

THE VISITOR

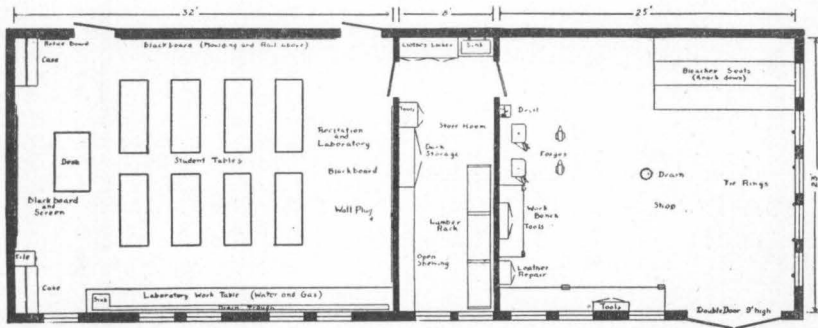
Devoted to the Interest of Agricultural Education in
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AGRICULTURAL ROOM NUMBER



ROOMS FOR VOCATIONAL AGRICULTURE

Designed by the Division of Agricultural Education, University of Minnesota

SERVICEABLE ROOMS FOR WORK IN AGRICULTURE

The plan for agricultural rooms as shown above is offered as a suggestion in helping to solve a big problem. Before proceeding with a description of the plans it should be said that they are not offered as the final word, and as our current price lists have it, are "subject to change without notice." Door and window spacing, size and arrangement may be readily altered to suit conditions of design and construction. Room dimensions are not invariable. But, in general, the plan should be easily adaptable to conditions as found in Minnesota and other states of the Middle West.

Recitation-Laboratory

The rooms are planned to accommodate a group of sixteen pupils, which seems to be about the limit desired in vocational classes. The main recitation room is 23 by 25 feet of standard ceiling height, with maple floor and as much light as possible. Artificial lighting should be provided in abundance. Almost all the wall space on three sides of the room is available for blackboard, that in front being convenient for the use of the instructor.

The two cases shown in the front corners of the room should not be permanently fastened to the walls.

They should be about seven feet high and four feet wide; the base rising 36 inches and being 22 inches deep, and the top, with shelves and glass doors, being but 14 inches deep. This upper part may be used for display material such as bottled grains, pickled insects, and byproducts, as well as for the books of the agricultural library and bulletins, if these are bound or kept in filing cases. The doors here may be of either the hinged or sliding type, the former being less expensive to install, the latter being more convenient and less subject to breakage. The base, being deeper and with solid doors, may be used for the storage of bulkier and less slightly materials.

The laboratory work table under the windows serves two purposes. With water, drainage and heat provided, it may be used in milk testing and soils work. It is 24 inches deep and 40 inches high. This height allows the students to work comfortably while standing, and "toe space" at the bottom provides further for their comfort. The top is acid proofed, with the drain running its entire length. The space underneath is used for drawers and cupboards or soil bins. This gives additional room for storage. The size

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ROOM PLANNING SERVICE

The limited space of The Visitor prohibits an extensive discussion of the question of the agricultural room. It is impossible even to give a detailed explanation of the plan submitted.

We feel, however, that so many mistakes have been made in the planning of agricultural rooms, that school boards and architects as well as agricultural instructors should have some practical ideas to guide them. It is with this thought in mind that this number is issued.

The Division of Agricultural Education will be glad to supply copies of this Visitor to school boards and architects or to others interested. It also offers its services in helping to plan in detail any particular room or set of rooms that is being planned for within the state.

S. D.

SEVERAL POSSIBLE SEATING ARRANGEMENTS

In a space the size of the recitation-laboratory shown in the Minnesota plan several seating arrangements are possible. Some are entirely unsatisfactory, some are usable and a few are highly satisfactory and practical.

Only the two most common faulty arrangements will be mentioned here. One is the use of desk arm chairs exclusively. This is too formal, does not allow sufficient space for individual laboratory work, and unless seats are fastened together leads to untidiness and confusion. Another equally as bad is the use of standard school desks for the same reasons.

