



'Tropic Lalo' Paspalum for Soil Erosion Control

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'Tropic Lalo' paspalum (*Paspalum hieronymii* Hack.) is an excellent groundcover for soil erosion control that is widely adapted to Hawaii's soils and climates. This cultivar is a cooperative release by the Natural Resources Conservation Service, United States Department of Agriculture, and the Department of Agronomy and Soil Science, College of Tropical Agriculture and Human Resources, University of Hawaii.

Origin

Tropic Lalo, originally from Brazil, was introduced to Hawaii in 1968 by the Hawaii Plant Materials Center, USDA-NRCS, by way of the National Plant Materials Center, Beltsville, Maryland.

Description

Tropic Lalo is a low growing, rapidly spreading, stoloniferous grass that usually reaches a height of about 12 inches (30 cm); however, it may be twice as tall under moist, fertile conditions. It produces many stolons, which readily root at the nodes to form a dense, sod-like turf. Its abundant leaves are linear in shape, approximately 3–9 inches (7.5–20 cm) long, and ½ inch (1.25 cm) wide. The leaves and stems are covered with coarse hairs about ¼–½ inch (1.5–3 mm) long. The flowering stems are semi-erect and from 12 to 24 inches (30–60 cm) high, depending upon the soil fertility. Seed production is sparse, and only about 1–2 percent of the seeds are viable.

Use

Tropic Lalo is intended primarily as a groundcover for soil erosion control in orchards, waterways, roadsides, and other erosion-prone areas. It will trap large amounts of sediment when grown in waterways. It is a low-maintenance plant with a dense growth habit that crowds out weeds and does not require frequent mowing. When mowed frequently (weekly or biweekly) it becomes mat-like and makes a coarse but very desirable and acceptable turf for lawns and other landscapes. Its stolons are tough and coarse; hence, it will tolerate fairly heavy use from wheeled equipment and foot traffic. It is palatable



Tropic Lalo groundcover in an ornamental tree farm on the Hamakua coast of the island of Hawaii.

and is readily grazed, but it is not recommended as a pasture plant because of its slow regrowth.

Adaptation

Tropic Lalo is adapted to locations from sea level to over 3000 feet (900 m) in Hawaii and to annual rainfall of 40–100+ inches (1000–2500 mm). If irrigated, it will grow well in drier areas. It is adapted to a wide range of soil conditions—from coarse to fine textured and from strongly acid to slightly alkaline (pH 4.5–7.5). It is somewhat tolerant of infertile soils and low-lying soils that tend to stay wet but do not become waterlogged. It does not tolerate long, dry periods. It is quite resistant to water erosion. It is tolerant of 50–60 percent shade, but its growth is slower and it forms a less dense mat under shaded conditions.

Methods of establishment

Tropic Lalo is established from sprigs (stem cuttings) planted on grids varying from 12 x 12 inches up to 36 x

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36 inches (30 x 30 cm to 90 x 90 cm). Sprigs may be broadcast and lightly covered with a disk or planted in furrows 1–3 feet (30–90 cm) or more apart. The minimum planting rate should be no less than 40 bushels/acre of sprigs or stolons (28 kiloliters/ha). Greater amounts may be required with close spacings. In plantings of 12 x 12 inches (30 x 30 cm), complete cover may be achieved in as little as six weeks. The area to be planted must be moist or be irrigated, because the cuttings, sprigs, and young, newly established plants are susceptible to drought. Land preparation beforehand can be minimal, with either herbicide application or disking, or both, to remove existing vegetation. However, a well prepared seedbed is preferred. Unless planting into a "stale seedbed" in which the potential for weed emergence has been reduced by several rounds of growth-forcing and control with herbicide sprays, weeds may become a problem until the grass is established. If this occurs, frequent mowing may control weeds in the young planting.*

Insect and disease pests

Tropic Lalo can be damaged by the grass webworm, *Herpetogramma licarsisalis* (Walker). There have been no reports of significant damage due to plant pathogens in Hawaii.

Management

Tropic Lalo, being low growing, will not need frequent mowing unless it is used in situations that require a closely cut turf, such as a lawn or a groundcover in a macadamia nut orchard (to facilitate nut harvest). Evaluation trials in diverse environments have indicated that to maintain it as a closely cut turf, it may be necessary to mow it from 6 to 30 times a year, depending on the location and type of use. It can be cut to less than 1 inch (2.5 cm) and will recover well.

During establishment, Tropic Lalo will respond to nitrogen fertilizer, but once established it requires only low maintenance, and fertilizer applications may not be necessary. In orchards, it should obtain sufficient nutrients from the fertilizer used for the trees. It may be grown in association with nitrogen-contributing legumes such as white clover (*Trifolium repens*), big trefoil (*Lotus pedunculatus*), the desmodiums (*Desmodium* spp.), etc.

Tropic Lalo has been compared to hilograss (*Paspalum conjugatum*), 'Pensacola' bahiagrass (*Paspalum*

notatum), seashore paspalum (*Paspalum vaginatum*), and kikuyugrass (*Pennisetum clandestinum*). It is slower growing and requires less maintenance than kikuyugrass. It is faster growing than bahiagrass, does not grow as tall, and provides better cover. It provides better cover than hilograss and is adapted to a wider range of environments than seashore paspalum, which is primarily used around brackish water.

Availability of planting materials

The NRCS Plant Materials Center, Hoolehua, Molokai, Hawaii 96729, maintains a block of Tropic Lalo paspalum. Vegetative material is available to commercial growers and others interested in establishing production fields.



Tropic Lalo paspalum (above) four weeks after transplanting a stolon and (below) in full cover.

*The preemergence herbicide Chipco® Ronstar® G has been approved for use with Tropic Lalo during its establishment in nonfood crops except in areas where certain endangered Hawaiian birds may feed; read the product label and follow all directions. Mention of a company or trade name does not constitute an endorsement, guarantee, or warranty by the University of Hawaii Cooperative Extension Service or the U.S. Dept. of Agriculture and does not imply recommendation to the exclusion of other suitable products or companies.