

Engle Participating in Public Affairs Program

William Engle of Cochransville is currently participating in a unique public affairs education program being conducted jointly by Pennsylvania State University Cooperative Extension Service and Department of Agricultural Economics and Rural Sociology.

The group, comprising 35 people from various counties in the area, is meeting at Hazleton. They are involved in 20 days of intensive training in economics,

sociology, communications, public speaking, meeting management, and government. The sessions are designed to provide the participants with a broader understanding of problems facing rural Pennsylvanians.

Those taking part have received W.K. Kellogg Fellowships which are defraying costs of instruction, study materials, room and board while at the institutes, and field trips.

Developing Less Thirsty Plants

The amount of water required to produce the food consumed by one individual per day is astounding. Over 1,000 pounds of water are required to produce 1 pound of bread and it has been estimated that over 23,000 pounds of water are required by a steer and the forage it eats in the production of 1 pound of beef. Two University of Arizona

agronomists, A. K. Dobrenz and M. A. Massengale, have aimed their research at finding plants which can produce more dry matter with less water. At the annual meetings of the American Society of Agronomy in Miami Beach, Dobrenz reported on the research findings.

The process of transpiration by which plants lose tremendous quantities of water has often been called a necessary evil. Dobrenz and Massengale applied several antitranspirant and growth regulator chemicals and found that Gibberellic acid did increase the efficiency of water use.

Leaf area reduction can also be utilized to improve the water requirement of cereal grains. This involves the removal of the basal leaves on the plant during the stage of maturation, thus reducing the transpiring area of plants.

Dobrenz reported that the total amount of water applied to

alfalfa was cut by 40 percent when high producing adapted cultivars were grown and monitoring of the available soil moisture was used for application of irrigation water.

Numerous plant characteristics were observed in an attempt to find a feature which can be utilized by plant breeders to select more water-use efficiency plants. The amount of cutin on leaves of certain grass species is significantly related to the water needs of those plants and appears to be an effective technique for isolating efficient lines. Various anatomical features of the plant roots also appear to be associated with efficient use of water.

Through plant-water related experiments, we can better understand why so much water is "pumped" through a plant during the growth period. Information from these investigations will allow plants to be bred that conserve and more efficiently utilize one of our most important natural resources, WATER.

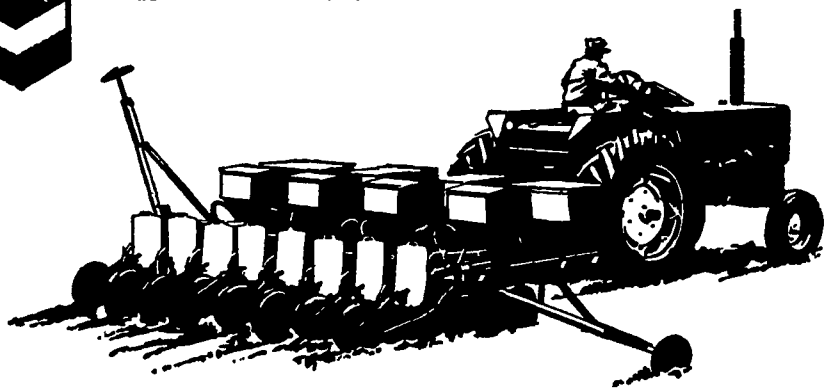
Reed Canarygrass Seen As Potential Feed Source

Reed canarygrass is exceptionally well adapted to and presently growing on large acreages of poorly drained soils. However, it also has a potential to yield better than other grasses on upland soils and is very nutritious.

The reason farmers do not grow more of it is because animals seem to reject it, even when it is lush and nutritious.

University of Minnesota scientists have discovered that this low palatability may be caused by alkaloids. If alkaloids can be controlled, the rejection problem may be solved and more effective feed supply will result.

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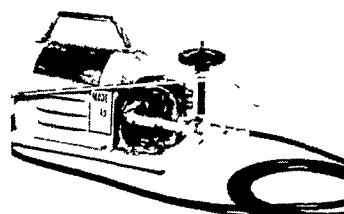
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