LAND APPRECIATION

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LAND APPRECIATION

(Land Judging)

by

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Land Appreciation Schools are designed to give the participants an appreciation of the need to classify land according to its capability in order that each kind of land may be best treated and used to keep it permanently productive without damage to the land.

These schools grew out of annual conservation schools for 4-H Club and FFA boys held at Red Plains Conservation Experiment Station, Guthrie, Oklahoma since 1941. Later this work was developed on a field basis.

Land owners and operators who use all their land according to its capability have made great progress in soil conservation farming and ranching.

Participants in these schools are taught to appreciate the fact that soil depth, texture, permeability, slope and other factors determine the capability class of the land, and that this classification is the key to using and treating land properly. This is the first step in becoming a soil conservationist.

Land Appreciation Schools should be carried out in such a way that the participant will emerge not only with a genuine respect for technical skills involved in determining land capability classes but also with a desire to have his home farm so classified that his land may be put to proper use and treated with the right combination of conservation practices. This will hasten the application of soil and water conservation in Oklahoma.

ACKNOWLEDGEMENT

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The author is grateful for this assistance.

Planning and Organization

Holding a Land Appreciation school requires prior planning, organization and co-ordination. The county agent is the person to take the lead. He gets in touch with representatives of all agricultural and other interested agencies, tells them of the proposed land appreciation school, and asks them to participate and assist according to their own means.

Time Required for Conducting a Land Appreciation School

Staging of this event requires a day's time. The explanation of the school and various land factors to be studied should be given in a classroom or comfortable building, using approximately two or two and one-half hours in the morning. In the afternoon, a field trip is made to a previously selected farm.

Use of Fields

Three fields are used, numbered one to three. The participants are informed of the total number of conservation practices applicable to each field, as well as results of tests for lime and phosphorus. Other practical information is given as to type of farming: livestock, cash crop, fruit, vegetable, etc. Additional pertinent information is also given such as the availability of barnyard manure and special conservation equipment.

Soil Profiles

A soil profile must be exposed by digging a hole in each field in advance of the school. This enables the participants to examine the soil depth, texture, and permeability of subsoil.

Judging

A Soil Scientist makes decisions involved in determining land capability class and conservation practices needed. This is done in advance of the school. The correct answers are designated on a separate sheet (Form P-1) for each of the three fields, and these are referred to as "Master Sheets." These sheets contain official answers.

Group Arrangements

A guide leads participants from one field to another. Not more than fifty people should be in one group. Large numbers of farm people can participate in a land appreciation school at one time if arrangements are made for several guides; for example, six leaders could handle three hundred people.

Four or five holes could be dug in the field at intervals of seventy-five

yards or more, in order to accommodate several groups of people studying one field at the same time. It is important to space these holes far enough apart so the sound of voices will not distract or confuse other groups in the same field.

Figure 1. This is a group of boys and adults participating in a soil conservation judging contest. They are making their placings on the soil and the field—similar to livestock judging work.

Teams

If it is so desired, teams consisting of representatives from soil conservation districts, neighbor groups, farm organizations, 4-H Clubs, vocational agriculture students, and "GI" classes may participate in order to create competitive interest. Teams can be made up of these individuals. All others may compete for individual high score.

Study of Fields and Recording

After examining a soil profile, each participant makes an estimate of the texture of soil, its permeability, depth, slope, degree of erosion, drainage and capability class of the land. These estimates are recorded on Sheet No. 1. On part 1 of Sheet No. 1, the participants place an "X" in the square preceding his choice of terms. For example, under "Surface Texture", if his estimate is "Medium Texture", he marks "X" in the square by the word "Medium". In "Land Capability Class No." column, he circles the class number. It is optional if participants are required to determine the land class. In case the officials conducting the training school decide to give the people this information, the ten points allowed can be distributed to other items such as texture, depth, permeability, slope, degree of erosion and drainage.

After estimating the physical factors of land and land capability class, each individual chooses the minimum treatment needed on each field for conserving soil. Sheet No. 2 contains legends for soil conservation practices. These practices are divided into three groups—cropland, land to be retired from cultivation and native pasture land. Participants are told in advance how

Figure 2. A group of farm youth participating in a land judging school.

many conservation practices are needed and from which group to select practices.

In case practices other than those listed are applicable, they may be written in blank spaces. The practices selected are recorded by legend number in the squares at the bottom of Page No. 1, on part 2 of the page. For example, if the rotation selected is practice No. 6, and a diversion terrace is also thought needed (practice No. 3) the numbers are placed in squares as follows: [6] [3]. In grading, the judges should not count off if these practices are recorded in some other order. In other words, order of practices recorded from left to right should have no bearing on the grade.

Grade

Points are awarded for each entry made on Sheet No. 1 by participants in the Land Appreciation School. Total number of points makes up final score. The perfect score on a field is 50. Twenty-five points are given on Part 1 of Sheet No. 1. Twenty-five points are given for a perfect score on Part 2 at bottom of Sheet No. 1. Perfect score on three fields is 150 points. Participants can compare their score with others in their group.

