A clear perspective emerged from the studies is that mulberry gardens in Kashmir valley are inhabited by five species of mites. Among these species the strawberry spider mite (*Tetranychus turkestani* Ugarov and Nikol) and European Red Spider mite (*Panonychus ulmi* Koch) appear in the last week of April as soon as sprouting of leaves starts and phytophagous in nature causing leaf damage to the greater extent. The other three species namely, *Agistemus (nr.) industani* Gonzalez, *Euseius* sp. and *Neoseiulus* sp. are predatory in nature and feed on the phytophagous mites, eggs and immatures of insects.

Both the species of phytophagous mites are the serious pest of mulberry gardens in Kashmir, India and cause significant damage to all the four varieties of mulberry tested. *Tetranychus turkestani* appeared more dangerous than *P. ulmi* as it completed its life cycle faster than *P. ulmi* and produces greater number of eggs and offsprings. Both of them are the serious threat to sericulture, as they prefer to feed on tender leaves. They feed by piercing leaf cells and by sucking up the sap from under side of leaves. As a result of feeding injury and toxic saliva of mites, top most leaves showed speckling during early feeding and then become cup shaped, corky brown, deformed, leathery and thickened which lead to poor quality of foliage for silkworm thus resulting in poor quality as well as quantity of silk.

Highest population density of *T. turkestani* occurred on Ichinose variety than other three varieties of mulberry during both 2011 and 2012 years, while *P. ulmi* population was higher on Tr10 variety during 2011 and KNG during 2012. Tr10 variety showed little resistance/tolerance to *T. turkestani* but was highly susceptible to *P. ulmi*. The population of mites was highly affected by weather parameters. Higher
temperature, moderate relative humidity and low rainfall are the key factors determining rapid multiplication of both the species in mulberry ecosystem.

Mite Incidence and Percent Damage Index of *T. turkestani* and *P. ulmi* were highest in the month of July and were lowest in the month of May when population was very low. In the month of October temperature and humidity were demising, with the onset of winter diapause. From the studies it is clear that, mite pest menace in mulberry increases rapidly during summer season in Kashmir valley.

Studies clearly indicated that, *T. turkestani* and *P. ulmi* showed high rates of increase during spring and summer than during autumn season under laboratory conditions indicating temperature as a substantial factor that can influences the reproduction and survival of *T. turkestani* and *P. ulmi*. Information gathered on the biological parameters of pest mites will help the researchers and academicians in developing pest outbreak predictions, designing management and deploying these mites for mass rearing projects where *T. turkestani* is having relative advantage over *P. ulmi*. Optimum rearing season or temperature for development, survival and fecundity can be chosen from the results. Studies can be used in development of computer simulation models to predict *T. turkestani* and *P. ulmi* development and population dynamics for pest management purposes. Life history studies can be utilized to develop effective management programmes deploying predators against both *T. turkestani* and *P. ulmi*. Results from the field and laboratory studies can be used to develop an effective management module for controlling mites in mulberry garden of Kashmir valley.

Biological parameters of predatory mites, *A. industani* and *Euseius* sp. showed that both are having high feeding potential and can be reared efficiently on both *T. turkestani* and *P. ulmi* under laboratory conditions. However, *Euseius* sp. performed better than *A. industani* with higher predation, oviposition, fecundity and decreased development developmental time than *A. industani*. *Euseius* sp. fed all stages of both *T. turkestani* and *P. ulmi* while as *A. industani* was able to feed only eggs and immature stages. Studies confirmed that during summer season both predatory mite species developed better and consumed more prey stages than during autumn season. Studies revealed that temperature as significant factor influencing the
biology of *A. industani* and *Euseius* sp. and favourable season being summer season during which average temperature ranged from 25 to 30 °C.

Studies confirmed that eggs and immatures are the best feeds for the both predatory mites on which their developmental process was better than that on adults. Studies indicated that both *A. industani* and *Euseius* sp. may be considered as potential biological control agents for *T. turkestani* and *P. ulmi* on mulberry and any other crop. Density of prey stages are the important factors affecting the efficiency of these predator mite species in suppressing the populations of the phytophagous mites.

Proper preventive measures are to be planned to manage the mite damage in mulberry. An integrated approach with emphasis on host plant resistance, agronomy and biological control is need of the day to sustain quality and quantity of silk production for sustainable sericultural development. In this task, the predatory mites, *Euseius* sp. and *A. industani* provide an option as bio-control agents for control of mite pest in mulberry gardens which needs to be explored.