The Causes of Drying off of Walnut Twigs in Walnut Grown Areas of Iran

M.J.Malakouti

Professor, Tarbiat Modarres University & Director General, Soil and Water Res. Inst.

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Walnut is one of the highly profitable horticultural products, and in case of proper fertilization will become even more profitable. The areas under cultivation in Iran, being mostely calcaeous with bicarbonated irrigation waters, together with the growers negligence in providing balanced fertilizers especially micronutrients will produce trees especially walnuts with nutrient deficiencies. Even when fertilizers are sufficiently applied, soil conditions and water characteristics will prevent walnuts to uptake micronutrients, or translocating them adequately, even if they are absorbed. As a result, the tree leaves receive insufficient amounts of nutrients producing walnuts that have low level of micronutrients and are therefore of poor quality for human consumption. Consequently the calcareous soils produce poor quality walnuts as well as poor quality fruits in general.

The total wlnut production in Iran is about 146000 tons from area of 45000 hectares or an average of 3230 Kg/ha. Thus, efforts in the area balanceed fertilization, especially foliar applications in mid autumn or early spring for fruit set (a 0.5% solution of urea, boric acid, and zinc sulphate each) and proper placement of the fertilizers (in ditches or deep holes) should be attempted to improve walnut yield and quality (toprevent the darkining of the resulting nuts). It is possible to increase the walnut yield by diagnosing the trees, in addition to having low yields, is dying off of the twigs, wrongly as cubed to the cold weather of areas under cultivation such as the town of Touyserkan.