Introduction
CHAPTER-I
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The oilseed crops play a vital role in Indian Agricultural economy. These crops hold a sizable share (13%) of the country's gross cropped area contributing around 5% of its gross national production and about 10% of the value of agricultural products. Among different oilseed crops, rapeseed and mustard are the major oil seed crops in India. They occupy a prominent place being important next only to groundnut contributing nearly 30 percent of the total oil seed production in the country. The oil content varies from 37 to 49%. Oil is utilized for human consumption, seeds as spices and cake as a cattle feed and manure. Mustard is also an important oilseed crops containing over 40% oil on dry weight basis. After oil extraction, it provides a meal containing over 40% high quality protein. In the Western country, the meal is utilized exclusively as a food for livestock and poultry but in many Asian countries, it is used as an organic fertilizer for field crops.

India is the largest rapeseed mustard producing country in the world next only to China followed by Canada. The total area under rapeseed mustard in India is 44.7 lakh ha, with annual production of
42.0 lakh tonnes and productivity of 941 kg/ha. The major rapeseed mustard growing states in the country are Rajasthan, Uttar Pradesh, Madhya Pradesh, Haryana, Gujarat and Chhattisgarh.

In Chhattisgarh, the total area under rapeseed mustard is 50.10 thousand hectare with annual production of 16.60 thousand tonnes and productivity of 331 kg/ha (Anonymous, 2001). In Chhattisgarh, the major rapeseed mustard growing areas are Bastar, Surguja, Kanker, Dantewada and Korea districts. In Bastar, rapeseed & mustard are grown in 6.83 thousand hectare with annual production of 5.06 thousand tonnes and productivity of 740 kg/ha (Anonymous, 2002).

Mustard is succumb to various foliar diseases. Forty two fungal pathogens have been reported to provoke diseases on mustard species, out of these Alternaria blight is one of the most wide spread and destructive disease of cruciferous crops in India particularly in northern region of M.P. Alternaria blight is caused by four species of Alternaria viz., *Alternaria brassicae* (Bark) Sacc., *Alternaria brassicicola* (Schw.) Wiltsh, *Alternaria raphani* Grove and Skolko and *Alternaria alternata* (Fr.) Kelss in India. Of these Alternaria caused by *Alternaria brassicae* is one of the major disease in Bastar plateau and other parts of Chhattisgarh.
Alternaria blight of mustard is synonymously known as Alternaria leaf spot, Alternaria pod spot, Alternaria leaf and pod spot, Alternaria blight, Alternaria leaf blight, Alternaria pod blight, Alternaria leaf and pod blight, Alternaria dark leaf spot, Black spot, Brown spot, Stem streak, Seed rot, Siliquae mould, Grey leaf spot and Grey leaf mould of rapeseed mustard (Kolte, 1985a).

The pathogen of Alternaria blight is frequently isolated from leaves, stems and silique generally results in heavy losses (10-70%) in seed yield and quality. The infection of pathogen at seedling stage may lead to death of young plants.

The information on period of occurrence of Alternaria blight in different location, extent of infection, its development and losses in yield is not available with respect to Bastar plateau. The constant use of fungal toxicants is not only harmful for human and cattle life but also pollute the atmosphere. Therefore, efforts are under way to find alternatives of chemical fungicides. Studies conducted on the use of plant extracts have opened a new avenue to control the plant disease and information on effect of plant extracts against Alternaria spp. is very meagre. Hence, identification of such plant extract will be of immense practical value as they are safe economical and non phytotoxic to plant.
Keeping in view of the gaps existing, the following studies will be undertaken to generate comprehensive informations on host pathogen interactions so as to develop an integrated package to effectively handle the disease problem:

- Isolation, identification, symptomatology and pathogenicity of *A. brassicae*

- To study the prevalence of *Alternaria* blight in Bastar plateau.

- To study the periodical development of *Alternaria* blight in different varieties and sowing dates under prevailing environmental conditions.

- To assess the losses in yield due to *Alternaria* blight in most prominent varieties of mustard.

- To manage *Alternaria* blight of mustard in a integrated way involving host resistance, plant extracts, chemical and cultural practices.