FULLY MECHANIZED FARMING ON THE AGRONOMIC UNIT BASIS—BY ROBERT E. HORTON

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When the paper on “agronomic farming units” was prepared by the late Dr. Robert E. Horton, it was his chief desire to raise some questions for discussion. Much of his paper deals with engineering, economic, and social problems. Those phases probably should be discussed further, since the writer must limit his remarks chiefly to agronomic and soil conservation aspects of the question. Since Dr. Horton was an engineer, he tried to visualize farming reduced to engineering methods so far as possible. Although this paper appeared in the last volume of the PROCEEDINGS, perhaps a brief review of it may be desirable at this point in order to clarify Doctor Horton’s ideas.

In the first place, he considered farming largely an engineering industry and therefore, that it should be more completely mechanized. If this were done, the farmer, being a skilled workman, should receive remuneration for his labor commensurate with other skilled people and in proportion to the amount of his investment. In order to do this, Doctor Horton believed it necessary to increase the size of fields so that larger equipment could be used, and thus increase the efficiency of all mechanical operations.

To obtain these larger field units, he suggested that a number of farmers organize what he proposed to call an “agronomic farming unit.” Line fences would be eliminated in cases where this would result in larger fields with longer rows for more efficient operation, or for more effective erosion control. Farmers and members of their families would continue to live and work on this land. One farmer among the group would be chosen as general manager. Others would be assigned to supervise special lines of activity, such as livestock, crops, or dairying, to which they would devote most of their time. It is assumed that on an agronomic farming unit equipment could be kept busy a greater percentage of the time and also that by proper management more timely operation would be obtained. The “farming unit” organization would have complete control over application of assembly-line procedures of industry to calling an “agronomic farming unit.” Line fences and fields made more suitable for the application of waterway or a system of terraces or diversion ditching, to which they would devote most of their time. It is assumed that on an agronomic farming unit equipment could be kept busy a greater percentage of the time and also that by proper management more timely operation would be obtained. The “farming unit” organization would have complete control over

It seems that there would be certain advantages from the agronomist’s point of view, in some plan that might well be considered. Many are operating farm businesses that are too small to return sufficient labor income for a satisfactory level of living. A farmer of this type does not have the incentive or the capital to do much toward improving his land. He may not be able to purchase fertilizers or keep his land in as good rotations as others who are operating farm businesses that are too large. Such a man might gain by putting his farm into a farming unit along with larger farms. It would be possible on a large unit to purchase equipment better suited to the requirements of the farm than on the individual small farm. Special equipment might be profitable on a large unit that could not be afforded by a small operator. It is also more likely that the small farmer will have a larger than is really necessary for most operations, since he must purchase equipment for the heaviest operation he will have.

In the matter of erosion control, the largest advantage in the farming unit would have certain advantages. In many cases the handling of water across fields or from one farm to another presents many difficulties. It may be advantageous to run a waterway or a system of terraces or diversions across farm boundaries. In many cases the not only simplify the system of water disposal would make it more efficient and less expensive to install and maintain. The Soil Conservation Service has made some attempt to simplify disposal systems through the cooperation of new farmers. By combining fields and pasture, the amount of fencing probably could be greatly reduced and fields made more suitable for the application of soil conservation measures.

Doctor Horton has stressed timeliness