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[\[Full-text PDF \(851K\) \]](#) [\[References \]](#)**Characteristics of Taking Root of Rice Nurseling Seedling in Relation to the Changes of Some Inorganic and Organic Constituents after Transplanting**

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Abstract:

The growth and changes of some inorganic and organic constituents in the shoots of rice nurseling(NS)and young(YS)seedlings after transplanting(TP) were compared to clarify the characteristics of taking root of NS.1)Elongation growth and leaf emergence rates were inhibited in YS for 3 days after TP, but not in NS.The first nodal roots of the NS started to emerge 2-3 days after TP, and the number of roots of NS at the same plant age in leaf number was higher than that of YS until about the 4.0-leaf stage.2)Nitrogen (N)and phosphorous(P)or potassium(K)percentage in the shoots of NS started to increase at one and three days after TP, respectively.This was 2-3 days earlier than that in YS.The contribution ratio of endosperm to the accumulation of N, P and K in the shoots after TP was higher in the order of P, N and K.3)The total sugar percentage in the shoots of NS decreased until 7 days after TP.On the other hand, that in the shoots of YS was markedly increased due to the transplanting injury until 3 days after TP.4)The decomposition of starch in the endosperm of NS was not inhibited by TP, and the starch was utilised for the growth of NS and almost consumed at 7 days after TP.5)N, P and K percentages in the shoots after taking root were higher in NS than those in YS, but vice versa in total sugar and starch percentages.6)These results showed lower transplanting injury and smoother taking root in NS in comparison with YS.

Keywords:

NPK content, Nurseling seedling, Rice plant, Starch content, Taking root, Total sugar content, Transplanting injury, Young seedling

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