

6. Novel Characterization in situ of Nitrate Uptake by Rice plants in the Absence and presence of External Ammonium Ions

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A spectrophotometric method recording the nitrate uptake in situ was devised to study the nitrate uptake by rice plants, Oryza sativa L.. Double reciprocal plot of the rate of uptake versus concentration of nitrate in the nutrient solution gave a  $V_{max}$  of 8.264  $\mu$  mol./g.fw. hr. and an apparent  $K_m$  of  $3.70 \times 10^{-4} M$  for the nitrate uptake by intact seedlings under steady state of uptake. Addition of ammonium to the uptake solution slowed little the rate of nitrate uptake. However, there observed neither feedback inhibition of nitrate reductase activity in vitro and in vivo nor the ammonium induced repression of the enzyme in turnover.

7. 수도 냉수처리에 의한 저온 장애의 품종간 차이 (예보)

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인위적으로 수온을 조절할 수 있는 시험답에서 냉수처리에 의한