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'TROPIC CORAL' TALL ERYTHRINA
Erythrina variegata L.

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HITAHR · COLLEGE OF TROPICAL AGRICULTURE AND HUMAN RESOURCES · UNIVERSITY OF HAWAII

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INTRODUCTION

'Tropic Coral', a tall erythrina, is a cooperative release by the United States Department of Agriculture, Soil Conservation Service; the University of Hawaii, Hawaii Institute of Tropical Agriculture and Human Resources, Department of Agronomy and Soil Science; and the Honolulu Botanic Gardens.

ORIGIN

'Tropic Coral' is a fastigiate form (column-shaped with branches erect) of the open-branched Cochin China Coral tree, locally known as tall erythrina or tall wiliwili. It originated from cuttings given to the USDA Soil Conservation Service in 1972 from a columnar form of *Erythrina variegata* growing in the Foster Botanic Garden, Honolulu. Foster Botanic Garden received the plant originally as a single rooted cutting from E. M. Menninger, who obtained it among seeds under the name *Erythrina fusca* from the Botanic Garden in Adelaide, Australia.

The columnar form is quite common in cultivation in New Caledonia. In cultivation it has spread to other tropical and warm-temperate areas, including Australia and southern Florida. The fastigiate form of this cultivar is not known to occur anywhere in the wild. The genetics of the column-shaped form are not known; hence, 'Tropic Coral' is propagated from cuttings.

'Tropic Coral' has been previously referred to as *Erythrina variegata* var. *fastigiata*, but for nomenclatural reasons this name is not valid. The natural range of *Erythrina variegata* extends from the east coast of Africa, throughout Southeast Asia and Maylasia to Oceania, including Fiji, Tahiti, and the Marquesas, and as far north as southern Okinawa.

'Tropic Coral' was officially released for public use in 1985 as *Erythrina variegata* L. cv. Tropic Coral.

DESCRIPTION

'Tropic Coral' is a leguminous tree that grows approximately 30 ft (9.1 m) tall within three years and may eventually reach heights of 40 to 50 ft (12.2 to 15.3 m), depending upon spacing, care, and location. It has an erect or columnar growth form with numerous vertically oriented branches coming out of the single trunk. It has attained the dimensions of 11.5 ft (3.5 m) high by 3.5 ft (1.1 m) wide the first year from unrooted cuttings planted directly in the soil under favorable growing conditions. Leaves are trifoliate with heart-shaped leaflets, 3 to 5 in (7.6 to 12.7 cm) wide by 5 to 7 in (12.7 to 17.8 cm) long. It has small thorns, 0.04 to 0.08 in (1.0 to 2.1 mm) long, on the trunks and branches. Thorns are longer if the tree is stressed by lack of moisture. The leaves remain on the tree at flowering, unlike some species of *Erythrina*, which drop their leaves.

Flowers, appearing near the top of the tree, are brilliant orange-red. The flowers are 0.75 to 1.25 in (1.9 to 3.2 cm) wide by 2 to 2.75 in (5.1 to 7.0 cm) long. Seed pods are 0.50 to 0.75 in (1.3 to 1.9 cm) wide by 3 to 5 in (7.6 to 12.7 cm) long and contain two or three dark brown seeds. The seeds are 0.25 to 0.33 in (6.4 to 8.5 mm) wide by 0.50 to 0.67 in (12.7 to 16.9 mm) long.

Seeds and foliage of 'Tropic Coral' tall erythrina were nontoxic in laboratory tests and on feeding trials conducted with week-old chicks.

USES

'Tropic Coral' was tested and developed primarily as a windbreak for soil and water conservation and for plantings around farmsteads. It has a strong root system that does not seem to compete with adjacent crops. It is an excellent tree for use as an ornamental in landscaping and as a screen for privacy and from light. It is an attractive tree that, because of its erect and columnar form, is low-maintenance and requires little or no pruning.

