**Disease management of Alternaria leaf blight disease of sunflower**

## Several experiments were conducted and the integrated strategies developed areas :-

♦ Removal and burning of infected plant residue reduces the inoculumn levels thereby minimizes the carryover of disease from season to season.

♦ Use of healthy seed reduces the initial inoculum load as the fungus is of seed borne in nature.

♦Occurrence and severity of the disease depends on the season and planting dates. The spring crop sown in late February will have higher incidence than the crop sown in first week of January. Mid September planting of sunflower in Nainital and Tarai region of Uttarakand keeps the crop free from major diseases particularly with low infection of leaf spot.

♦Early planting of sunflower during *kharif* season results in low occurrence of leaf spot. ♦

♦ Closer spacing induces more disease build up. Spacing of 60 x 30cm or 45 x 30 cm is optimum in reducing the build up of disease.

♦Alternaria leaf blight severity was less when normal package of practices were followed compared with low fertilization and farmers practice.

♦Seed treatment with thiram or captan 3g/kg or carbendazim at 1g /kg protects the seed from seed borne infection.

♦Spraying of mancozeb 0.3% four times at interval of 7-10 days is very effective in controlling the disease with an increase in yield by about 43 to 65%. OR Spraying of carbendazim + mancozeb (1:1) three times at 15 days interval after disease appearance improves seed yield and reduces leaf spot. Spraying of Iprodione also reduces the disease. OR Spraying of propiconazole 1ml/l or hexaconazole 1ml/l three times at 30, 45 and 60 DAS effectively reduced leaf spot disease.