Abstract
Focus of pigeonpea pest management research has been on pod borer Helicoverpa armigera (Hubner), however with large-scale cultivation of transgenic cotton in Maharashtra, pest scenario has changed requiring more attention on pod fly. Pod fly Melanagromyza obtusa Malloch now has become important biotic constraint in increasing the production and productivity under subsistence farming conditions, irrespective of agroecological zones. The survey of Marathwada during 2007–08 revealed that the damage by pod fly ranged from 25.5 to 36% (Anonymous 2008). Hence, studies were carried out to assess and devise pest management module, which can go as a component of widely accepted Integrated Pest Management (IPM). Experimental result over twe years indicate Emamectin benzoate 5 SG in combination with Acetamiprid 20 SP or Dimethoate 30 EC gave higher grain yield of 1 399 and 1 392 kg/ha and lower pod fly grain damage (13.30 and 11.95%). Similarly, all the three biopesticide preparations (crude neem kernel seed extract (5%), neem oil (3 000 ppm) and Pongamia oil) gave higher grain yield in comparison to control. Among these biopesticides crude neem seed extract out performed others in terms of per cent increase in yield (31.28%). Maximum percentage increase in yield has been observed in mixed spray of emamectin benzoate and acetamiprid (64.22%), followed by emamectin and dimethoate (62.56%). Effectiveness of emamectin benzoate, which is based on green chemistry, will help in achieving less yield losses through reduction in H. armigera incidence. Similarly, use of crude neem extract or Pongamia oil will give an option for organically-grown pulse crop in reducing pod borer and pod fly infestation.