

# THE VISITOR

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## HOME PROJECT PLANNING

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There is a valid reason why this first issue in Vol. XI of the Visitor contains an article on Home Project Planning. It is to be hoped that teachers of agriculture have led their classes to select home projects for 1923-24 by the end of the first week in school. Many of the problems in connection with home projects arise during the first and last months of the school year; only a few during the winter months. It is also to be hoped that pupils will construct the various parts of their plans as the need occurs. Consequently, project plans should usually be started at the beginning of the school year. The subject "Home Project Planning" is especially appropriate at this time.

Perts of two actual home project plans follow. The present discussion is based on their characteristics and contrasts.

### PROJECT I

#### PLAN FOR GROWING OATS

##### PART I—AIM

My aim is to learn all I can about oats so that I can make as much profit as possible from my 20 acres of oats.

##### PART II—PROJECT AGREEMENT

My father is going to let me rent 20 acres and he will let me hire what horses, machinery, and labor I need from him. I can grow the oats according to this plan and can have all the profit I make.

##### PART III—PROCEDURE AND REASON

The problems I expect to meet in oat growing are (1) Choose field; (2) choose variety; (3) obtain seed; (4) prepare seed oats; (5) disk oat land; (6) harrow oat land; (7) Sow oats; (8) cut oats; (9) shock oats; (10) thresh oats; (11) sell oats.

###### 1. Choose Field

What field shall I choose?

I shall choose a 20-acre piece at the southwest corner of the farm.

###### 2. Choose Variety

Which variety shall I choose?

I shall choose Iowar oats.

###### 3. Obtain Seed Oats

Where shall I obtain seed oats?

I will purchase certified seed oats from \_\_\_\_\_ of \_\_\_\_\_, Minn.

###### 4. Prepare Seed Oats

How shall I test seed oats for germination?

I will use the plate and blotter method and run three tests.

How shall I treat oats for smut.

I shall sprinkle the seed oats with 1 pint of 40 per cent formaldehyde in 10 gallons of water, put them in sacks, and let them stand for 12 hours.

## PROJECT II

### PLAN FOR GROWING OATS

#### PART I—AIM

On our farm we have grown oats for many years. We have broadcasted oats on land which has often been poorly prepared. No attempt has been made to obtain good seed oats. Oats are a neglected crop and it is possible that they are produced at a financial loss. My aim is two-fold (1) to compare the profit on oats raised as we have always raised them and the profit on oats raised according to the best methods I can discover and (2) to make as much profit as I can on 20 acres of oats.

#### PART II—PROJECT AGREEMENT

The following is a letter received by my father, September 6, 1922.

"Dear Mr. \_\_\_\_\_:

I am writing to express to you in writing my understanding of the agreement reached by you, Raymond, and myself in respect to Raymond's home project for this year.

My understanding is (1) that you will rent to Raymond 20 acres of land to be selected jointly by you and him, (2) that he may hire from you horses, machinery, and labor needed, (3) that he may borrow from you sufficient funds to finance his project, (4) that he may conduct the project as he wishes, and (5) that he will be allowed to stand the loss or receive the profits on his venture. The rates for rent, hire, and interest will be those commonly paid in this community.

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Furthermore, it is understood that you will co-operate by furnishing Raymond such data as will enable him to arrive at the cost of producing the oats grown by you in 1923.

If my understanding is incorrect, I am anxious to make correction. I appreciate your good will and desire to co-operate. Yours sincerely,

Teacher of Agriculture."

#### PART III—PROCEDURE AND REASONS

The problems I expect to meet in growing my oats are:

(Same problems as in preceding plan, Project I)

##### 1. Selection of the Field

- What kind of soil shall I select?
- What crop should oats follow?
- What field will be in condition at planting time?

(a) Oats require more moisture than any of the crops grown in this locality except the leguminous forage crops,<sup>1</sup> consequently, a soil holding a large amount of moisture is preferable. A heavy soil holds more moisture than a lighter soil<sup>2</sup> and therefore I will select a heavy soil in preference to a lighter soil.

(b) There are only three main crops at home: corn, oats, and clover. Oats may follow oats or corn. Oats after corn is a desirable order because the corn land can easily be fitted for oats. If the land is so rich that oats lodge after corn, another crop of oats may follow to good advantage and the lodging will not be serious.

I may rent 20 acres either where corn was grown last year or where oats were

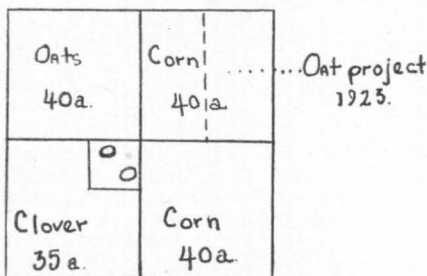
<sup>1</sup> Mosier and Gustafson, Soil Physics and Management, p. 188, 242.

