

Spray for Soil Erosion Control

surface spray of polyvinyl alcohol stabilizes soils on banks or lawn area without injury to plants or to seed germination

John J. Stark

Tests with Elvanol, grade 71-30, indicate that the material might replace straw and wire for control of water or wind erosion. It has been applied on newly seeded lawn areas and on previously planted banks without apparent plant injury or reduction of seed germination.

Elvanol is a polyvinyl alcohol in the form of a free-flowing powder, and may be readily dissolved in water at 170°F to give a concentrate with the consistency of rubber cement. The concentrate may be stored in a closed container for prolonged periods and diluted with cold water at the time of application.

The same chemical compound is used in many products—as a water resistant

adhesive, a remoistenable adhesive, and a laminating adhesive. It is used also in many paper, plastic, and textile products. In the soil its action is apparently one of coating the surface particles with a thin film of adhesive, which joins the particles firmly together but leaves many spaces for the entry of air and water. After application, Elvanol will absorb cold water up to 40% of its weight without redissolving, and is found to offer very little resistance to the normal growth of plant roots.

Elvanol, applied on a two-acre sloping lawn—recently graded and seeded—substantially reduced erosion around the sprinkler risers, which had been a major

problem. The previously planted seeds germinated and produced an excellent turf.

The rate of application was 20 gallons of a 3% Elvanol solution, sprayed uniformly over an area of 1,000 square feet. The soil should not be wet or excessively dry at the time of spraying. To secure the bonding action of the material, the soil should be allowed to dry and should not be disturbed after treatment.

Elvanol is available in powder form or as a 6% concentrated solution in 55-gallon drums.

John J. Stark was Farm Advisor, Los Angeles County, University of California, when the above reported study was conducted.

MARKETING

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marketing orders, is designed to correct or prevent deceptive practices in the marketing of a product, making false claims or misleading representations, and improper sampling and grading.

Marketing Tools

Marketing orders by themselves are only devices and tools and their effectiveness depends upon the skill and judgment of the operators and on the nature of the problems involved.

There are no fixed rules for formulating and operating marketing programs. However, the provisions of a marketing order should consider the probable effects on net returns over a period of several years. Too often marketing programs are judged by their effect on one year's price. In operating any marketing program, attention must be given also to competitive effects on other products and to market-entry possibilities from other areas.

Industry Support Required

California legislation provides that a marketing order regulating producers can not become effective unless written assent is given by at least 65% of the producers representing 51% of the volume, or by at least 51% of the producers representing 65% of the volume.

Many California marketing orders apply jointly to producers and handlers of the commodity affected. In such cases a marketing order can not become effective unless—in addition to the producers' approval—written assent is given by at least 65% of the handlers by number or volume. An exception applies to the processors of canned and dried fruit for which the requirement is 65% by number and by volume. Orders affecting only handlers require assent from the same proportion of handlers as do joint orders.

The State Director of Agriculture has responsibility for the operating and enforcement of marketing order provisions. He appoints, from industry nominations, Advisory Boards which make recommendations to him. Where necessary, state and local law enforcement agencies and legal divisions are available to render service; violations are referred to the Attorney General's office for prosecution.

The costs of California marketing programs are borne directly by the industries themselves through assessments on producers and handlers. In 1957, assessments for all programs totaled \$8,474,000—of which about 58% was spent for market promotion; 29% for administration, inspection, and enforcement; and 3% for market research. The percentages vary widely from one program to another.

Some orders are issued with a specific date of termination. However—after hearings and the required assent from the industry affected—the Director of

Agriculture may extend the order. Other orders operate continuously. Several of the present California orders have undergone a series of amendments to keep the order geared to the changing needs of the industries concerned.

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BULLS

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mained with the heifers for 30 days. At slaughter—30 days later—the percentage conception was calculated from the number of fetuses of the proper size.

Regression equations were calculated from semen quality tests on the 12 bulls used for breeding. Regression lines drawn from these equations are shown in the graph.

If a conception rate of 30% or less is considered impaired breeding efficiency, the graph indicates that impairment may be present when less than 43% of sperm are living, or less than 37% are motile, or more than 35% are abnormal.

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