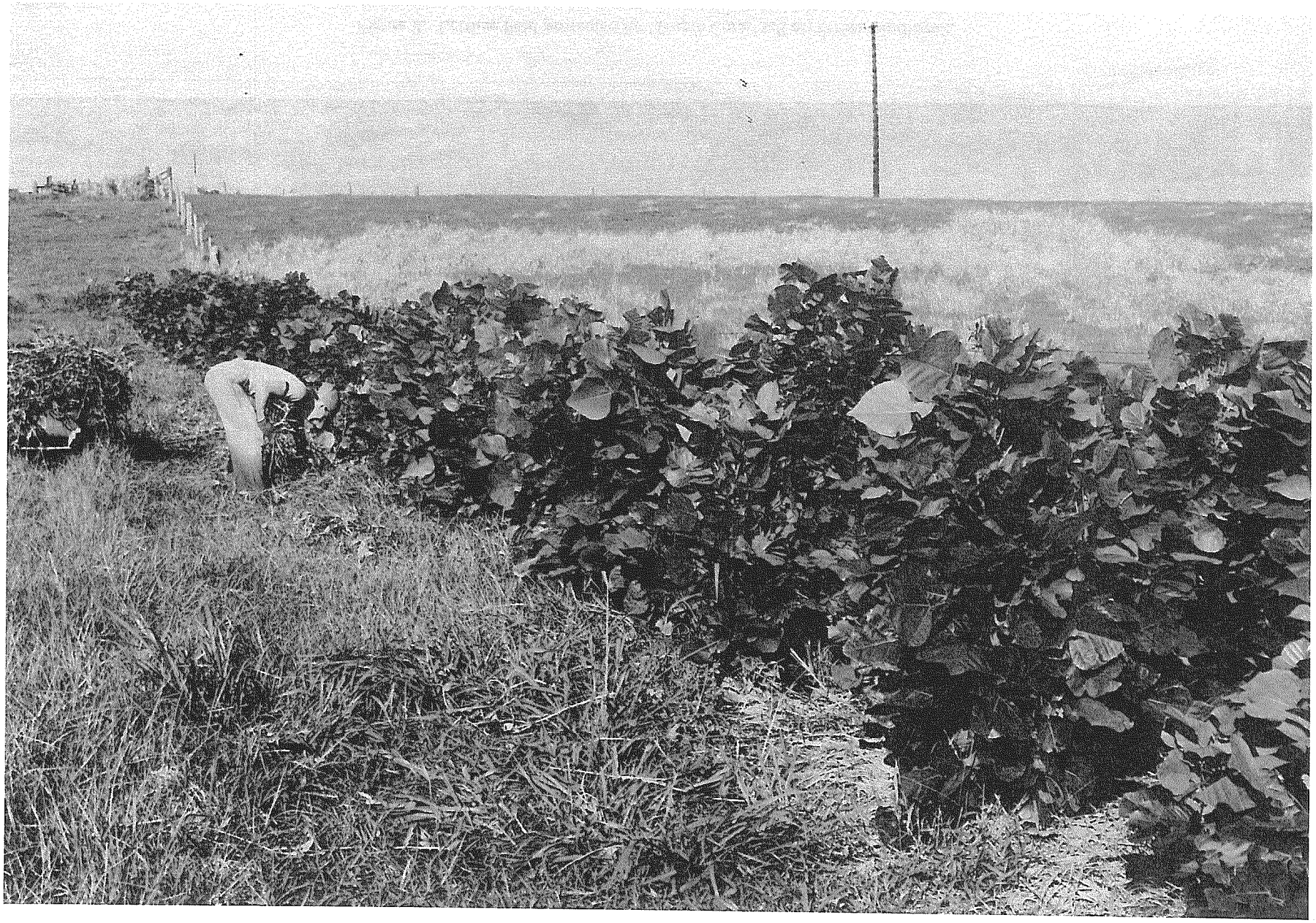

Figure 1. Weeding maintenance and drip irrigation help young 'Tropic Coral' tall erythrina get established as a windbreak on a small acreage in Kohala, Hawaii.

