CONCLUSION

The study clearly demonstrated that root-knot nematodes are a major problem of vegetable crops in Western Uttar Pradesh. After survey, two species, *M. incognita* and *M. javanica* were found to be more common and more frequent than other species (*M. arenaria*) in this area. The survey indicates that root-knot nematodes are greatly affecting plant growth of vegetables and causing appreciable yield losses. Fly ash has shown good source of nutrient elements which are beneficial to plants. The soil application of fly ash ameliorated plant growth of three vegetables (okra, cucumber and pepper) and suppressed the nematode penetration and delayed the development. Soil application of fly ash from 10 to 30% levels was found beneficial for all the three crops, maximum being at 20% level.

Nematode inoculated plants also showed improvement in their plant and yield under the influence of fly ash. At the same time, development of galls, egg masses and reproduction were completely checked. Fly ash and nematodes together interacted antagonistically. The study showed that fly ash was beneficial to the plants at lower level (20%) and toxic to root-knot nematodes at all the levels. Thus fly ash can be used as an eco-friendly nematicide-cum-nonconventional fertilizer at 20% level. Use of fly ash in the agricultural field will improve the fertility of soil which would be beneficial to crops. On the other hand it has enough potential to manage the nematodes, and at the same time, it can
solve the disposal problem of huge amount of fly ash generated daily. Thus use of fly ash as soil amendment can be recommended to farmers for the management of root-knot nematodes in the vegetable fields.