

FROM PARASITISM TO MUTUALISM, LONG TERM INTERACTIONS CONSEQUENCE

S u m m a r y

There are described interaction between parasites and plants in nature and agrocenoses. *Neotyphodium* endophytes are described as symbionts which can be both, parasites and mutualists. Bacteria from the genus *Wolbachia* can be considered as microbial manipulator of arthropod reproduction. These so called

“male killers” can induce parthenogenesis in haplodiploid insects. Dark-septate endophytes (DSE) are ubiquitous fungus species noted in roots of many arcto-alpine plants. Its role is still not clearly known, but they may play an important role in early season nitrogen uptake.