

PERMANENT METHODS OF WIND EROSION CONTROL

By W. S. Chepil*

Permanent methods to control wind erosion include those soil conservation practices that will successfully prevent wind erosion over a period of years. This does not mean methods that will solve the problem of wind erosion permanently. Effective wind erosion control requires planning for a period of years. The so-called permanent methods should be foremost in the minds and activity of all those connected with the problem. Too many begin worrying about soil blowing after it has started. By then it is usually too late to prevent damage to crops and soil. The rule "An ounce of prevention is worth a pound of cure" applies well to the problem of soil erosion. It is much more practical to adopt permanent wind erosion measures than it is to delay and then depend on emergency methods when a period of blowing arrives. Emergency methods are by all means important and they should be used as a last resort when permanent measures have not been established or for some reason are not fully effective.



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Regrass Land Unsuitable for Cultivation

A number of permanent practices can be adopted, each suited to a particular soil type and region. Probably the most important of all is proper land use. It has been definitely established in some of the "dust bowl" surveys that the most severe wind erosion occurred on land in capability classes IV, VI, and VII, which were being cultivated. Land in these capability classes should be seeded to perennial grasses and legumes to obtain a permanent vegetative cover adequate for more or less permanent wind erosion control. Advice from soil conservationists should be sought. As far as Kansas is concerned, maps and other information are available to farmers to acquaint them with the land capability classes on their farms. It is necessary that there be a sound regrassing program on land unsuitable for cultivation. This objective should be foremost in every program of land use in areas susceptible to wind erosion.

Keep the Land Covered

Permanent conservation methods are necessary also for land suited for cultivation. A planned system of management is necessary here too. The cardinal rule should be to strive to keep the land covered with vegetation or crop residue at all times. Virtually all of our wind erosion problem in the past has been due to failure to maintain a vegetative cover over the ground. This was nature's way of holding the soil long before man interfered with the balance. As much as our good earth abhors a vacuum, so also it abhors bare ground. We cannot afford to go against this natural process; we must cultivate the land, of course, but we must also use our ingenuity to keep it covered at the same time.

Farming Practices of Utmost Importance

Strip cropping and contour strip cropping are accepted wind erosion control measures in many progressive communities. Their use could be expanded to other areas. Moreover, crop rotations to maintain a high level of soil fertility

are extremely important soil conservation measures everywhere. A high level of soil fertility is necessary to produce sufficient vegetation to give the soil adequate protection against erosion. Then, too, in all our educational programs we must stress the importance of preventing burning. Even weeds seldom should be burned. They can be eradicated by other means. Another method is field shelterbelts. In some areas they have proved extremely effective. It is necessary also to stress the importance of continuous control of grasshoppers and other vegetation-destroying insects, especially in dry areas. In some instances soil blowing in the past has been traced to insects destroying the crop cover. With the advent of powerful modern insecticides and development of suitable techniques for their application, damage from insects now can be largely avoided.

There are many other methods suitable to control wind erosion. The use of various types of barriers and buffer strips, seeding turn rows to grass or other vegetative cover, preventing the overgrazing of pastureland, revegetation of grasslands with best species of grass, and building up live-stock feed reserves for drought periods, are all conservation practices to use in combatting wind erosion.

Imperative that Farmers Work Together

Who is to guide the farmer to choose methods best suited to his farm? The farmer himself is probably his own best guide. Long years of experience have no doubt taught him many lessons. Progressive neighboring farmers are his next best guide. Then, too, the agricultural experiment stations, colleges, the various government and county extension agencies, and others have information and ideas. The most suitable practices differ for different soils and different regions. Then, too, no one method, but a combination of methods, on any one farm is generally found to be the most reliable. Finally, community action in wind erosion control is highly important. Wind erosion has a way of expanding rapidly once it starts. While the control of wind erosion is primarily the concern of the individual farmer, his success may be aided or hampered by the action of his neighbors. Excellent progress is usually made where organizations have been formed to promote community action against soil blowing by wind.

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