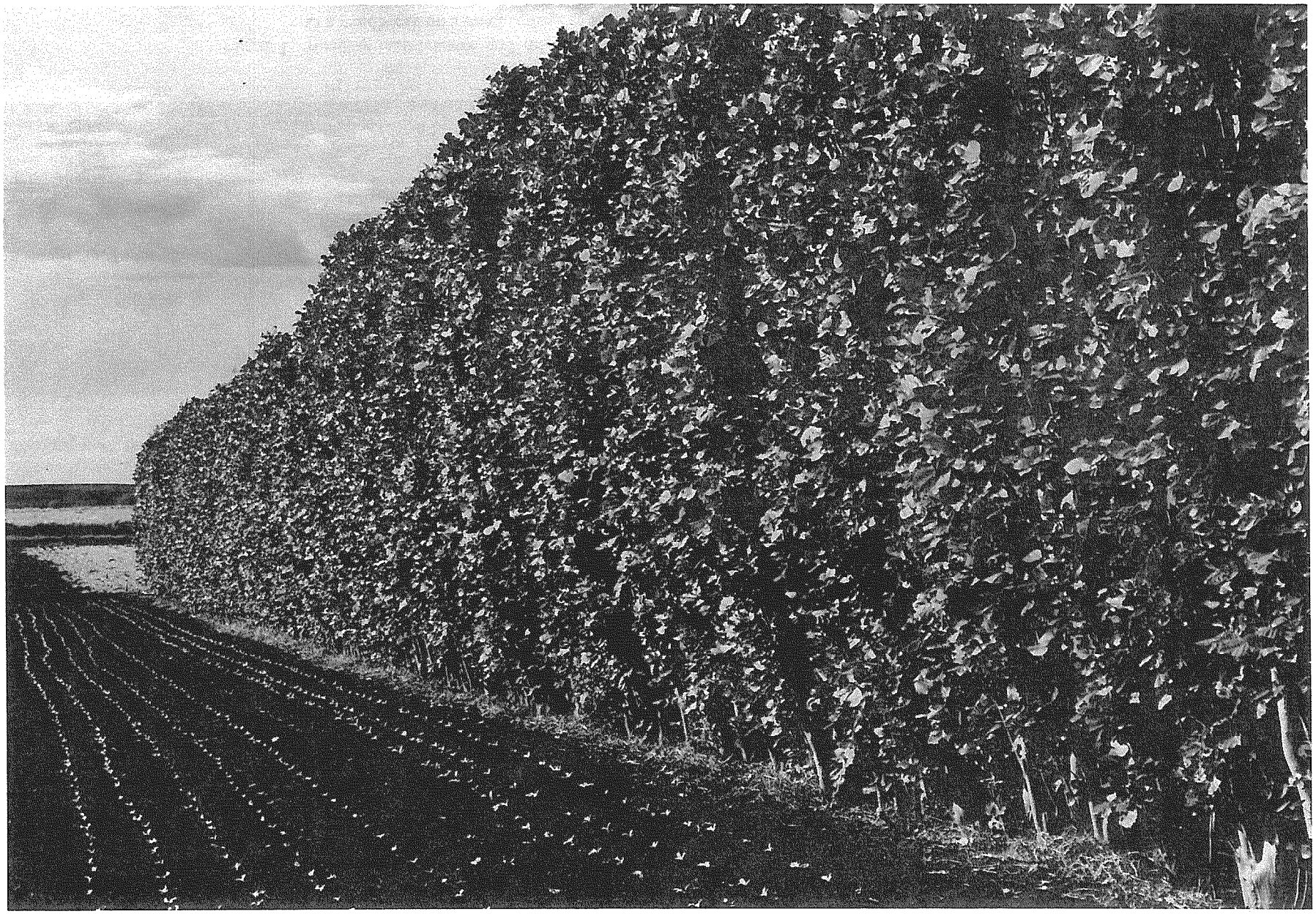

Figure 2. Lettuce field protected by 'Tropic Coral' tall erythrina windbreak.

