

SUMMARY

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- 1) All four isolates of *Alternaria alternata* (Fries) Keisler from various places in Western Maharashtra were collected. There was variation in MIC of carbendazim against *Alternaria alternata* isolate. MIC on agar plates ranged from 10-15%. MIC on Gerbera leaves ranged from 5-8%. Isolate Aa-4 from Pune sample was highly resistant with resistant factor 1.5
- 2) Culturing of the sensitive *Alternaria alternata* isolate (Aa-2) on carbendazim continuously increased resistance. Use of carbendazim alternately inhibited the growth of pathogen at 2nd passage.
- 3) Carbendazim mixed with mancozeb, kocide-101 and roko stopped the growth of *Alternaria alternata* in 1st passage only. Similarly results were obtained on Gerbera plants, when treated with above mixture.
- 4) Synergistic effect of Carbendazim mixed with other other agro-chemicals with on the development of fungicide resistance in *Alternaria alternata* were studied both *in vitro* and *in vivo*. In *in vitro*, it was seen that carbendazim with fungicides (kavach, mancozeb and ridomil) herbicide (mera-71) completely inhibit the growth of pathogen.

In *in vivo* studies carbendazim mixed with above fungicide, herbicide and insecticide (thimate) were also prevented infection of *Alternaria alternata* to Gerbera.