

AGRICULTURAL ENGINEERING

(Scope) Agricultural Engineering may be defined as the art and science of engineering as applied to agriculture.

The scope of agricultural engineering embraces both the technical and economic phases of the application of engineering to agriculture, and is comprehended in the following general headings:-

Clapp - Ackerman 1. Farm Power and Operation Equipment -- This includes power of all kinds such as electrical, water, gas, farm implements, machines such as tractors, engines, etc., and related equipment.

Woolley - Waller 2. Farm Sanitation -- This includes water supply, sewage disposal, lighting, heating and ventilation of farm buildings, and related equipment.

Wood - Mohrman 3. Farm Structure -- This includes farm lay-out, ^{roads, farm forests,} farm buildings, and other structures, concrete construction, building materials, and related equipment.

Embrey - Smith 4. Land Reclamation.-- This includes drainage, irrigation, land clearing, terracing, etc., and related structures and equipment.

THE OBJECT OF AGRICULTURAL ENGINEERING

To promote a better understanding of the value of the science of engineering as applied to agriculture.

To offer technical information and assistance to any taxpayers of Virginia who are interested in the development and the increase in the efficient use of agricultural resources of the state.

To make the farm homes of the state more attractive and more fit places in which to live.

To train men for the agricultural engineering profession and for farm life.

To conduct investigations along agricultural engineering lines.

Engineering principles applied to agriculture have played a tremendous part in the advancement and development of our agricultural practices and are destined to play an even more important part in the future.

The farmers of Virginia have over \$50,000,000 invested in farm implements and machinery. Millions are spent annually for the purchase of new machinery. There is great need for more general use of labor saving farm machinery.

Over \$268,000,000 is invested in farm buildings in Virginia. This is 22.4% of the value of all farm property and more than the combined value of implements, machinery and livestock. There is need for better planning, arrangement and

construction of the buildings on the farm.

99,000
Only a very small percentage of the 186,242 farmers in the state have running water and other conveniences in the homes. There is great need for educational work along this line to make the farm home more fit places in which to live.

Over 1,172,000 acres of farm land in Virginia is in need of drainage. Over 1,496,000 acres of swamp land in Virginia is in need of community drainage. Thousands of acres are now being cultivated at a loss due to poor drainage.

Thousands of acres of farm lands in the state are in need of terracing to prevent loss from soil erosion.

There is great need for the development of our water power both for farm and industrial uses.

There is need for the improvement of our farm to market roads as well as the roads on the farms.
~~improvement & development of our farm forests~~

There is need for more intelligent management of our farm forests.