

DENITRIFICATION DYNAMICS OF A BEIJING UPLAND FLUVIO-AQUIC SOIL DURING SUMMER MAIZE GROWTH PERIOD: EFFECT OF SOIL MOISTURE, NH₄-N AND NO₃-N CONTENT

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Summary. The experiment was carried out in a Beijing fluvio-aquic soil during summer maize growth period. Denitrification was studied using acetylene inhibition technique in a soil incubation system. Water filled pore space (WFPS), NH₄-N and NO₃-N content were also studied. The results showed that the denitrification N loss mainly happened within 2 weeks after fertilizer nitrogen application while WFPS played an important role in denitrification. The effect of NH₄-N and NO₃-N content on denitrification was confined to some times or places only when soil moisture was appropriate.

Key words Denitrification. Maize. Acetylene inhibition. Water-filled pore space.