

(cont. from page 28)

These symptoms will appear first on the older foliage then rapidly spread over the entire plant. This situation is most often found on plants which have not received fertilization for a long period of time. *Magnesium* deficiency appears on the older foliage with yellowing or bronzing occurring at the base of the leaf and working its way up the leaf as the deficiency progresses. This deficiency is commonly seen on a number of palm species, podocarpus and pittosporum. Symptoms of *iron* deficiency first appear on young leaves at shoot terminals. During the early stages of iron deficiency a pronounced yellowing of foliage occurs with the veins and veinlets remaining green thus giving a netted appearance. In the latter stages of this deficiency leaves become smaller and dead spots and marginal burning may appear. A few of the many plants affected by iron deficiency include ixora, citrus, hibiscus and camellia. *Magnesium* deficiency appears as two different symptoms depending on the plant type. Broadleaf species show this deficiency as a yellowing of leaf tissue between the midrib and the main vein. *Manganese deficiency differs from iron* deficiency. In *manganese* deficiency a broader green area remains along the veins. *Iron* deficiency and *manganese* deficiency may be quite difficult to differentiate. Some of the species which exhibit this deficiency include allamanda, bougainvillea, ligustrum and viburnum. On palm and cycad species the *manganese* deficiency symptoms are quite different. New emerging leaves become smaller and malformed. These leaves fail to expand and appear to be crinkled. This condition is called frizzle top. Palms which may show these symptoms include Queen Palm, Date Palms, Fishtail palms, and Sago Palm.

Other nutritional deficiencies may occasionally appear in nursery or landscape situations from time to time. To add to the confusion of what a deficiency may be, more than one deficiency may occur at one time. Particularly in cases when the soil pH is quite high. Two IFAS Cooperative Extension Service publications which may be helpful are Bulletin 791, *Nutritional Deficiencies of Woody Ornamental Plants Used in Florida Landscapes* and Circular 352-A, *Soil Reaction (pH) for Flowers, Shrubs and Lawn Around the Home*. Other publications are available concerning each of the essential elements. Contact the Extension at 689-1723 for these publications. ■

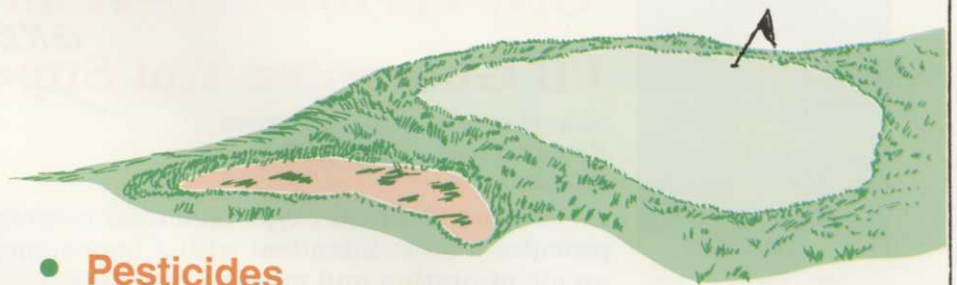
STALFORD NAMED DIRECTOR OF SEED DEVELOPMENT

Harry Stalford has been named director of turf seed development at International Seeds, Inc., Halsey, Ore. according to J. L. Carnes, president.

Stalford returns to ISI after a two-year sabbatical during which he was manager/partner of one the largest turf and forage seed farms in Oregon's Willamette Valley.

His responsibilities at International Seeds will include customer contact, distributor sales and the overseeing of convention activities.

International Seeds is a breeder, marketer and distributor of quality turf and forage grass seeds. ■



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