<sup>2</sup> Ibid, p. 197.

grown last year. The oats lodged last year, there will be little or no lodging from richness of soil.<sup>3</sup>

(c) The field where we had oats last year is clay loam. The fields where we had corn are silt loam except in one corner. The latter fields can be put in condition to sow a little earlier in the spring; the clay loam soil is slower to dry out.

(d) The following is a sketch of the home farm showing acreage and locations of crops grown in 1922.



I have decided on the field indicated. This field was in corn in 1922. The soil is silt loam, a little lighter than that used for oats in 1922. I prefer the heavier soil, as it holds more moisture, but this advantage is offset by the earlier sowing possible<sup>4</sup> on the silt loam and by the fact that the order of rotation which my father has established will not be interfered with. Three members of the class think I should select the clay loam field which was in oats last season.

##### 2. Selection of Variety

###### Questions

- Which variety will yield best?
- Which varieties are least likely to lodge?
- Shall I select an early or a medium variety?
- Shall I select a variety the grain of which is attractive in appearance?
- Which variety shall I select.

(a) The substation nearest to my home is that at Waseca. The best yielding varieties there are Minnesota 674 (Sixty Day), Iowar, Minota, and Iowa 103.<sup>5</sup> Iowar is highly recommended as a yielder in Iowa.<sup>6</sup>

<sup>3</sup> Conversation with John Seymour (neighbor).

<sup>4</sup> Breeders' Gazette, May 18, 1922. Vol. 81, p. 66.

<sup>5</sup> Minnesota Special Bulletin 53, pp. 8 and 9.

<sup>6</sup> Wallace's Farmer, March 4, 1921, Vol. 46, p. 416.

(b) There is little information available on the stiffness of straw of the different varieties. In general, the early varieties in this locality have a shorter, stiffer straw.<sup>7</sup> The yield of straw is not particularly important at home since we have more than enough for our needs every year. Minnesota 674 and Iowa 105 are said to have exceptionally stiff straw.<sup>8</sup> Iowa 103 and Iowar are somewhat better than the medium varieties in this respect.<sup>7</sup>

(c) Early varieties are preferable because their flowering period is usually past before the hot weather of July arrives.<sup>9</sup> Early varieties are better as nurse crops because they shade the ground less and because they are taken off earlier in the season than the medium varieties.

(d) I wish to sell my oats and therefore attractive appearance is of some importance. White varieties are more desirable in the market.

(e) I will select Iowa 103 as my variety. I would prefer Minnesota 674 if seed were available in quantity. Iowa 103 is a white oat and is early. It is a short strawed variety and lodges little.<sup>10</sup> It seems to be the best variety considering yield, stiffness of straw, earliness, and appearance. It is strongly recommended by the Minnesota Experiment Station.<sup>11</sup>

#### 3. Obtaining Seed Oats

##### Questions

a. What kind of seed shall I obtain?

b. Where shall I obtain seed?

(a) We are raising a yellow oat at home, probably Kherson. Therefore, I can not use home grown seed. Furthermore I wish to get seed, the crop from which can be certified. The increased quality, yield, and seed value of my crop will pay me good returns for this added expense.

(b) I will obtain certified seed oats from \_\_\_\_\_ of \_\_\_\_\_ Minn. Mr. \_\_\_\_\_ lives ten miles from here so that these oats have been grown under the same climatic conditions which exist here.

#### 4. Preparing Seed Oats

##### Questions

a. How shall I clean seed oats?

b. How shall I test oats for germination?

c. How shall I treat oats for smut?

<sup>7</sup> Conversation with Joseph Hale, separator man in our threshing ring.

<sup>8</sup> Minnesota Special Bulletin 53, p. 8, and Wallace's Farmer, April 2, 1920, Vol. 44, p. 104.

<sup>9</sup> Iowa Bulletin 96.

<sup>10</sup> Conversation with Joseph Hale, separator man in our threshing ring.

<sup>11</sup> Minnesota Special Bulletin 53, p. 8.

(a) The seed oats will be clean when I get them.

(b) Mr. \_\_\_\_\_ guarantees that his oats will germinate at least 90 per cent. I will test them by three different methods, the rag doll method, the plate and blotter method, and the soil method. If the seed oats germinate under all three methods I will consider the test reliable. I will select small samples from each sack of seed oats to get a representative test sample. I will test 100 seeds by each of the three methods.

(c) It pays to treat for smut every year.<sup>12</sup> There are three methods of treatment. The first is to sprinkle oats with a solution of 1 pint of 40 per cent formaldehyde in 40 gallons of water. About a gallon of the solution is sprinkled on a bushel of oats. This method causes oats to swell and may necessitate drying them out. It also involves handling much water.

