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Abstract:	Chilli leaf curl disease complex is a major important viral disease. The crop grown in Jharkhand usually suffers seriously from this disease. Considering the economic importance of the disease prersent investigation has been carried out. Causing significant reduction in yield roving survey to know the incidence of chilli leaf curl virus disease was undertaken in Chutia, Pithoria, Bukru, Boreya and Sukurhuttu villages of Ranchi district. The survey results clearly indicated that the incidence of disease varied from 24.55 to 75.53% depending on the season in which the crop was grown. Incidence was low during Rabi, 2015-16 (24.55 -32.27%) and high during Kharif, 2016 (55.42 -75.53 %). All the plants of chilli infected with chilli leaf curl disease complex causes vein clearing on young leaves at the early stages of infection upward curling of young and old leaves and stunting in most cases. Curling of fruits could be seen in mature plants. Leaf curl caused by mites shows downward curling of leaves, partial suppression of lamina near the petiolar end and a shiny bronze colour on the lower surface of the leaves. Emerging young leaves in infected plants become brittle narrow and thicker. Leaf curl due to thrips results upward curling of leaves and interveinal buckling. Irregular scrapping of epidermis could also be seen. In chilli, the most obvious symptoms caused by P. latus is progressive inward rolling of leaves in an inverted boatshaped manner and has a shiny, silvery lining on their ventral surface, rat tailing of leaf petiole and brittleness of foliage, buds are aborted and flowers distorted, shoots grow twisted and fruit may be mishappen and russeted. Among different insecticides three times soil application of Carbofuran 3G (30 Kg/ha) recorded minimum average disease incidence (19.26%) with the highest yield of (87.78 q/ha) and recorded maximum disease reduction over control (38.23 percent) during Rabi, 2015-16 cropping season. In Kharif season, effect of different insecticides on leaf curl disease incidence, fruit yield and yield attributing characters of chilli were very low in comparison to Rabi season with higher leaf curl incidence, lower fruit yield and cost benefit ratio. It was appearance from the evaluation of plant products/ botanical in full conditions that plant product effectively reduce the disease as compared to control. Two sprayings of neem seed kernel extract (NSKE) 5% was recorded to the most efficacious botanical in reducing disease incidence (23.45 percent) coupled with highest yield (64.45 q/ha). Application of NSKE 5% @ 5ml/lit was highly economical which recorded cost-benefit ratio of 1:17.13 and net returned of Rs. 1,5543/- which recorded highest net return /ha among all the plant products. The efficacy of integrated management on chilli leaf curl disease complex showed that minimum disease incidence (12.58%) was recorded in treatment-2 [One time soil application of Carbofuran 3G @ 30 Kg/ha + 2 spray of Imidacloprid @ 0.003%] with the highest disease reduction over control (61.12%)]. Among seven varieties screened against ChLCV, none of the varieties were found free of disease in both Rabi and Kharif seasons. Leaf curl incidence was highest during Kharif season than Rabi season in all varieties. The effect of varieties on yield attributing characters of chilli revealed that the variety Pusa Jwala showed maximum mean plant height (44.14 cm), mean no. of branches/plant (5.82) ,mean no. of fruits/plant (5.69) , mean length/fruit (6.90 cm), mean breadth/fruit (0.97 cm) and mean weight/plant (71.49 gm) in Rabi season as compared to Kharif season which has comparatively less mean plant height (35.89 cm), mean no. of branches/plant (5.48),mean no. of fruits/plant (4.75), mean length/fruit (5.65cm) , mean breadth/fruit (0.59 cm) and mean weight/plant (41.26gm).
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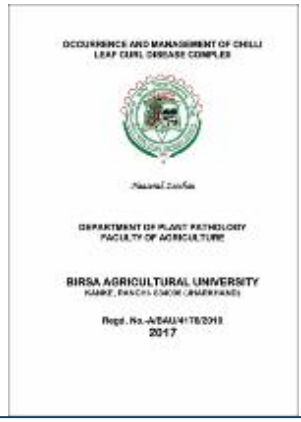
1615 Naaserah Zeeshan.pdf		6.59 MB	Adobe PDF	

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