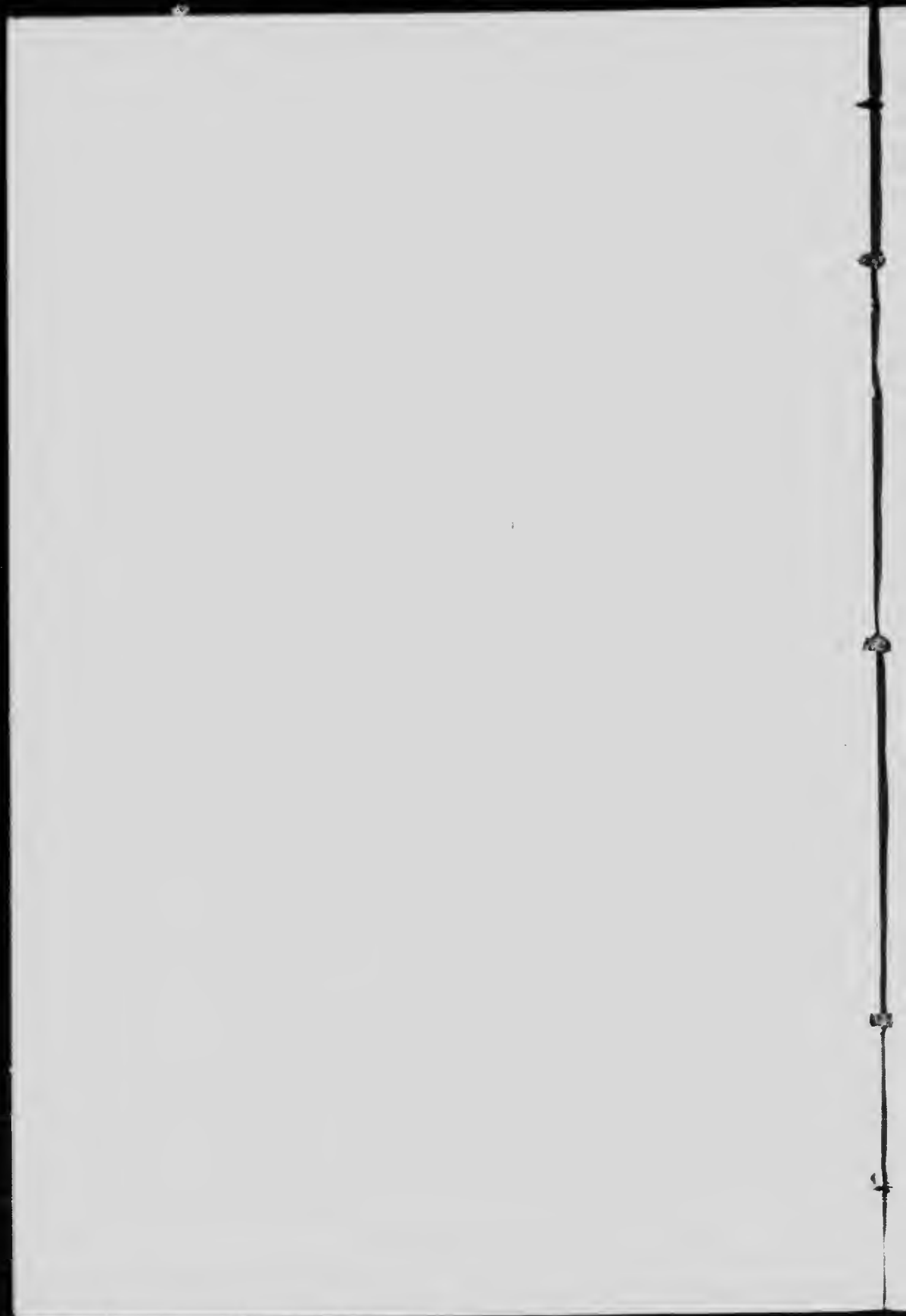
3—Will report once a month the progress being made by the
Club.

Club Organizer.....

Profession or Occupation.....

Secretary





Manitoba Agricultural College

(Extension Service Section)

Any of the following Bulletins or Circulars may be obtained free on request from the Extension Department.

BULLETINS

- 1—Horses.
- 2—Twelve Noxious Weeds.
- 3—Care of Milk and Cream.
- 4—Protection of Farm Buildings from Lightning.
- 5—The Farm Garden.
- 6—Farm Poultry in Manitoba.
- 7—Hog Raising in Manitoba.
- 8—Cow Testing.
- 9—Repairing Farm Equipment and Roads.
- 10—Plans for Farm Buildings.
- 11—Canning and Preserving.
- 12—The Farm Flock.
- 13—Barn Ventilation.
- 14—Care of Cream for Creameries.
- 15—Boys' and Girls' Clubs.

CIRCULARS

- 1—The Farmers' Beef Ring.
- 2—Some Facts About Sheep.
- 3—Manitoba's Hog Market.
- 4—Beef Cattle Situation.
- 5—A Few Dairy Facts.
- 6—
- 7—
- 8—Hints on Home Nursing.
- 9—Practical Hints on Poultry.
- 10—Meat (Home Economics Department).
- 11—What Every Girl Should Know.
- 12—
- 13—Cream for Creameries.
- 14—Method in Dressmaking.
- 15—Fattening Chickens for Market.
- 16—Pork Making on the Farm.
- 17—Servants in the House.
- 18—Alfalfa in Manitoba.
- 19—Fodder Corn in Manitoba.
- 20—Alfalfa Inoculation.
- 21—Barley Growing.
- 22—Notes on Growing of Trees, Shrubs, etc.
- 23—Improving the Farm Egg.

