

## INVESTIGATION AND MEASUREMENT OF DISEASES OF SEED SPICES AND CULINARY HERBS OF BANGLADESH

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### Executive Summary

An experiment was conducted for detection and identification of diseases of seed spices and to measure their incidence and severity during 2021-2022. The disease incidence and severity were recorded under natural epiphytic conditions. The most common seed spices and herbs of Bangladesh are coriander, cumin, dill/ Indian dill, black cumin, fennel, fenugreek, sickle fruit fenugreek, celery and ajowan were considered for this experiment. The mentioned nine species are mostly herbaceous plants which belong to different genus and different families respectively. Like other crops, seed spices and culinary herbs are not free from microbial (fungus, bacteria, nematode, virus etc.) infection and diseases. In the field experiment of these nine seed spices, identified diseases were foot & root rot, leaf spot, leaf blight, umbel blight etc. Foot and root rot disease was noticed severely in fenugreek field at the seedling stage and also in black cumin that was caused by *Sclerotium rolfsii*. Among the three varieties, the lowest disease incidence was recorded in BARI Methi 3, and the highest disease incidence was recorded in BARI Methi 2. Leaf spot was recorded in coriander which is caused by *Fusarium* spp. Both disease incidence and disease severity were the highest in BARI Dhonia 2. Leaf blight disease was recorded in fennel, cumin, wild celery, ajowan and dill which were caused by different species of *Alternaria*. Umbel blight was recorded in fennel also caused by *Alternaria* spp. Umbel blight also observed in wild celery and ajowan field but only few umbels were affected. In case of leaf and umbel blight there was no significance difference between BARI Mouri 1 and BARI Mouri 2. However, in case of cumin, dill, wild celery and Ajowan, disease incidence and disease severity was increased with the increasing age of the plant. All cumin plants were blighted before flowering stage was caused by *Alternaria* spp. Powdery mildew disease was observed in coriander and dill field but a very small portion of umbel were affected.

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