

## Establishing Native Hawaiian Plants for Ground Cover Protection on Hawaii's Roadways (Hydromulching, Weed Control and Subsurface Irrigation)

### Principal Investigator:

Professor Joseph DeFrank

### Project Sponsor:

#### Need:

Non-native grasses are currently used for re-vegetating cleared roadsides, drainage features and commercial landscapes. Hydroseeding is conducted with Mainland seeds; however, non-native species require ongoing maintenance and irrigation, and have a direct cost and environmental impact if they encroach onto adjacent areas.

#### Objective:

To develop a hydromulching protocol by first establishing a Native Hawaiian soil profile that will create a sustainable re-vegetation effort to prevent roadside erosion and minimize maintenance costs, weed management and irrigation.

#### Duration:

October 1, 2005 – September 30, 2008

#### Cost:

\$93,512

#### Update:

- Conducted review of relevant literature on native plants and their applications on the roadway
- Reviewed current literature on native Hawaiian grasses and sedges (pili grass, `aki`aki grass, and mau`u`aki`aki)
- Literature review serves as a basis for formulating methodologies for experiments
- Tests of mau`u`aki`aki to preemergence herbicides showed no adverse affect on seedling germination
- Native plants from Plant Materials Center on Molokai continue to grow in propagation beds at the UH