

中国学术期刊全文收录期刊

美国化学文摘社(CAS)收录期刊

# 北方园艺

## NORTHERN HORTICULTURE

BEI FANG YUAN YI

中文核心期刊  
黑龙江省优秀期刊  
中国北方优秀期刊  
全国优秀农业期刊

黑龙江省农业科学院  
黑龙江省园艺学会



主办

9

2014

总第312期  
5月(上)

# 北方园艺

(1977 年创刊·半月刊)

BEI FANG YUAN YI

总第 312 期      2014 年第 9 期      5 月(上)

## 目 次

### ◆试验研究◆

---

- 甜瓜幼苗耐盐碱性及缓解盐碱胁迫  $\gamma$ -氨基丁酸浓度的筛选 ..... 赵九洲,胡立盼,徐志然,等(1)
- 盐胁迫对甜瓜种子发芽的影响 ..... 王喜涛,周秀艳,辛 明,等(7)
- 不同引发剂对茄子种子引发效果的研究 ..... 狄文伟,周 彤,赵 冰(12)
- 南高丛越橘四个品种的光合特征研究..... 李根柱,张自川,王贺新,等(15)
- 5-氨基乙酰丙酸对葡萄盐胁迫缓解效应的研究 ..... 刘 鹏,赵宝龙,王文静,等(19)
- 吐鲁番不同栽培架式葡萄叶幕微气候差异分析..... 贾 杨,廖 康,刘曼曼,等(23)
- 疏果方式对“赤霞珠”葡萄挥发性物质的影响..... 刘品何,刘 胜,秦伟帅,等(27)

### ◆研究简报◆

---

- 枣头及枣吊摘心对红枣结实性状的影响..... 刘期国,王雨歌,董宇顺,等(32)
- 夏季遮荫对罗汉果生长和净光合速率的影响 ..... 马克群,徐函兵,范宏伟(35)
- 苏州光福不同杨梅品种果实品质分析..... 郑丽屏,蔡 平,王利芬,等(38)

高海拔地区乌塌菜高产栽培优化研究…………… 马 杰,王 嵩,赵 维,等(40)

露地及保护地栽培四种油桃果实品质的比较

…………… 阿卜杜外力·麦麦提,阿衣古力·阿不都瓦依提,热孜宛古丽·塔伊尔(43)

## ◆设施园艺◆

---

水肥减量对日光温室小型西瓜产量品质及土壤水分状况的影响…………… 罗 勤,陈竹君,雷金繁,等(48)

适合新疆戈壁地区甜瓜穴盘育苗的基质相对含水量的探究 …………… 宋 羽,卢青成,王 浩(53)

黑龙江省温室草莓栽培技术…………… 刘海军,于永强,陶可全,等(56)

玫瑰香葡萄设施促成栽培技术…………… 裴巧艳,石福敏(59)

高寒地区日光温室菜豆引种比较试验 …………… 杨小梅(60)

## ◆栽培技术◆

---

### ☆菜园☆

黑龙江省高寒地区早春生产叶用莴苣的关键性栽培技术 …………… 刘雨娜(62)

## ◆园林花卉◆

---

### ☆植物☆

八种抗旱材料组合对于旱矿区油松抗旱性的影响…………… 涂永成,裴宗平,周 江,等(63)

中间锦鸡儿不同器官水浸提液对苜蓿种子萌发的影响…………… 翟德莘,陈 林,杨新国,等(67)

康宁霉素对国槐幼苗生长及生理指标的影响…………… 朱衍杰,张秀省,穆红梅,等(71)

藏东南云南松次生林群落物种多样性研究 …………… 王 伟,张洪峰,张 华(74)

干旱胁迫对三种藓类植物生理特性的影响 …………… 国春晖,沙 伟,李孝凯(78)

铅胁迫下德国鸢尾生长特征和分布的研究…………… 朱旭东,田松青,原海燕,等(82)

历山自然保护区苔藓植物的再调查 …………… 张二芳,高 平,赵建成(87)

波叶海菜花不同居群叶面积指数的变化及分析…………… 翟书华,王 斌,苏 源,等(90)

不同光照处理对五种观赏蕨生长发育及观赏特性的影响…………… 张国珍,曾富春,李策宏,等(93)

