SUMMARY

Som (*Persea bombycina*, Kost), the primary food plant of muga silkworm, grows wild abundantly in northeastern region. In sericulture, the nutritionally rich leaves are required and these leaves are always threatened by diseases, pests and natural calamities. The muga food plant som is infected by several foliar diseases such as, leaf spot, leaf blight, gray blight, red rust *etc.* causing 6.25-27% reduction in total leaf yield. Moreover, the diseases reduce leaf quality and make it unpalatable for the muga silkworm consequently, heavy loss to the silk industry.

Based on the results obtained during the present investigation, the following conclusions may be drawn.

- The survey work has clearly shown the prevalence of four major foliar diseases. The diseases, however, appeared in different intensities.
- The leaf spot disease appeared during March-April (spring) every year. The disease was most serious during summer.
- The red rust disease appeared in spring in all the localities studied every year. It was present almost through out the year but in varying degrees, except in winter.
- A sharp increase in the intensity of leaf blight was noticed from rainy season that reached its peak during autumn.
The grey blight disease appeared during summer to pre-winter. High intensity of the disease was recorded during autumn.

Correlation between weather parameters and disease intensity of leaf spot indicated strong influence of weather on development and intensity of this disease.

Cultivar S-3 showed resistant reaction to leaf spot and red rust diseases and was moderately resistant to grey blight disease while S-6 showed moderate reaction to all three major diseases studied.

Conidia of *P. disseminata* germinated at temperatures ranging from 15 to 30°C. The spore germination and growth of germ tube started 8 h after incubation. Maximum spore germination was recorded at 75% RH. The percentage of conidial germination was higher on the first four leaves.

Carbendazim was found most effective fungicide and showed only 12.0% disease severity followed by Thiophanate methyl (32.22%).

Among the plant extracts used, *Ocimum sanctum* significantly reduced the severity and incidence of grey blight disease.

*Trichoderma viride*, *T. hamatum* and *T. harzianum* have the potential for development as a biological agent to control the grey blight disease of som.

Carbendazim and extracts *V. rosea*, *O. sanctum* and *A. Indica* have no adverse effect on growth and cocoon yield of muga silkworm.