

研究论文

# 应用<sup>15</sup>N研究施氮比例对小麦氮素利用的效应

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**摘要** 应用<sup>15</sup>N示踪技术研究氮素不同底施和追施比例对小麦氮素利用的效应。结果表明, 籽粒蛋白质含量随追施氮肥比例的增加而提高, 颖壳、根系、茎秆的含氮量也呈随追氮比例增加而提高的趋势。收获时植株各器官中, 籽粒含氮量最多, 依次为颖壳、叶片、茎秆、根系。在两种肥料的比较中, 施用尿素比硫酸铵在植株营养器官中残留量少, 而籽粒中氮素吸收量大。各器官NDFP% (氮素来自肥料氮的百分比) 随追肥比例增加而呈低高低的变化曲线。均可用 $Y=a+bx+cx^2$ ( $Y=NDFP$ ,  $x$ =处理代号)方程表示。

**关键词** [<sup>15</sup>N示踪](#) [面包小麦](#) [氮素利用](#)

**分类号** [S512](#)

## Effect of Application Rate of Nitrogen on Its Utilization in Wheat by Using <sup>15</sup>N Tracer Technique

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**Abstract** By using <sup>15</sup>N tracer technique the effects of different application proportion of basic dressing and top dressing of nitrogen on its utilization in bread wheat were studied. The result indicated that the grain protein content raised with the proportion increasing of top dressing of nitrogen, so did the nitrogen content in outer glume, roots and culm. Among all the organs of the plants at raping time, the grain contained the highest nitrogen, the outer glume, leaf, culm and roots neat in order. The residual quantity of nitrogen was fewer in moratorium and the sorption quantity of nitrogen was more in grain with urea application than ammonium sulphate application. The change of NDFP(percentage of nitrogen content from nitrogen in fertilizer) in every organ of wheat plants showed like a parabola which can be expressed in the equation  $Y=a+bx+cx^2$  ( $Y=NDFP$ ,  $x$ = code of treatment).

**Key words** [<sup>15</sup>N tracer](#); [Bread wheat](#); [Nitrogen utilization](#)

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