Example of Scoring—Part I, Sheet No. 1

Here is an example of how judges award points on answers given by a contestant. Suppose Field 1 is cultivated cropland and is Land Capability Class III which has a topsoil texture of clay loam, subsoil which is permeable, a deep soil, and a rolling slope with no wind erosion, moderate water erosion and good drainage. Judges should list the following points on the master sheet with correct placings.

Land Capability Class No. III	**10 points**
Good Drainage	**1**
Moderate Water Erosion	**4**
***Wind Erosion**	**0**
Slope of land, rolling	**4**
Deep Soil	**2**
Permeable subsoil	**2**
Texture of soil, fine	**2**

* In this case the field is not affected by wind erosion. Judges place points awarded under land capability class number. They write points awarded for each of the other factors after the words in each column. Participants giving answers not in accordance with the judges' decisions receive fewer points for their answer or a zero for their score on that item. Judges and localities will vary, and the above points and system also will vary.

Example of Scoring—Part II, Sheet No. 1

Suppose a participant marks practices 1, 4, 6, 8, 9, 10, and 12 from Sheet No. 2. The judge will grade as follows:

1	4	6	8	9	10	12	—(practice numbers)
(5)	(2)	(5)	(4)	(3)	(3)	(3)	—(points awarded by judges for each practice)

The total number of points circled under squares totals 25, which is a perfect score in this particular example. Had the participant marked some practice or practices other than ones designated by the judging committee, he would have received fewer points, or perhaps a zero, for his answer. Emphasis is given by the judges to the conservation practices having the most important bearing on each specific field problem. In the above example, lowest number of points was given for terrace maintenance. This would depend upon the decision of the judging committee. In certain localities, the judging committee would consider this practice worthy of more points. The judging committee is authorized to determine how many points should be awarded to the participants for each of their answers. Participants will have different ideas about conservation practices on a field. A method can be used to give points for optional practices. Here is an illustration:

1	4	6	8	9	11	12	/	5	7	10
5	3	5	3	3	3	3	/	2	2	2

The sloping line indicates the separation between the correct answers for conservation practices and some optional conservation practices such as 5, 7, 10. It is suggested that points for the optional practices be less than the figure for the practice having least number of points assigned. For example:

1	4	5	8	9	11	12
5	3	2	3	3	3	3

In this case the participant would score 22 points instead of 25 points. The difference is the selection of the rotation. The participant used practice 5 instead of practice 6. A total of 3 points was lost by using practice 5 instead of 6. In all cases the judges tell participants how many conservation practices are necessary on a specific field. The participant makes the selection of the proper practices from Sheet No. 2. The practices are selected by legend number.

Tabulating Scores

The tabulation card is a very helpful device for tabulating the scores of all individuals in Land Appreciation Schools. To save time, before the school begins, the tabulating cards may be distributed to all participants as they enter the first field. These people can fill out the card, giving their name, address and other information desired. The guides should take up cards and keep them. After grading on each field, the guide should call out the name of each participant as it is written on the card. This individual responds by calling out his grade on parts 1 and 2.

It has been found advisable to have the groups exchange placing sheets No. 1 and grade each other's answers. If this is not satisfactory, other methods can be used. In many cases the individuals can grade their own placing sheets. The grading is done by the guide calling out correct answers in part 1 (sheet No. 1). As an illustration, if "Medium Texture" is the correct answer, two points are marked after the words "Medium Texture". This is continued on through parts 1 and 2. Each individual takes part in grading the answers, either on his own sheet No. 1 or by exchanging with someone else. At the end of the grade recording period, the guide holds a discussion about the correct answers, proper practices, etc., before his group leaves the field. In this way, everyone attending the Land Appreciation School has a chance to ask questions and really make a study of the facts.

The guide can total up the score on each tabulation card in a few minutes after all fields have been studied. The high scoring individuals can be determined. The rating and scoring of the entire group can soon be determined by each guide.

Recognition of High Scoring Individuals

The winners may be determined in each group. Individuals making highest number of points are given recognition as "high point" individuals. If teams compete, total points of each member on the team are added, thus making total for the team. In case of a tie, "tie breaker" methods may be used. For example, the tie may be broken by determining who made highest score on part one of field 1, etc., until the tie is broken.

Miscellaneous

If time will permit, four fields may be used instead of three. However, it is usually best to use three fields because of the time factor and it is more convenient to select three desirable fields on a farm for the Land Appreciation School. It is recommended that a total time of 30 minutes be spent on each field, examining it and making entries on Sheet No. 1. It is suggested that Circular No. 509, "Know Your Soils", be used as a reference for Land Appreciation Schools.

