

## GROWTH RESPONSE OF SPROUTED RUBBER SEEDS TO PRE-PLANT APPLICATION OF DIURON

Radha Lakshmanan and K.I. Punnoose

Lakshmanan, R. and Punnoose, K.I. (1998). Growth response of sprouted rubber seeds to pre-plant application of diuron. *Indian Journal of Natural Rubber Research*, 11(1&2) : 46-49.

Pot culture and field experiments were carried out to study the tolerance of sprouted seeds of *Hevea brasiliensis* to preplant application of diuron at the rate of 2.5 kg/ha. Results of the pot culture study, where planting was carried out the same day and 1, 3, 5 or 7 days after spraying indicated no toxic effect on seedling growth. On the contrary, a slight stimulatory effect of diuron on seedling growth was noticed. Field experiments revealed that growth of rubber was not adversely affected when planted at different intervals (same day, 1, 2, 3, 4, 5, 7 or 10 days) after spraying diuron.

Key words : Diuron, *Hevea*, Herbicide, Seedling growth, Sprouted seed, Weed control.

Radha Lakshmanan (for correspondence), Rubber Research Institute of India, Regional Research Station, Padiyoor - 670 703, Kannur, India and K.I. Punnoose, Rubber Research Institute of India, Kottayam - 686 009, India; e-mail : rrii@vsnl.com

### INTRODUCTION

Weeds pose a major threat to healthy and vigorous growth of rubber in seedling nurseries. Restricting weed growth in the nursery is thus a cultural operation of paramount importance. The critical period of crop-weed competition in *Hevea brasiliensis* is reported to be between the fourth and sixth week after transplanting (Suryaningtyas and Terry, 1993) during which, weed free condition is to be maintained for obtaining healthy seedlings. This necessitates the control of weeds right from planting.

Diuron is a promising herbicide for weed control in rubber seedling nurseries (Mathew and Punnoose, 1975). Spraying of diuron at the rate of 2.5 kg/ha and planting sprouted rubber seeds after 7-10 days have

been reported to give good control of weeds for a period of 3-4 months (Lakshmanan *et al.*, 1995). Maintaining this gap of 7 to 10 days often becomes difficult, as the time available for preparation of nursery beds after pulling out the previous season's budgrafted plants and the time at which the seeds become ready for transplanting from germination beds is limited in large commercial nurseries. Hence the tolerance of sprouted rubber seeds to diuron application was tested, both under laboratory and field conditions, after spraying diuron, marketed under the trade name 'Klass' (80% a.i.). Diuron is a colourless crystalline solid with 3-(3,4-dichlorophenyl)-1, 1-dimethyl urea as active ingredient. It does not produce any allergic skin reaction