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# WESTERN ECOLOGY, LLC

## LAND IMPRINTERS

AS SPECIFIED BY DR. ROBERT M. DIXON, THE IMPRINTING FOUNDATION, TUCSON, AZ.

### **Low Cost, One – Step, Hydrologic and Ecologic Land Restoration**

**Restoration & Reclamation: Highways,  
Grasslands. Forest, Cut-slopes, & Post-fire.**



**Seeding: Range, Wetlands, Fire, Mines & Land-fill,**

**Benefits: Erosion control, Dust-Control, Ecological weed control.**

A NO-TILL, MECHANICAL LAND TREATMENT TECHNIQUE WHICH FIRMS (NOT COMPACTS) AND STABILIZES SOIL BY FORMING A GEOMETRIC GRID OF IMPRESSION PATTERNS ON THE SOIL SURFACE. IMPRINTS CAPTURE AND HOLD: **WATER** (3-5 LITRES) FOR **INFILTRATION** AND **RE-WATERING**, **ORGANIC MATERIAL**, AND LOCAL **BENEFICIAL SEEDS** FOR **GERMINATION**. LAND IMPRINTING HAS BEEN SPECIFIED FOR SEEDING, STORM-WATER MANAGEMENT AND EROSION CONTROL.

#### Highlights:

- Currently specified by US Army Corps of Engineers, CALTRANS (BMP), CDOT, USFS, and BLM for fire restoration, and Arizona State Lands. Under review by BLM, NMDOT, NMENMRD & NRCS for inclusion in Standards & Specifications.
- Over 25,000 hectares, from New York landfills to Arizona deserts and Costa Rican rainforest, have been successfully imprinted and surface vegetation and soils made functional
- CALTRANS/U of C studies have found that native seed germination is highest in Imprinted soil
- LAND IMPRINTERS CAN BE DEPLOYED AT SPEEDS UP TO 12- 25 MPH.
- Models for every reclamation project
- Specified for: Seeding, mulch crimping, pollution control, BMP for stormwater management, erosion control, BMP for TMDL reduction, all in a one-step application
- Re-establishment of soil hydrological function, Increase in soil aeration, Ecologic weed control, Capillary re-watering during dry periods

**Land Imprinting increases stormwater infiltration a minimum 100%**

Models: Super Heavy, Heavy, Medium and Light Duty models of Land Imprinters. Available attachments for bulldozers and excavators.

## Land Imprinter benefits

Imprinting v other seeding methods

Features	Hydro-seeding	Drilling	Land Imprinting
Erosion control	No	No	Yes
Soil firming	No	No	Yes
Aeration	No	No	Yes
Water storage	No	No	Yes
Method	Surface application	Till	No till
Seed depth	Surface	Calibrated	below surface
Storage capacity	No	No	5-7 litres
Weed suppression	Yes	No	Yes
Volunteer recruitment	No	No	Yes
Increased infiltration	No	No	Yes
Application limitations	Access	Slope & soil	Slope (max 2:1)
Cost per acre	High	Moderate	Lowest
Application benefit w/o seed	No	No	Excellent
Mulching	Yes, additional	No	Yes, Crimping
Mulching cost	Yes	Yes	No
Harsh site seeding	Yes	Limited	Yes
Harsh site success	Fair	Low	Excellent
Applications:			
<i>Landscaping</i>	Fair	Fair	Excellent
<i>Post fire</i>	Limited	Yes	Excellent
<i>Highway</i>	Excellent	Yes	Excellent
<i>Range</i>	Too costly	Yes	Excellent
<i>Agriculture</i>	No	Yes	Excellent
<i>Road reclamation</i>	Limited	Limited	Excellent
<i>Mine Reclamation</i>	Fair to poor	Limited	Excellent
<i>Landfill Reclamation</i>	Fair to poor	Limited	Excellent
Low rainfall performance	Poor	Poor	Best
Maintenance, equipment	High	Moderate	Very low

Land Imprinter attachments: Amendment box (rotary vane), seed box (rotary vane), 3-point hitch, Dozer blade mount.