## ☆景观☆

基于 RS 和 GIS 的武川县景观格局变化研究…………… 王文玲,高 永,杨 光,等(97)

## ◆生物技术◆

---

38 个石榴品种的 RAPD 遗传关系分析 …………… 马 丽,马耀华,郝兆祥,等(101)

核桃种质资源遗传多样性的 RAMP 标记分析 …………… 张建英,毛向红,张莹莹(106)

不同生长调节因子对耐寒柑橘愈伤组织诱导效应研究…………… 胡选萍(109)

四川天彭牡丹遗传多样性研究…………… 甘 娜,陈其兵,罗承德(112)

基于绿色荧光蛋白观察的花粉介导转化泡桐初探 …………… 杨利艳,冉 慧,乔白露,等(117)

羽衣甘蓝 SRAP 体系建立与优化 …………… 祝朋芳,康耀海,黄娟娟,等(121)

## ◆植物保护◆

---

不同药剂对韭菜迟眼蕈蚊致毒的温度效应及田间药效 …………… 李贤贤,马晓丹,薛 明,等(125)

苹果炭疽菌叶枯病防控研究 …………… 曹依静,党 伟,孙共明,等(128)

不同杀虫剂对红花指管蚜的室内毒力测定及田间药效试验 …………… 于海燕,范文忠(131)

冬枣采后黑腐病病原菌分离鉴定及控制研究…………… 蒋 卉,朱丽霞,郭东起(133)

## ◆贮藏保鲜加工◆

---

不同溶剂对女贞子黄酮提取效果和抑菌活性的影响 …………… 王晓洁,盛东峰(137)

外源糖对香雪兰切花活性氧平衡的影响…………… 刘亚杰,常 苹,唐东芹(140)

采后不同钙浓度处理对贮藏期间苹果硬度及果胶含量的影响 …………… 贺芬芬,刘成连,原永兵,等(147)

枣渣中不溶性膳食纤维酶法提取工艺及性质研究 …………… 李星科,刘芳丽,李素云,等(151)

水杨酸对青椒抗冷性的影响 …………… 丁 天,史君彦,王 清,等(154)

## ◆食用菌◆

---

五株荷叶离褶伞碳氮源及适合发酵菌株的筛选 …………… 周会明,张焱珍,席亚丽,等(159)

- 农药对食用菌菌丝生长的均匀试验研究 ..... 朱妍梅,石 强(163)
- 刺芹侧耳液体培养基配方优化研究 ..... 李 超,肖千明(168)

## ◆中 草 药◆

---

- 贵州桑属植物资源及综合利用之前景 ..... 黄鹏予,张珍明,谢 华,等(170)
- 不同采收季节蕨麻的化学成分研究 ..... 李军乔,温 馨,包锦渊,等(173)
- 不同茯苓菌株的菌核产量比较及内在品质评价 ..... 徐 雷,陈科力(176)

## ◆土壤与肥料◆

---

- 水分胁迫下 AM 真菌对紫花苜蓿生长及抗旱性的影响 ..... 孔 静,裴宗平,杜 旻,等(179)
- 氮肥用量对温室草莓生理特性的影响 ..... 王学林,彭晓丹,韩秀君,等(182)
- 采煤塌陷裂缝对土壤速效养分的影响 ..... 贺明辉,高 永,陈 曦,等(186)
- 土壤施钙对温室油桃贮藏期间果实品质的影响 ..... 李中勇,高东升(189)

## ◆产业论坛◆

---

- 山西省文冠果的栽培历史及研究现状..... 张东旭,敖 妍,马履一(192)

## ◆专题综述◆

---

- 菊芋耐盐碱性研究进展 ..... 薛志忠,杨雅华,李可晔,等(196)
- 胡桃楸研究现状及保育对策 ..... 张淑媛,杜凤国(199)
- 茶尺蠖天敌生态学研究进展..... 高 宇(203)

## ◆农业经纬◆

---

- 近十七年国家自然科学基金资助植物白粉病项目情况分析 ..... 李 莹,王殿东(206)
- 新疆塔里木南缘胡杨林生态价值测度..... 王吴续,徐崇志,李 青(210)
- 我国休闲农业发展现状及对策分析..... 李 娟,王 健,任 喆(214)

