Parthenium hysterophorus

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Agricultural has been in constant controversy with weeds. Generally, half of the farmers effort of farming may be devoted to the battle against weeds. Weeds are hidden enemies of crops and cause huge loss to the crop yields, which amount to between Rs. 115 to 200 billion per annum (Agricultural Statistic of Pakistan,.1999-2000). They deplete the soil of its resources and also harbour insect, pests, disease pathogens.

Moreover uncontrolled weeds cause more losses in developing countries almost 17 to 35 per cent as compared with developed countries having 10 to14 per cent.

Parthenium hysterophorus, one of the world's "worst weed" was first introduced in Pakistan only 20 years ago. In a very short period of time, it advanced form isolated outbreaks to establish core infestation in the Punjab province. Its high rate of successful establishment and rapid maturity, enormous number of seed produced and seeds being lighter in weight thus easily transported by variable agencies, make it an aggressive and strong competitor amongst indigenous vegetation crop Plants. Parthenium hysterophorus Linn. is an annual herb of neotropical origin which has now become pan tropical in distribution. It was first reported in India in the early 1950s and a little later in Australia. In Pakistan

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characters which other plants do not have. Parthenium weed has potential to become the major weed the cropping areas of Pakistan. To prevent this form happening, it is imperative to contain raise awareness and commitment in cropping industries.

For sustainable development it is worthwhile to control and check the further spread of Parthenium heysterophorus in the cropping areas of Pakistan as it caused heavy yield reduction in agricultural crops and forage production. Furthermore, the export of contaminated seeds/livestock items is also adversely affected. For example, the export of seed, grain and livestock products form Parthenium infested area within and outside of Australian has been banned to many countries of the world. Pakistan, being an agricultural country her agro based exports can be affected severely by Parthenium infestation in variable commodities. For sustainable development and smooth sailing of agro based exports of the country it is very important to check its spread and contamination.

Reports are available that the Parthenium weed caused an estimated loss of $ 16 million/year for Queens land pasturelists (Australia) due to reduced production and increased expenses on management practices. It also affects cropping system to the tune of $ 6 million/year and significant cost are expended on road side control. The preliminary date on the distribution patter on this

later in Australia. In Pakistan its occurrence was reported in 1980s. This weed has got a major weed status world wide within a relatively short period. For example, it is not included in weeds of Australia until 1976. The weed did not find any place in the worlds worst weeds, however within the last ten years it has become one of the seven most dangerous weeds of the world. It has been introduced in many countries of Africa, Asia and Pacific Islands.

As the alien species facing little environmental resistance Parthenium has become a menace in wastelands and non-cropped areas. The weed can affect crop production, a yield decline of 40% in agricultural crops and 90 % in forage production has been reported. Another indirect affect of the presence of the Parthenium weed is its role as an alternate host for crop pests, functioning as inter season reservoir or inoculum source. The impact of Parthenium weed on livestock production is similarly diverse, both direct and indirect affects on grazing lands, animal health, malik and meat quality, marketing of pasture, seen and grain are well documented.

Frequent contact with plants or pollen can produce serious allergic reactions such as dermatitis, hay fever and asthma. More than two decades ago, serious human health risk from Physterophorus were reported form India and twelve deaths were attributed to allergenic response particularly flu and asthma form Poon alow (Anonymous 1976). Parthenium weed because of its invasive capacity and allelopathic properties, has the potential to disrupt natural ecosystems. It has been reported as causing a total habitual change native Australian grasslands, open wood lands, river banks and flood plains (McGadyen, 1992). Similar invasions of national parks and forest reserves have been observe recently in capital and Lower Punjab of Pakistan (Author's personal observations.)

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distribution patter on this weed in Pakistan, suggest that similar situation can breakout in here also if the wed is not properly managed at this critical stage of invasion.

Keeping in view the hazards it cause dot human health, feedlots, crop productivity, biodiversity and the over all ecosystem composition. The Fungal bio Technology Lab Department of Botany, University of the Punjab has taken initiative to restrict the spread of Parthenium. The typical weedy characters' of the weed, make it an otherwise successful competitor which if not snubbed at the grass root level would in future change the whole scenario.