

**NU-FLOW M: A SAFE NEW SEED
TREATMENT FUNGICIDE FOR THE
CONTROL OF COTTON SEEDLING
DISEASE CAUSED BY *THIELAVIOPSIS
BASICOLA* AND *RHIZOCTONIA SOLANI*.**

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Abstract

Nu-Flow M, a new cotton seed fungicide patented by Rohm and Haas Co. and co-developed with Wilbur-Ellis Co. received EPA registration in April 1995. The active ingredient is Myclobutanil, a member of the triazole family of ergosterol biosynthesis inhibiting fungicidal compounds with systemic activity. Recommended dosage range is 20 - 40 g a.i./100 kg seed. Mammalian toxicological values of Myclobutanil compare favorably with other members of its class. Efficacy and plant safety data are derived from studies conducted since 1992. Tests conducted in inoculated soils in greenhouses indicate particular sensitivity of *Thielaviopsis basicola* to Nu-Flow M. The lowest recommended application rate of 20 g a.i./100 kg seed (1.25 fl oz/cwt seed) significantly inhibited root necrosis and root pruning even at high rates (300 - 400 cfu/g soil) of inoculum. Addition of a companion seed treatment, Nu-Flow ND, enhanced activity. Similar tests under high inoculum conditions (9 - 10 cfu/g soil) also demonstrated good activity against *Rhizoctonia solani*. Seedling survival was enhanced by combining Nu-Flow M even with Nu-Flow ND which has excellent *Rhizoctonia* activity from Chloroneb. Germination and vigor studies indicate extremely low phytotoxicity. No discernible phytotoxicity or negative plant growth regulatory effects were observed at 160 g a.i./100 kg (10 fl oz/cwt), four times the maximum application rate (2.5 fl oz/cwt). Nu-Flow M has performed consistently well in the field. Stand performances of Nu-Flow M combinations compare favorably with industry standards such as Baytan 30 + Thiram 42S + Apron Fl over several years of trials in the National Cottonseed Treatment Program. Nu-Flow M offers a safe and effective means of control of *Thielaviopsis basicola* and *Rhizoctonia solani*.