

Good Conservation Can Mean More Efficiency, Scientist Explains

New Techniques to Increase Farm Output on Reduced Acreage

Frank Viets Jr, chief soil scientist for the United States Department of Agriculture regional soil and water conservation laboratory at Fort Collins, Colorado, is worried about the attacks on fertilizer as a pollutant of streams, lakes and water supplies.

Restricting fertilizer use so we would have to expand our intensive cropland base would be a national disaster, he warns.

However, Viets doesn't give nitrogen and phosphate fertilizers a completely clean bill of health as non-polluters.

Proper Land Use

Rather, his theme is that soil erosion and uncontrolled rain runoff are the real villains when it comes to agriculture-related pollution. He feels farmers, generally speaking, should aim for top yields and use more, not less, fertilizer, on their best fields. Then, they can concentrate production on land

that is least subject to erosion and retire poorer land to less intensive use.

The great strides made in erosion control and in increased agricultural productivity during the past 20 years have let us retire more than 50 million acres to grass and less intensive use where the hazards of erosion and pollution are less, he reminds. He predicts by further intensifying agriculture, we can retire another 20 million acres.

This last, he believes, will require more use of technical know-how by farmers, larger capital inputs into farming, and probably a continuing trend toward consolidating smaller farm units into larger ones.

Thomas Beaver, vice president and general manager of the North American Division of Sperry Rand's New Holland farm equipment division, located here in one of the nation's

finest agricultural areas, says that throughout the nation, farmers and teams of agricultural scientists are working out the shape of things to come in conservation and better land use.

Harvest The Rain

Their efforts are directed toward new and different ways to "harvest" more of the rain that falls, and to tillage and management systems that improve soil structure and reduce erosion.

They are studying the uses of chemicals to directly and indirectly promote the cause of conservation.

The Soil Conservation Service has high hopes that no-till, minimum-till and modified tillage systems for row crops will make a great contribution toward protecting soil and water resources and increasing farm productivity during the 1970's. An SCS spokesman reports

about 7 million acres were planted under the no-till method last year, compared with less than 10,000 acres just five years ago. And no-till can cut soil erosion 65 to 95 per cent.

In Oregon, agronomists are building a herbicide safety zone for weed-free grass seed plantings by applying bands of activated charcoal directly over the seed rows at planting time.

And, a Beltsville, Maryland, USDA research center biologists and soil scientists have found chemical additives for herbicides that may lead to more effective weed control with fewer applications at lower herbicide rates.

Air pollution and soil losses from wind erosion are still with us in the 1970's. But tests in humid Ohio and in dryland sections of Nebraska show minimum tillage of such row crops as corn, along with a sod or crop

residue cover on the field, can prevent wind erosion and bring higher yields, even on highly blowable soils.

In the Nebraska Sandhills, 150 bushels of corn to the acre, and more, have been grown recently under irrigation on soils that wouldn't support a corn crop before.

The secret is not irrigation alone. Sod planting of corn to control blowing on these light soils is what makes the irrigation workable.

Correspondence



The summer season provides house plant owners with an opportunity to move their plants outdoors where they may benefit from more natural environmental conditions.

Since the native homes of many of our indoor plants are world wide, the cultural requirements vary with the species of plant.

Most plants grown for their flowers need full sun; but African violets and gloxinias, for example, want semi-sun (little direct sun), and foliage plants do best in semi-shade (no direct sun).

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The move outdoors may be made as soon as nights remain above 55 degrees. Plunge plants into soil outdoors to their pot rims. Roots stay cooler than if pots are exposed to air and sun, and moisture remains more constant. Water plants and surrounding areas in dry weather.

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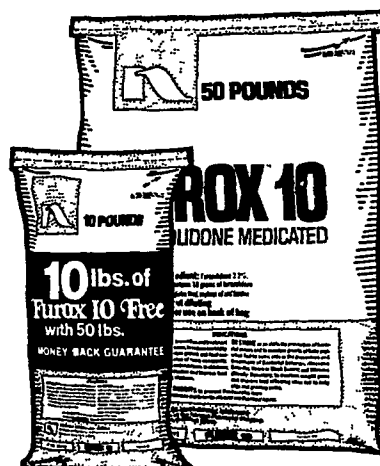
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