The stem borer, *Chilo partellus* (Swinhoe), is one of the serious pests of sorghum in India. It is reported to cause as high as eighty per cent damage to newly released sorghum hybrids and varieties, thereby acting as a major constraint in achieving maximum yield potential. As regards the control of this pest, no easy and economical method is known. Also not much attention has been given towards aspects like utilization of host plant resistance, breeding for resistance, making chemical control cheap by judicious use of insecticides, etc. in the control of this pest. Moreover, single factor approach has not yielded much; hence, there is strong need of integrated pest management in sorghum, which is known as poorman's crop and where modern production and protection practices have not yet been introduced to a large extent.

Investigations were undertaken on different methods of control and also to explore the possibility of integration of host plant resistance and chemical control.

Results obtained from studies on resistance in sorghum to stem borer have brought out that cultivars like, E 601, E 603, E 603 and E 604 are highly promising and stable. Similarly varieties SPV Nos. 90, 102, 104, 105 and 106 are moderately resistant to borer in addition to their desirable agronomic characters.

Breeding for resistance to borer has yielded six selection

\[ \text{ex.1.} \ 666 \times 772, \ E \ 303 \times \ P37, \ E \ 302 \times \ S \ 303, \ SPV \ 190 \times \ P \ 151, \]
SFV 115 x P 151 and SFV 105 x IS 5400, showing higher levels of resistance.

Investigations on chemical control have led to the conclusion that only two applications, on 25th and 35th day, of endosulfan 4 per cent dust in leaf whorls instead of traditional three applications of granules are required for borers control. Moreover, application on 25th day after germination is more beneficial than on 20th day as hitherto practiced.

It is seen from the trial on integration of host plant resistance and chemical control that by growing resistant lines, it may not be necessary to resort to chemical control under less and moderate level of borers infestation. However, it may become necessary to integrate the two methods in case of severe infestation.

To prevent the carry over of borers to next Kharif season, it is essential to destroy or consume, before March, stems and stubbles, left after harvest, as they harbour large number of borers larvae, a fact evident from present studies. Efforts should also be made to check the development of borers on summer hosts. Observations on other cultural methods like plant and row spacings and application of nitrogen fertilizer have shown that these do not, possibly, affect the borers incidence.

From the studies on natural enemies of borers, it has been found that parasites, Apanteles flavipes Cam., has a potential for use in integrated control programmes. Studies with
Bacillus thuringiensis (B.t.), a biological agent produced from the HD-1 strain, have shown that use of this agent compares favourably with synthetic organic insecticide endosulfan in controlling borer and can be integrated with endosulfan.

From what has been investigated, it is evident that integrated management of stem borer, Chilo partellus (Swinhoe) is practical and feasible.