

研究报告

# 冬枣果实硬核期对<sup>15</sup>N尿素吸收、分配及再利用特性研究

赵登超<sup>1</sup>,姜远茂<sup>1</sup>,彭福田<sup>1</sup>,张进<sup>2</sup>,张序<sup>1</sup>,巨晓棠<sup>3</sup>,张福锁<sup>3</sup>

<sup>1</sup>山东农业大学园艺科学与工程学院,泰安 271018; <sup>2</sup>浙江大学环境与资源学院,杭州 310029; <sup>3</sup>中国农业大学植物营养系,北京 100094

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## 摘要

以盆栽冬枣为试材,研究了冬枣果实硬核期土施<sup>15</sup>N尿素条件下N的吸收、分配和再利用特性.结果表明,果实膨大期,细根中的肥料氮比率(Ndff%)最高为10.64%,其次为新生营养器官.果实采收后,叶片和枣吊中的<sup>15</sup>N回撤;翌年萌芽前,粗根中的Ndff%最高(3.69%);盛花期,新生营养器官(当年生枣头枝、枣吊、叶片和花)中的Ndff%最高.果实硬核期施肥后,当年根系吸收的<sup>15</sup>N尿素主要用于营养生长(叶片、枣吊、根系),回撤<sup>15</sup>N优先贮藏于根系,休眠季节根系(54.01%)贮藏<sup>15</sup>N略高于地上部器官(45.99%),主要的<sup>15</sup>N贮藏器官为粗根(38.61%).地上部枝干中的贮藏<sup>15</sup>N从采果后到萌芽前含量变化剧烈,可作为贮藏<sup>15</sup>N营养诊断的“靶器官”,同期粗根中贮藏<sup>15</sup>N变幅较小,属长期“库”.贮藏<sup>15</sup>N具有就近利用的特性,其分配随生长中心的转移而转移.

关键词 [冬枣](#) [果实硬核期](#) [<sup>15</sup>N尿素](#) [吸收](#) [分配](#) [再利用](#)

分类号

## Absorption and distribution of nitrogen from <sup>15</sup>N labelled urea applied at core-hardening stage in winter jujube

ZHAO Dengchao<sup>1</sup>,JIANG Yuanmao<sup>1</sup>,PENG Futian<sup>1</sup>,ZHANG Jin<sup>2</sup>,ZHANG Xu<sup>1</sup>,JU Xiaotang<sup>3</sup>,ZHANG Fusuo<sup>3</sup>

<sup>1</sup>College of Horticulture Science and Engineering,Shandong Agricultural University,Tai'an 271018,China;<sup>2</sup>College of Environmental and Resource Science,Zhejiang University,Hangzhou 310029,China;<sup>3</sup>Department of Plant Nutrition,China Agricultural University,Beijing 100094,China

## Abstract

The study with pot experiment showed that at the rapid-swelling stage of winter jujube fruit,the percent of nitrogen derived from fertilizer (Ndff%) was the highest (10.64%) in fine roots,followed by new-growth nutritive organs.The absorbed urea-<sup>15</sup>N decreased in leaves and deciduous supers,and accumulated preferentially in root systems after harvest.The Ndff% in coarse roots was the highest (3.69%) before budding stage,while that in new-growth organs (new branches,deciduous supers,leaves and flowers) was the highest at full-blooming stage.The urea-<sup>15</sup>N applied at core-hardening stage mainly allocated in nutritive organs (leaves,deciduous supers,roots) in the first year,with the distribution rate 54.01% in root systems in winter,which was higher than that in branches (45.99%).The <sup>15</sup>N stored in main branches changed drastically from post-harvest to budding stage.Main branches could be regarded as the 'target organs' of N storage,while coarse roots were the 'long term sink' of N storage.The N reserve distributed preferentially in contiguity organs,and the distribution center changed with the growth and development of winter jujube in next spring.

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## Key words

[Ziziphus jujuba Mill.var.inermis Rehd.\(winter jujube\)](#) [Fruit core-hardening stage](#)  
[<sup>15</sup>N Labclled urea](#) [Absorption](#) [Distribution](#) [Reutilization](#)

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