

AGRICULTURAL ENGINEERING

4-H CLUB  
FARM SHOP PROJECT  
RECORD BOOK



NAME OF MEMBER \_\_\_\_\_

NAME OF CLUB \_\_\_\_\_

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## AGRICULTURAL ENGINEERING CLUB

The purpose of the Agricultural Engineering Club is to give instruction in Agricultural Engineering through 4-H Club demonstrations. Projects will include Farm Shop, Farm Power and Machinery, Farm Structures, Drainage, Irrigation and Terracing.

### Farm Shop Project:

The purpose of a Farm Shop project is to assist 4-H Club members in selecting a set of tools suitable for equipping a farm shop and to instruct in the care and proper use of these tools. The goal of every club member should be to secure and equip a repair shop on his home farm, and to demonstrate the value of doing many simple repair jobs and building small articles of equipment on the farm.

This project will continue throughout the year and will require two years to complete. Each club member will be required to keep a complete record of all tools secured for the project and to make a list of all shop equipment on the home farm. He will also keep a record of repair work done on farm equipment, and of all articles built, with approximate cost for materials, time spent on the projects, and estimated value of each completed exercise.

### 1st Years Work

1. Assemble and list all shop tools, bench and other shop equipment on the home farm. Check the equipment on your home farm against the list of tools and equipment on the following sheets.

2. Clean, repair and sharpen the tools to be used in this years' work. Sharpen chisels, file and set saws, replace broken handles, etc.

3. Secure additional tools necessary. The list of tools on page 2 shows the equipment you should have for this project. Where these tools are not all available on the home farm, arrangements should be made to purchase them.

4. Build work bench (if farm does not have suitable one). Plans for bench will be furnished and assistance given in selecting a good location for it.

5. Build a pair of saw horses. These will be found useful for later work.

6. Build a tool cabinet. Plans will be furnished for a good wall tool cabinet in which all the small tools of the shop can be conveniently kept.

7. Arrange tools in cabinet. It is important to have the tools conveniently arranged in the cabinet, also so arranged that space is economically utilized and edged tools protected.

8. Selected project (nail and tool box, wagon jack, wood working vise, Chicken coop, or self feeder are suggested). Some project should be selected that will find ready use on the farm when finished.

### 2nd Years Work.

The second year's work in this project will continue along much the same line as the previous year, but with the addition of instruction and exercises in rope and belt work, (knots, splicing, lacing), harness repair (stitching, etc.), and metal working (soldering, forging, etc.). An outline for the second year will be supplied and records will be required similar to those of the previous year.

Tools

Each club member should secure the following tools, or have available a similar set selected from the home farm which shall meet with the approval of the project leader and the county agent. Check in the columns provided on this sheet the tools which you have available that correspond to the items in list.

Tool List	Ck. here	Cost or Inventory Value	Remarks
1-1 lb. claw hammer			
1-24" hand saw, 8 point cross cut			
1-26" hand saw, 5--rip.			
1- 2 ft. folding rule			
1- 24" steel square			
1- 14" jack plane			
1- 6" block plane			
1-10" sweep Ratchet brace			
1- set of 6 auger bits, 1/4", 3/8", 1/2", 5/8", 3/4", 1"			
1- Nail set			
2- Screw drivers, 1 large 1 small			
1- 8" try and miter square			
1 - set of 3 chisels, 1/4", 1/2", 1".			
1-2x8" combination oil stone			
1- 6" slim taper file			
1- 8" regular taper file			
1-10" rat tail file			
1-10" flat mill file			
1-12" half round wood rasp			
1- 8" wing dividers			
1- Wood mallet			
1-10" draw knife			
1- Hand axe			
1-24" wrecking bar			
1-4 1/2" jaw blacksmiths vise			
1-hacksaw frame and 12 blades			
1-8" adjustable wrench			
1-6" combination pliers			
1- Grind Stone			

On this sheet appears a long list of tools, some of which are often found on the farm. Assemble all the tools and equipment on your farm and check with these items. Use additional sheets to enumerate all articles that you may find that do not appear on this list. Do not list wrenches and small tools that belong with certain of the farm machinery.

TOOL LIST	Ck. Here	Remarks
Saw set		
Saw clamp		
Coping saw		
Compass saw		
Marking gauge		
Expansion bit		
Gimlet bits		
Screw driver bit		
Bevel square		
Twist drills		
Planes		
Level		
Wood working vise		
Pliers		
Files		
File handles		
Mechanists' hammer		
Blacksmith's hammer		
Monkey wrenches		
Adjustable Wrenches		
Pipe wrenches		
End wrenches		
Chain drill		

TOOL LIST	Check Here	Remarks
<u>Breast drill</u>		
<u>Post drill</u>		
<u>Carpenters' Pinchers</u>		
<u>Clamps</u>		
<u>Cold Chisels</u>		
<u>Hand Punches</u>		
<u>Center Punches</u>		
<u>Blacksmith's forge</u>		
<u>Tongs</u>		
<u>Anvil</u>		
<u>Screw plate</u>		
<u>Pipe taps and dies</u>		
<u>Blow torch</u>		
<u>Soldering irons</u>		
<u>Tin snips</u>		
<u>Bolt cutters</u>		
<u>Pinchers</u>		
<u>Axe</u>		
<u>Grindstone</u>		
<u>Emery Stone</u>		
<u>Tool Grinder</u>		
<u>Wire Stretchers</u>		
<u>Harness Tools</u>		
<u>Cement Tools</u>		







ANNUAL STATEMENT

Expenditures

- 1. Value of tools at 1st of year ----- \$ \_\_\_\_\_
- 2. Cost of tools bought ----- \$ \_\_\_\_\_
- 3. Cost of repairing tools ----- \$ \_\_\_\_\_
- 4. Cost or value of materials used ----- \$ \_\_\_\_\_

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- 5. Total cost of Project ----- \$ \_\_\_\_\_

Receipts

- 6. Inventory value of all tools and shop  
equipment at end of the year ----- \$ \_\_\_\_\_
- 7. Inventory value of finished articles ----- \$ \_\_\_\_\_

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- 8. Total receipts ----- \$ \_\_\_\_\_

Summary

- 9. Total receipts ----- \$ \_\_\_\_\_
- 10. Total cost of Project ----- \$ \_\_\_\_\_
- 11. Profit or labor income ----- \$ \_\_\_\_\_

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Articles Exhibited

Prizes

_____	\$ _____
_____	\$ _____
_____	\$ _____
_____	\$ _____

Total Value Prizes ----- \$ \_\_\_\_\_

