EFFECT OF SOURCE AND TIME OF NITROGEN FERTILIZER APPLICATION ON SEED GERMINATION AND SEEDLING GROWTH OF NICOTIANA TABACUM (L)

P.W.M.B.B. Marambe and U.R. Sangakkara
Faculty of Agriculture,
University of Peradeniya.

Nitrogen fertilizer is essential for good seedling growth of tobacco. Although there is a standard fertilizer technique developed by the Ceylon Tobacco Company, little research has been carried out on optimal N fertilization of tobacco nurseries.

This study presents the effect of two sources and four times of nitrogen fertilizer application on tobacco variety 'Sathan'. Ammonium sulphate and urea were the nitrogen sources. Phosphorus and potassium were applied uniformly as a basal fertilizer.

The use of ammonium sulphate enhanced plant growth more than urea. The single application of fertilizers at preplanting and 21 days after seeding showed better growth of shoots and roots when compared with split applications. The comparison of the application of nitrogen fertilizers prior to planting with single applications at 21 and 42 days after planting showed that basal applications induce better plant growth in tobacco. The results suggested that ammonium sulphate applied as a basal fertilizer is the optimal nitrogen fertilization practice in tobacco nurseries.

References:

Akehurst, G.C. (1971). 'Tobacco.' Longmans Group Ltd., London: 1 - 55.

Beetz, A.N.J. (1925). 'Tobacco fertilisers.' Tropical Agriculturist. LXV : 349.

Tso, T.C. (1972). Physiology and biochemistry of tobacco plants. Dowden, Hutchinson and Ross Inc. U S A : 393.