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EQUIPMENT FOR THE FARM SHOP

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The Federal Housing and the National Rural Electrification Programs have helped to make it possible for many farmers either to build and electrify new farm shops, or to improve the existing ones. News Letter No. 45 discussed the need for a farm shop and made recommendations as to size, arrangement, construction, and other details. The information and suggestions that follow for equipping a farm shop are the results of numerous studies and observations in various sections of the country. It would be impossible to make a list of tools and equipment that would be practical for every farm. The size of the farm and type of farming, the mechanical ability of the farmer, and other factors will necessarily influence the kind and amount of equipment needed. The lists that follow, therefore, are only suggestive. Some farmers will require more tools while many farmers will be able to do their repair, maintenance, and construction jobs with much less equipment. An attempt has been made to list the tools under a number of headings based upon the various types of activities found on farms.

EQUIPMENT

Workbench. The bench should be at least 12 feet in length, 33 inches high and 30 inches wide. It can be built in the shop by anyone who is handy with tools.

Vises. A machinist's vise with 4 or 4½ inch jaws should be placed near the right hand end of the bench. A wood-working vise should be placed near the other end.

Post drill. A heavy duty post drill which will take blacksmith's drills is recommended. It should have a pulley so that it can be operated with power as well as by hand.

Anvil. An all steel anvil is recommended. The anvil should weigh from 70 to 100 pounds. A short length of rail-

road rail makes a fair substitute for the anvil.

Grindstone. The grindstone should be a No. 1 stone, 2½ to 3 inches thick, and 24 to 28 inches in diameter.

Forge. The forge may be the portable steel type or it can be built of brick and concrete. The hearth of the forge should be 22 inches or larger and there should be a hood and pipe to carry off the smoke. A good revolving fan type blower is essential.

Tool cabinets. The most convenient place for the hand tools is in a wall cabinet over the bench. Two wall cabinets should be provided, one for the wood-working tools, and one for the other tools.

Supply cabinets. Cabinets and drawers for supplies can be easily attached to the walls and workbench. Shelves placed between the studding are convenient for storing small articles.

Motors. Where electricity is available individual motors or one motor and a line shaft can be used to operate the post drill, grindstone, and various wood-working machines such as a circular saw, bandsaw, or jointer. If electricity is not available a gasoline engine and line shaft can be used in a similar way.

Woodworking Tools

- 1 26", 8 point handsaw
- 1 28", 5½ point rip saw
- 1 15" jack plane
- 1 10" ratchet brace
- 1 16"x24" steel square
- 1 2 ft. fourfold rule
- 1 8" dividers
- 1 1½ lb. nail hammer
- 1 26" carpenter's level
- 1 pistol grip saw set
- 2 slim taper files, 5" and 6"
- 1 saw filing vise
- 6 auger bits, Nos. 4, 6, 8, 10, 12, 16
- 2 nail sets, 3/32" and 1/8"
- 2 firmer chisels, ½" and 1½"
- 1 8" drawknife
- 1 2"x8" oilstone
- 3 screwdrivers, 3", 6", 8"
- 1 10" halfround cabinet file
- 1 auger bit file
- 1 ½"-3" expansive bit
- 1 counter sink
- 1 5" mallet
- 1 screwdriver bit
- 1 30" wrecking bar
- 1 12" compass saw
- 4 gimlet bits, Nos. 4, 5, 6, 7

Metal Working Tools

- 1 8"-12" hacksaw
- 2 cold chisels, ½" and ¾"
- 1 center punch, ¾"x4"
- 3 crescent wrenches, 6", 10", and 12"
- 1 3" tinner's snips
- 1 set of 7 carbon steel bit stock drills, ¼" to ¾"
- 6 blacksmith's drills, 1/4", 3/16", 5/16", 3/8", 7/16", 1/2"
- 4 engineer's double end wrenches, cap screw 1/4-5/16; nut 5/16-3/8, 7/16-1/2, 9/16-5/8
- 1 blow torch, 1 quart
- 1 12" flat bastard file
- 1 10" mill bastard file
- 2 round bastard files, 6" and 10"
- 3 solid punches, 1/4", 5/16", 7/16"
- 1 6" combination pliers, side cutting
- 1 soldering copper, 1½ lb.
- 1 machinist's ball pein hammer, 1 lb.
- 1 tap and die set, U.S.S. ¼" to ½", S.A.E. ¼" to ½" and ⅝" pipe

Leather Working Tools

- 1 revolving belt punch, 6 tubes
- 1 rivet set
- 1 stitching clamp (homemade)
- 1 riveting machine
- 1 awl haft with assorted blades
- 1 doz. assorted harness needles

Plumbing Tools

- 2 pipe wrenches, 14" and 18", metal handle
- 1 set pipe stocks and dies, ½" to 1½"
- 1 pipe vise, ¼" to 2½"
- 1 pipe cutter, ½" to 2"
- 1 pipe reamer, ¼" to 2"

Concrete Tools

- 1 10" plasterer's trowel
- 1 mixing box (homemade)
- 1 sand screen (homemade)
- 1 tamper (homemade)
- 1 edger
- 1 jointer
- 1 measuring box (homemade)
- 1 wooden float (homemade)

Forging Tools

- 1 pair 20" straight lipped tongs
- 1 pair ¾"x20" bolt tongs
- 1 hardie (to fit anvil)
- 1 2 lb. blacksmith's cross pein hammer

Gas Engine, Auto, and Tractor Tools

- 1 valve lifter
- 1 set of four tappet wrenches
- 1 automobile creeper (homemade)
- 1 1½ ton heavy duty auto jack
- 1 set of socket wrenches, 17 pieces, 12 point sockets to fit ¼" to ¾"
- 1 set of 6 double open end wrenches, 5/16" to 7/8" S.A.E.
- 1 thickness gauge
- 1 valve grinder
- 1 carbon scraper
- 1 chain hoist, 1 ton capacity

Fencing Tools

- 1 wire stretcher
- 1 13 lb. post maul
- 1 post hole digger
- 1 pair fencing pliers

Glazing Tools

- 1 putty knife
- 1 glass cutter