A step in the right direction is the use of seats or chairs sufficient for the class grouped in the front part of the room, with tables in the back. This plan recognizes the need of tables for laboratory work, writing, and to relieve the monotony of the ninety minute period. Under this scheme, however, the recitation is made distinct from the laboratory, the former being held with the pupils in the chairs, the latter with the pupils at the tables in the rear. This plan has two glaring faults. One is in the waste of space in having two sets of seats for the same pupils. The other is the absolute separation of recitation and laboratory work brought about by changing from one part of the room to another. It should be possible at all times to place laboratory work before the children without changing positions.

Tables Necessary

There is little doubt that a seating arrangement for a vocational agriculture classroom requires tables in some form or other. The large amount of mixed recitation and laboratory means that the pupils should be seated at tables during the full period of the class work. The extensive use of illustrative material, magazines, bulletins, and reference books requires that each pupil have a large amount of table space at his disposal. These tables should be substantially yet economically constructed, with acid-proof tops if possible, and of standard height. Strong chairs should be provided for the students, as stools are extremely uncomfortable for any considerable time.

Two-Pupil Tables

The table arrangement shown in the Minnesota plan is probably the most efficient from all standpoints. The tables measure 28 inches by 6 feet, giving sufficient space for two students at each. They may be made with or without drawers or a center pedestal which will of course vary the cost. Eight of these tables will be required for sixteen pupils. If the tables are placed in two rows, slightly separated, this plan has many advantages. The light is received from the left side with little obstruction from other pupils. It is possible for the instructor to pass freely around the class for observation and individual help. Each pupil has plenty of space for his materials of study. No two pupils are facing each other. This leads to better attention

and to better work during study periods. This plan is fairly informal and yet should make for neatness in room appearance. The only evident objection to this plan is that one table is needed for each two pupils which increases the expense somewhat over other plans.

The "C" Table

The so-called "C" table arrangement is not so satisfactory as the one just named but has the advantage of being less expensive and of requiring less space. For this plan, three tables are used, each measuring 30 inches by 12 feet. They are placed in the form of a square "C" with the open side to the front toward the teacher. The pupils are seated around the outside, allowing a convenient means of supervision by the instructor. All pupils are facing toward the front and toward each other, which is of course a socialized grouping. This is of value in recitation or group work, but quite unsatisfactory for individual study. Another fault of this plan is that one third of the pupils are facing the source of light and one third have their backs to it. This objection may be minimized by careful artificial lighting.

The "T" Table

The "T" type table arrangement calls for two tables, each 4 by 12 feet. One is placed across the room toward the front and the other with one end against the middle of the first, forming an inverted "T" as viewed from the front of the room. The instructor's position is in the middle of the front, with the class grouped around the tables. This plan also has the advantages of cheapness and space conservation, but without some of the advantages of the "C" arrangement, and with most of its faults.

The use of large tables, wide at one end and narrowing to the other has not proved satisfactory. Large tables scattered about the room lead to unsatisfactory work, disorganization, and unsightly appearance. Several long tables arranged crosswise of the room are objectionable because of their cumbersome and the difficulty in clearing the space for special occasions.

S. D.

INTERESTING FACTS

The farm repair and construction survey showed, among other data, some interesting facts in regard to minor jobs. Of the farmers replying 90 per cent do their own painting, 85 per cent use putty, 67 per cent lace belts, 50 per cent solder, 48.4 per cent cut glass, 38 per cent make rough sketches, and 17.9 per cent make drawings to scale.

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and number of these drawers may be varied, making them useful for many different purposes. It is often convenient to assign a drawer to each pupil, so that he may have a place for notebooks, pamphlets, paper, rulers, extra pencils, or other school material. Here also is a good place for the storage of threshed seed samples to be used in judging. Care must be taken to protect against mice and insects, if used for seeds.

If sufficient storage space is provided elsewhere, the construction of this laboratory work table may be materially cheapened by utilizing the water pipes (and gas pipes if gas is used for heating) as the supporting framework for the top. This type of construction must be well braced, for any play will lead to a weakening of the joints and a leakage of water or gas.