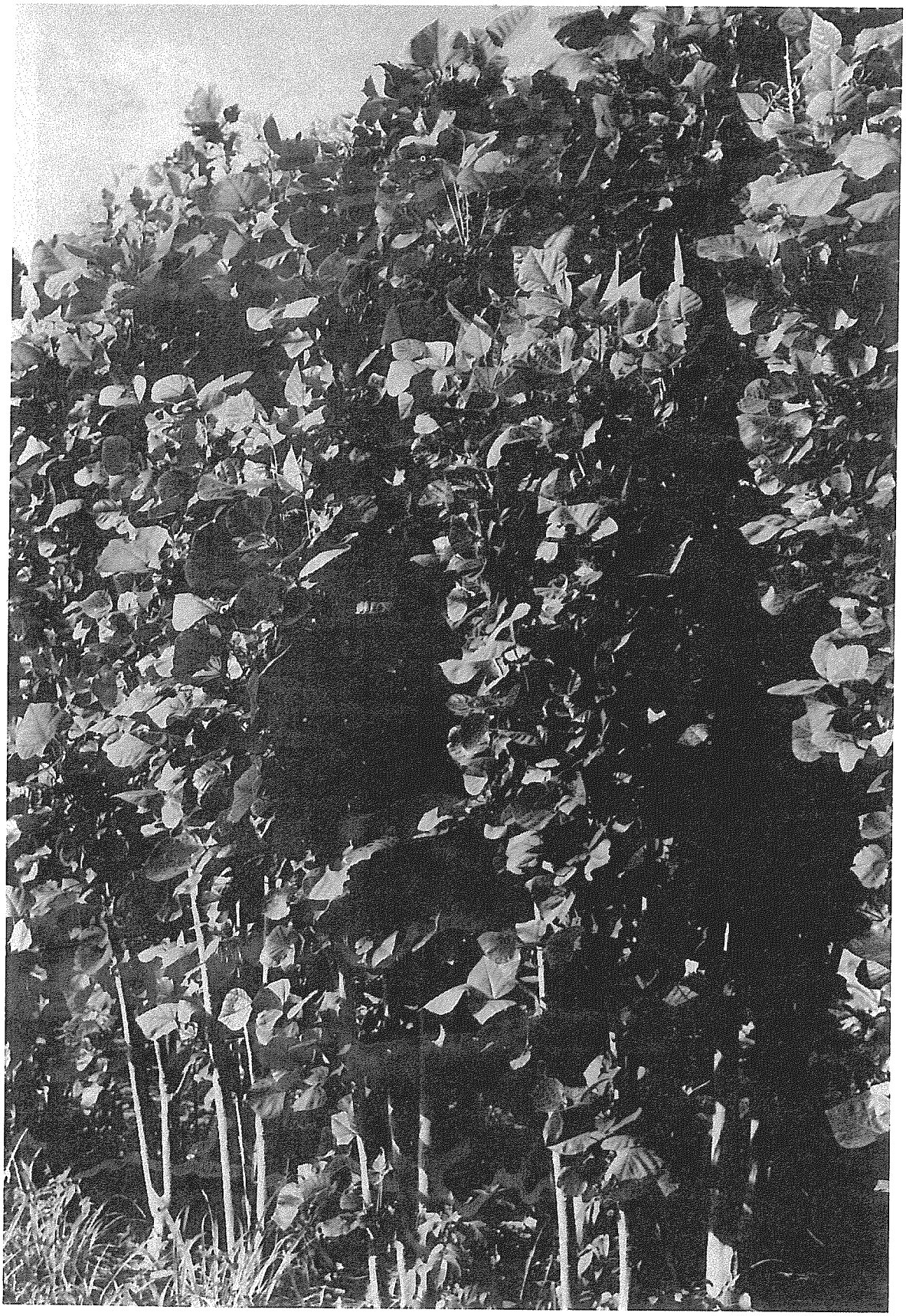

Figure 3. Young stand of 'Tropic Coral' tall erythrina windbreak.

Figure 4. 'Tropic Coral' tall erythrina as a windbreak for papayas.