# NORTHERN HORTICULTURE

(Started in 1977, Half Monthly)

Total NO. 312, NO. 9(2014), The First Half of May

## Contents

### ◆ Experimentation and Research ◆

- The Screening of Melon(*Cucumis melo* L.)Seedling Cultivars for Salt-alkaline Tolerance and the Concentration of  $\gamma$ -aminobutyric Acid Alleviating Salt-alkaline Stress ..... ZHAO Jiu-zhou, HU Li-pan, XU Zhi-ran, et al(1)
- Effect of NaCl Stress on Seed Germination of Melon ..... WANG Xi-tao, ZHOU Xiu-yan, XIN Ming, et al(7)
- Effects of Different Evocating Agent on the Evoked Response of Eggplant Seeds ..... DI Wen-wei, ZHOU Tong, ZHAO Bing(12)
- Study on Photosynthetic Characteristics of Four Southern Highbush Blueberry Species ..... LI Gen-zhu, ZHANG Zi-chuan, WANG He-xin, et al(15)
- Study on Mitigative Effect of 5-aminolevulinic Acid on Grape Under Salt Stress ..... LIU Peng, ZHAO Bao-long, WANG Wen-jing, et al(19)
- Analysis on the Canopy Microclimate of the Different Grape Cultivation Trellis in Turpan ..... JIA Yang, LIAO Kang, LIU Man-man, et al(23)
- Effect of Different Thinning Treatments on Volatile Compounds in 'Cabernet Sauvignon' Grape ..... LIU Pin-he, LIU Sheng, QIN Wei-shuai, et al(27)

### ◆ Research Notes ◆

- Effect of Heads and Bearing Branches Pinching on Fruit Traits of *Ziziphus jujubes* cv. .... LIU Qi-guo, WANG Yu-ge, DONG Yu-shun, et al(32)
- Effect of Shading on Growth and Net Photosynthetic Rate of *Siraitia grosvenorii* in Summer ..... MA Ke-qun, XU Han-bing, FAN Hong-wei(35)
- Analysis of Fruit Quality of the Different *Myrica rubra* Varieties in Suzhou Guangfu ..... ZHENG Li-ping, CAI Ping, WANG Li-fen, et al(38)
- Research on High-yielding Optimazation Growing of *Braassica campestris* L. in High Altitude Area ..... MA Jie, WANG Song, ZHAO Wei, et al(40)
- Comparison of Four Nectarine Fruit Quality That Cultivated in Open Field and Protected Area  
..... Abuduwaili • MAIMAITI, Ayiguli • ABUDUWAYITI, Rizivaneguli • TAYIER(43)

### ◆ Facilities Horticulture ◆

- Effects of Reducing Water and Fertilizer on Yield, Quality of Mini-watermelon and Soil Moisture in Solar Greenhouse  
..... LUO Qin, CHEN Zhu-jun, LEI Jin-fan, et al(48)
- Research on Suitable Substrate Water Content for Melon Plug-seedling in Gobi District of Xinjiang ..... SONG Yu, LU Qing-cheng, WANG Hao(53)
- Cultivation Techniques of Strawberry in Greenhouse in Heilongjiang Province ..... LIU Hai-jun, YU Yong-qiang, TAO Ke-quan, et al(56)
- Introduction Experiment About *Phaseolus vulgaris* L. Cultivars in Solar Greenhouse in Alpine Region ..... YANG Xiao-mei(60)