The second method is to mix 1 pint of 40 per cent formaldehyde and 1 pint of water and spray this on the oats. This method does not cause swelling or handling of water but injures germination and is very irritating to the nose and throat.<sup>13</sup>

The third method<sup>14</sup> is to sprinkle about 40 bushels of oats with a solution of 1 pint of 40 per cent formaldehyde in 10 gallons of water. Then the oats are shoveled over thoroly, sacked, and may be sown in 12 hours. This method is effective in controlling smut, does not injure germination, and causes little swelling.

The third method is the one that I will use.

Project plans ordinarily consist of six parts: (1) the aim; (2) the agreement between boy, parent, and teacher; (3) the detailed procedure; (4) the project bibliography; (5) the project accounts; and (6) the project conclusions. The present discussion deals with the first three parts.

Any educational activity is made more effective if there is a clear aim on the part of the learner. The wording of the aim is satisfactory if it indicates (1) that the pupil has a definite aim and (2) that he looks upon the home project as a means of learning. Both plans are satisfactory as to aim but Plan B shows that its maker has given more thought as to what his project may teach him.

#### The Project Agreement

Plan A does not show whether the project agreement was made at a conference of the three parties. Such a

<sup>12</sup> Breeders' Gazette, May 18, 1922.

<sup>13</sup> Ohio Bulletin, Vol. 4, March, 1919.

<sup>14</sup> Iowa Circular 45.

conference is necessary because the cooperation of parents is necessary and can not be obtained by using the boy as a go-between. The parent must understand thoroly the aims, methods, and results of the home project and he can not get the necessary viewpoint from the boy. Plan B indicates that such a conference has taken place.

The form of the agreement is also important. In plan A some sort of understanding exists, the details of which are vague and not a matter of record. Or the other extreme is a detailed written agreement signed by boy, parent, and teacher. The teacher of agriculture will not enforce such an agreement in court. The mere suggestion of legal action arising from the signing of names will antagonize some farmers. The main virtue of the signed agreement is its definiteness as to details. The agreement in Plan B is definite and is a matter of record but the parent has not been asked to sign it. The teacher, after a conference with boy and parent, records the agreement reached and sends a copy to the parent.

#### *The Detailed Procedure*

This part of the project plan is its core. The boy plans the details of how he will conduct his project just before each project problem arises. For example, just before planting time the class will take up the preparation of seed oats for planting and the boys who have oat projects will plan in detail how they will prepare their seed oats. Let us follow

through the steps the boy takes in planning such a project problem or job. Before oat planting time the boy will have analyzed his project into problems or jobs. Or the teacher may let these problems arise as he proceeds with his course of study. For example, the problem, preparation of seed oats, may arise when the subject is assigned by the teacher to the class.

#### *Step I. Determine the Main Points*

The teacher asks the boy having an oat project to determine the decisions he will have to make in order to prepare his seed oats. For example, these decisions might be (1) how to clean his seed oats, (2) how to test them for germination, and (3) how to treat them for smut. It is good practice to require the boy to formulate questions covering these points the answers to which will indicate the procedure he is to follow. For example, in planning the preparation of seed oats in Plan B, these questions are

- a. How shall I clean seed oats?
- b. How shall I test oats for germination?

#### *c. How shall I treat oats for rust?*

Note that in order to answer these questions the boy must state what he will do and not what he should do or would like to do.

#### *Step II. Gather information bearing on the questions*

The boy now has a guide for project study, i.e., he will select out all the information which contributes toward answering the above questions. He may find this information not only in the books, bulletins, and periodicals included in his bibliography but also in lectures and conversations with neighbors and others. In gathering information the boy should keep a record of sources. Wherever possible the boy should cite authorities for the statements in his plan (see footnotes in Plan B). This is good practice because (1) the boy is likely to be more careful in his statements, (2) the project plan has a greater permanent value, and (3) the teacher can check the accuracy and thoroughness of the boy's work.

#### *Step III. Answer the questions using the information which has been gathered*

The boy has a collection of information relating to each question. He needs to organize the information for each question and put the answer in written form.

#### *Step IV. Submit answers to the teacher for his approval*

Most pupils will not be able to put their plans in final form at the first writing. The teacher needs to check over the answers. He should go over the citations and look for grammatical errors. He should watch for completeness of the answer. It is very important that the answer contains the *reasons* for making a decision as well as the decision made. In general, Plan A contains answers which are incomplete and do not include the reasons for the decisions made. The answers in Plan B are satisfactory in these two respects. The question "How shall I treat my seed oats for smut?" is a very good illustration in both plans.

#### *Step V. Submit plan for a problem or job to the class*

Now the class passes on its soundness and practicability. If John can not justify his plan, then he should modify it.

#### *Step VI. Copy the plan in final form*

After the plan has been submitted to the class, John is ready to copy the plan into his project notebook in final form. If later it should become necessary to make changes in the plan, these should be added to the plan with the reasons for making them.