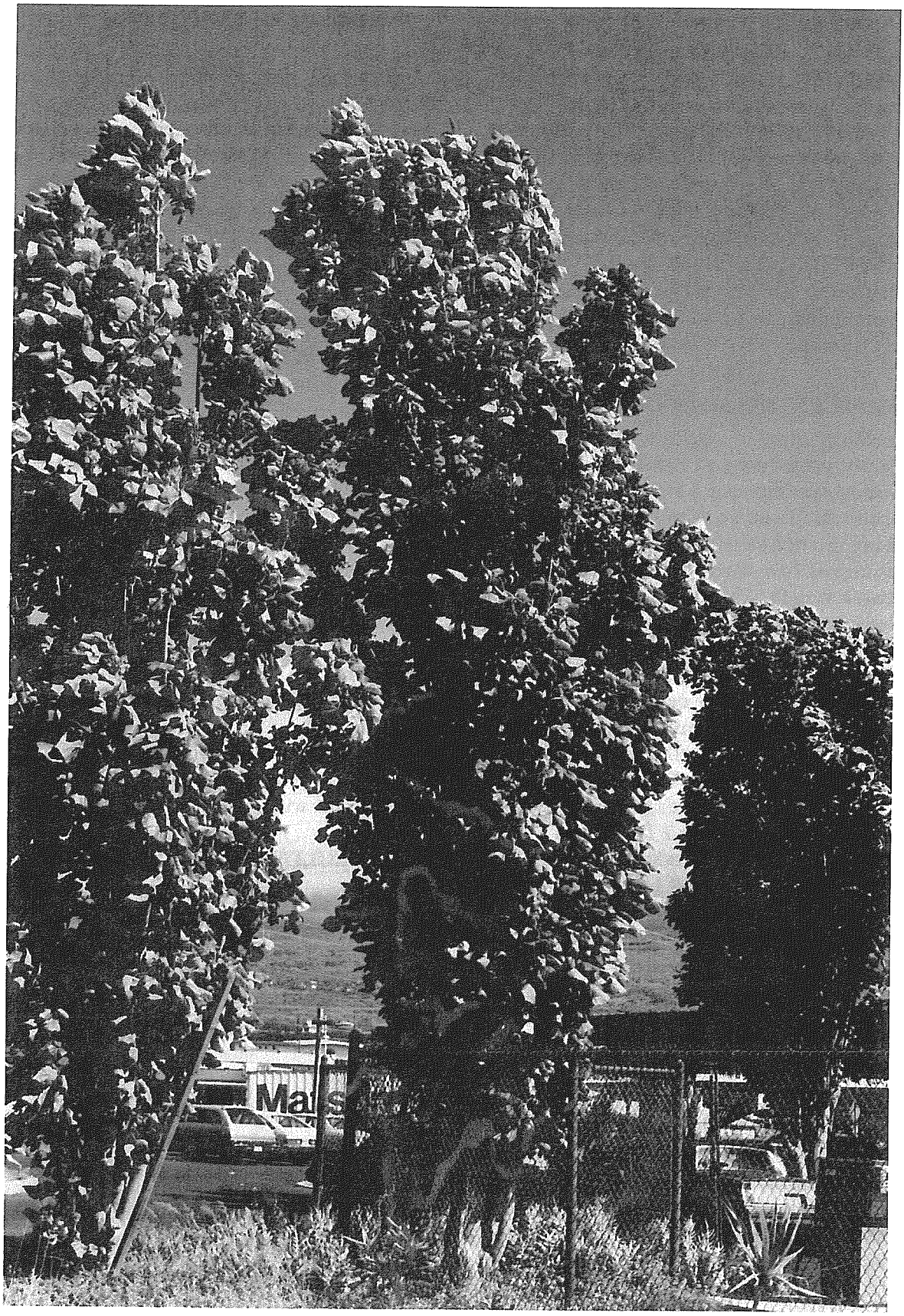

Figure 5. 'Tropic Coral' tall erythrina in a decorative spaced planting in Kona, Hawaii.

