

Effect of Red Shade Net on Growth of Greenhouse Flower Seedling in Trans-Himalayan Ladakh, India

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Abstract—Ladakh being a cold desert experiences extreme winter and cold spring. Use of greenhouse with polyethylene cladding material is popular in the region for early nursery raising. In order to enhance the growth of flower seedlings inside the greenhouse, a study on effect of red shade net was conducted. Studies were conducted in a greenhouse with red shade net just below the polyethylene sheet. Greenhouse with only polyethylene sheet served as control. Seed germination, seedling growth and other physiological characteristics of nine exotic flower seedlings (Paper flower, Aster, Linaria, Rudbeckia, Zinnia, Holly-hock, Sweet William, Himalayan Hibiscus and Candy tuft) were studied. With the use of combine shade net plus polythene the Photosynthetically Active Radiation (PAR) decreased by more than 80%, while the control encounter a decrease of only 50% in PAR which was transmitted inside the greenhouse. The maximum temperature was always lower but the minimum temperature was higher with the use of supplemented shading net. The relative humidity was higher by 16% then the control. Result suggest that with the use of supplemented shading net there is a decrease in leaf thickness and chlorophyll content with respect to the control raised seedlings. The microclimate so created by the supplemented shading net showed improved growth and initiated the earliness in germination of five flower varieties (Linaria, Rudbeckia, Holly- hock, Himalayan Hibiscus and Candy Tuft) whereas four flower (Paper flower, Aster, Zinia and Sweet William) showed no significant difference in number of days taken for germination. The use of shading net also retained the soil moisture to a greater extent than control.