Land Placing Sheet—Sheet No. 1

1. (Name or No.) _____
2. (Address) _____
3. (County or) _____
4. (Group No.) _____
5. ( ) _____

Part No. 1
Score Part 1 _
Score Part 2 _
TOTAL SCORE _____

Field No.	Soil: Surface Texture	Soil: Subsoil Permeability	Soil: Depth of Surface Soil and Subsoil	Slope	Erosion: Wind	Erosion: Water	Drainage	Land Capability Class No.
	☐ Coarse ☐ Medium ☐ Fine	☐ Very Slowly ☐ Slowly ☐ Moderately ☐ Freely	☐ Deep ☐ Shallow ☐ Very Shallow	☐ Nearly Level ☐ Gently Sloping ☐ Moderately Sloping ☐ Strongly Sloping ☐ Steep ☐ Very Steep	☐ No ☐ Slight ☐ Moderate ☐ Severe ☐ Very Severe	☐ No ☐ Slight ☐ Moderate ☐ Severe ☐ Very Severe	☐ Good ☐ Poor	I II III IV V VI VII VIII

Field No.	RECOMMENDED TREATMENT — Part No. 2
	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
	NOTES:

Instructions for Using*
Sheet No. 1

Participants should use the space "Notes" at bottom of Land Placing Sheet No. 1 to write down information about the field to be examined. This information is given by a guide for a group. For example:

1. Soil test shows deficiencies in organic matter and phosphate.
2. No barnyard manure available.
3. Use 6 practices.
4. Leave out practice 13.
5. Keep in cultivation with intensive use.

It is a good idea to give points for optional answers on physical characteristics. For example: If proper land capability class is No. 1, counting 10 points, the judges should consider giving some points for those marking it land capability Class II. Give from 2 to 5 points as consideration for being nearly correct. The same applies to other factors.

*Sheet No. 2

Sheet No. 2 is for guidance of participants in selection of proper land treatment needed for different land classes. For convenience three broad classes of land are considered. Practices 1 to 16 inclusive for land which will be used for cultivated crops, treatments for 20 to 36 inclusive are for lan l which requires permanent cover. Practices 38 to 48 inclusive are for land now in permanent cover and which has never been in cultivation.

Legend for Land Treatment Needed for Correct Use

TREATMENT
For Land Classes I, II, III, IV.

1. Terrace and farm on contour
2. Farm on contour
3. Contruct a diversion terrace
4. Maintain terraces each year
5. Crop rotation including legume every fourth or fifth year
6. Crop rotation including sowed crops and legumes every third or fourth year
7. Crop rotation of sod like crops of small grains and legumes and grasses for hay or pasture
8. Apply phosphate
9. Apply lime.
10. Use mixed fertilizer
11. Apply available barnyard manure
12. Do not burn crop residue
13. Return to vegetative cover (grasses or clovers)
14. Strip cropping for wind erosion
15. Mulch tillage to conserve soil and water
16. Install drainage system
17. _____
18. _____
19. _____

NOTES

A. TREATMENT: For land requiring a permanent cover. (Land which has been in cultivation)

20. Plant to tall grasses
21. Plant to Bermuda and adapted clover combination
22. Plant to adapted clovers only
23. Plant to tall and medium tall grass mixtures
24. Plant to short grass
25. Apply phosphate
26. Apply lime
27. Mow pasture to control annual weeds
28. Spray pasture to control perennial weeds
29. Construct diversion terraces
30. Install drainage system
31. Apply deferred grazing
32. Apply gully control work
33. Protect from burning
34. Control grazing
35. Provide noncompetitive cover for wind erosion control
36. Soil conditioning crop (legume)
37. _____

B. TREATMENT: For land now in permanent cover. (Land which has never been in cultivation such as native pastures)

38. Overplant adapted clovers
39. Apply phosphate
40. Apply lime
41. Mow pasture to control annual weeds
42. Spray pasture to control perennial weeds
43. Construct diversion terraces
44. Apply deferred grazing
45. Prevent burning of vegetation
46. Overplant with native grass seed
47. Apply brush eradication
48. Control grazing
49. _____
50. _____

This is the legend sheet used to determine the practice in part 2 on sheet No. 1. The blanks such as 17, 18, 19, 37, 49, and 50 can be used by writing in an additional practice when needed.

TABULATING CARD FOR LAND APPRECIATION SCHOOL

Participant's No. _____ **Group No.** _____

Name _____

Address _____

County _____

	Part No. 1	Part No. 2
Field No. 1		
Field No. 2		
Field No. 3		
(Field No. 4)		

TOTAL SCORE _____
(Part No. 1 Plus No. 2)

*Tabulating Card

The tabluation of Card No. A can be used conveniently for determining the score of individuals or teams in a Land Appreciation School. It can be easily mimeographed. It is handy for tabulating the team scores in Land Appreciation Schools.

* All forms in this publication can be economically mimeographed from regular size paper usually available for mimeograph machines.

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