ADAPTATION

'Tropic Coral' is adapted to elevations from sea level to 2000 ft (610 m) in Hawaii. Best success has been obtained, however, from sea level to 1000 ft (305 m). Above 1000 ft (305 m), it has performed best on the sunnier, leeward sides of the islands. At these altitudes, its growth is slower than at the lower elevations. It will grow without supplemental irrigation in areas with annual rainfall over 60 in (1524 mm) and in drier areas if adequate irrigation is provided. It will grow in a wide range of soils, from coarse to fine and from very acid to moderately alkaline (pH 4.5 to 7.5).

METHOD OF ESTABLISHMENT

'Tropic Coral' must be vegetatively propagated, as it does not grow true to form from seeds. Unrooted woody cuttings can be planted directly in the soil or rooted in pots and transplanted. Cuttings can be 12 in (30 cm) to over 3 ft (91 cm) long. Rooting percentage is low when cuttings shorter than 9 in (23 cm) are used. The longer the cuttings, the sooner the tree reaches usable size. The best survival rate has been obtained with cuttings of 0.75 to 2 in (1.9 to 5.1 cm) diameter. The cuttings should be placed in the ground to a depth of at least 6 in (15 cm). For windbreaks, plants should be placed at uniform intervals from 2 ft (0.6 m) to 6 ft (1.8 m) apart. As 'Tropic Coral' has only fair shade tolerance, the plants will lose some of their lower leaves if planted closer together than 2 ft (0.6 m).

After the cuttings have been taken from the stock plants, they should be allowed to air out or cure for at least 24 hours. Bases of the cuttings should be coated with a rooting hormone for good root development. The soil or potting medium should be kept moist for good establishment. Sealing the top surfaces of the cuttings with wax or tree-wound dressing is helpful in preventing the tops of the cuttings from rotting or drying out.

INSECTS AND DISEASES

'Tropic Coral' is susceptible to attack by powdery mildew (*Oidium* sp.), Chinese rose beetles (*Adoretus sinicus*), mealybugs (*Phenacoccus* sp.), spider mites (*Tetranychus cinnabarinus*), broad mites (*Polyphagotarsonemus latus*), and black stink bugs (*Coptosoma xanthogramma*). Although no specific record exists for 'Tropic Coral', several species of *Erythrina* are attacked by the Hibiscus snow scale (*Pinnaspis strachani*) and the carob moth (*Ectomyelois ceratoniae*) and are hosts for the fruit-piercing moth (*Othreis fullonia*). The fruit-piercing moth entered Hawaii after 'Tropic Coral' was officially released. 'Tropic Coral' may serve as a reservoir for these pests as well as for their predators. This should be considered on an individual basis by those planning to use the tree as a windbreak, particulary for commercial crops. Approved pest control measures may be needed at times.

MANAGEMENT

'Tropic Coral' is a legume and obtains its nitrogen from the atmosphere. Fertilizers should be applied according to soil test recommendations. The plant requires only occasional pruning of its branches. Weeds must be controlled around the trees. Planting the cuttings through black plastic has been a good method to control weeds and conserve moisture.

The plants are relatively maintenance-free. They will need supplemental irrigation if rainfall is below 60 in (1524 mm). Drip irrigation with an emitter at the base of each tree works best. In very windy conditions, the windward row of trees will require additional water to remain in good condition. Overirrigation may inhibit their growth rate; however, if they become stressed from lack of water, they will begin to shed their leaves and will become a less efficient windbreak.

AVAILABILITY OF PLANTING MATERIALS

To maintain varietal purity, only asexual propagation of 'Tropic Coral' is recognized. The SCS Plant Materials Center, Hoolehua, Molokai, HI 96729, will maintain a source of 'Tropic Coral' tall erythrina. Cuttings will be available to commercial growers and others interested in establishing production rows.

Hawaii residents may order **single copies** of this publication free of charge from county offices. **Out-of-State inquiries** or **bulk orders** should be sent to the Agricultural Publications and Information Office, College of Tropical Agriculture and Human Resources, University of Hawaii, 2500 Dole Street, Krauss Hall Room 6, Honolulu, Hawaii 96822. Price per copy to bulk users, $.35 plus postage.

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