Several other items of this room's equipment should be mentioned here. A rail four inches wide should be placed over the full length of each blackboard. This serves as a place for the effective showing of educational material. A valuable addition to this is the use of a one foot strip of beaver board or heavy green burlap extending above the rail. To this, unmounted pictures, blueprints, or plant specimens may be tacked or pinned for observation. A bulletin board of some material like wallboard should be neatly framed and placed in a prominent position. This will serve for special announcements and for posting the latest news of agricultural interest.

A filing cabinet of a standard type should be provided for the use of the instructor. This will be of value to him in keeping his correspondence and other school papers in order and readily available. This file should be out of the way and yet easily within reach of the teacher's desk. A roll screen for lantern slide projection of not less than 100 square feet area should be hung in the center of the front wall. It should be of strong material and sturdily made. If possible it should be protected from dust by a case or a wide moulding over it. Provision

should be made at the back of the room for an electric plug for convenience in connecting the projector. Reference is made in another column to the question of seating arrangement.

Storeroom

The storeroom, although small, is important. Its dimensions are 8 by 23 feet. It is well lighted, one end being entirely window space. The most of one wall space is used for shelves, both open and closed. Those marked "dark storage" will be found valuable in preserving color in specimens like clovers and alfalfas, which fade badly when exposed to the light. The cabinet marked "tools" serves for the larger tools such as spades, hoes, tampers, shovels, and rakes. The lumber rack is 12 feet long and so arranged that long pieces may be put in or taken out through the window. It is possible, however, with the door arrangement to take a 12-foot piece of lumber into the shop from the rack without going outdoors.

No provision was made for a door into the storeroom from the hall for two reasons. In the first place it is not needed and the instructor under the present plan may readily see who enters the storeroom. In the second place, this space can be profitably used for a clothes locker for the boys and a sink for washing up. In the former, cover-alls and work clothes may be kept when not being worn in the shop; and with the latter the students may clean up for classes following shop practice. A study table might be placed under the windows for the instructor or students at odd hours.

Shop

The school repair and construction workshop may be made one of the most important rooms in the entire building. If equipment is properly placed, a room 23 by 25 feet should be large enough under usual conditions. If possible, the ceiling should be of extra height to permit of large construction. This is not absolutely necessary but may be accomplished by lowering the floor level three or four feet below that of the adjoining rooms. The floor should be constructed of a wearable material which will stand water and rough usage. Wood is unsatisfactory, concrete is too hard and too cold, creosote blocks rot readily and require constant replacement. The state department has suggested a bitulithic floor and this would seem to fill the requirements. It should be so laid

as to slope gradually to a center drain in order that it may be flushed.

Both outside walls should be largely window space. The windows on the end should not extend lower than about 4½ feet from the floor. The doors to the outside should be as high as possible and the opening not less than 8 feet wide. This will allow for good sized machinery and implements to be taken in. The doors should be well made and may have the upper third glazed to admit extra light.

Two benches are shown in the plan, one 2 by 6 feet and the other 2 by 14 feet. These should be strong, well made, and practical, such as might be made for the home farm shop. If so much bench work is being done that this space is not adequate, other benches may be made and placed under the other windows or arranged as desired. One or two forges with anvils should be provided. These should be of some standard inexpensive type suitable for farm use. Tool cabinets should be placed on the walls so that each tool may easily be returned to its place after being used. Vises and at least one good grinder should be a part of the bench equipment.

Several other items in the plan need explanation. The post drill should be firmly attached and conveniently placed. The leather repair cabinet should be near the benches in order to be handy to the sewing horses clamped in the vises. The take-down bleacher seats are shop-made and are valuable for stock judging, special talks, or short course work. The tie rings are merely heavy iron rings set solidly in the masonry of the wall for the purpose of tying stock, so that no students will be delayed in their work by holding the animal part of the time.

As may be seen from the plan, the most of the space in this shop is unencumbered with equipment. It is therefore available for stock judging, construction of such large projects as colony houses and self-feeders, gasoline engine and tractor study, livestock, poultry or grain shows, machinery study, and concrete and cement construction.

It should not be said that this plan is an ideal that is unattainable. Several "agricultural suites" have been built in this state, and no doubt in others, which have cost far more than this. Yet seemingly little or no thought was put into their planning and hence they are of little value. It must be remembered that no ideal is attained that is not fought for and heartily supported.

S. D.