### ◆ Garden Design and Garden Plants ◆

- Effect of Eight Kinds of Drought-resistant Materials Combination on Drought Resistance of *Pinus tabulaeformis* in Dry Mining Area  
..... TU Yong-cheng, PEI Zong-ping, ZHOU Jiang, et al(63)
- Allelopathic Effects of Aqueous Extracts From Different Organs of *Caragana intermedia* on Seed Germination of Alfalfa  
..... ZHAI De-ping, CHEN Lin, YANG Xin-guo, et al(67)
- Effects of Trichokonins on Growth and Physiology Indexes of *Sophora japonica* Seedling ..... ZHU Yan-jie, ZHANG Xiu-sheng, MU Hong-mei, et al(71)
- Study on Community Characteristics of Secondary *Pinus yunnanensis* Forest in Southeast Tibet ..... WANG Wei, ZHANG Hong-feng, ZHANG Hua(74)
- Effect of Drought Stress on Physiological Characteristics of Three Moss Species ..... GUO Chun-hui, SHA Wei, LI Xiao-kai(78)
- Study on Growth and Distribution of *Iris germanica* L. Under Lead Stress ..... ZHU Xu-dong, TIAN Song-qing, YUAN Hai-yan, et al(82)
- Re-Survey on the Bryophyte of Lishan Nature Reserve ..... ZHANG Er-fang, GAO Ping, ZHAO Jian-cheng(87)
- The LAI Variation and Its Analysis of Different *Oxetelia acuminata* var. *crispa* Populations ..... ZHAI Shu-hua, WANG Bin, SU Yuan, et al(90)
- Effect of Different Light Treatment on Growth and Ornamental Feature of Five Ornamental Ferns  
..... ZHANG Guo-zhen, ZENG Fu-chun, LI Ce-hong, et al(93)
- Study on Dynamic Changes of Landscape Pattern of Wuchuan in RS and GIS ..... WANG Wen-ling, GAO Yong, YANG Guang, et al(97)

## ◆ Biotechnology ◆

- Genetic Relationship Analysis of 38 *Punica granatu* L. Cultivars Based on RAPD Markers ..... MA Li, MA Yao-hua, HAO Zhao-xiang, et al(101)
- Study on the Genetic Diversity of Walnut Germplasm Resources Based on RAMP Marker ..... ZHANG Jian-ying, MAO Xiang-hong, ZHANG Ying-ying(106)
- Study on Effect of Different Growth-regulators on Callus Induction of Cotyledon Explants About *Critus rutaceae* ..... HU Xuan-ping(109)
- Research on the Genetic Diversity of Tianpeng Tree Peony ..... GAN Na, CHEN Qi-bing, LUO Cheng-de(112)
- Preliminary Study on *Paulownia* Transformation via Pollen-mediated Transformation Approach Based on GFP Observation  
..... YANG Li-yan, RAN Hui, QIAO Bai-lu, et al(117)
- The Optimization of SRAP-PCR Amplification Program and System in Kale ..... ZHU Peng-fang, KANG Yao-hai, HUANG Juan-juan, et al(121)

## ◆ Plant Protection ◆

- Toxicity of Insecticides to *Bradysia odoriphaga* at Different Temperatures and Their Control Effect in the Fields  
..... LI Xian-xian, MA Xiao-dan, XUE Ming, et al(125)
- Primary Study on Comprehensive Prevention and Control of Apple Anthrax Leaf Blight ..... CAO Yi-jing, DANG Wei, SUN Gong-ming, et al(128)
- Toxicity Measurement and Field Trial Test on the Effects of Different Pesticides on *Uroleucon gobonis* ..... YU Hai-yan, FAN Wen-zhong(131)
- Study on the Isolation, Identification and Control of Black Mould Pathogen of Winter Jujube After Postharvest ..... JIANG Hui, ZHU Li-xia, GUO Dong-qi(133)

## ◆ Storage and Processing ◆

- Effect of Different Solvents on Extraction of Effective Total Flavones and Antibacterial Activity of *Ligustrum lucidum*  
..... WANG Xiao-jie, SHENG Dong-feng(137)
- Effect of Exogenous Sugars on Active Oxygen Balance of Cut *Freesia* Flowers ..... LIU Ya-jie, CHANG Ping, TANG Dong-qin(140)
- Effect of Various Calcium Concentrations Dip Treatment on Firmness and Pectin Content During Post-harvest of Apple  
..... HE Fen-fen, LIU Cheng-lian, YUAN Yong-bing, et al(147)
- Study on Enzymatic Extraction Technology and Properties of Insoluble Dietary Fiber From Jujube Slag ..... LI Xing-ke, LIU Fang-li, LI Su-yun, et al(151)
- Effect of Salicylic Acid on Chilling Resistance of Green Pepper ..... DING Tian, SHI Jun-yan, WANG Qing, et al(154)

## ◆ Edible Fungi ◆

- Screening of Different Carbon and Nitrogen Sources and Suitable for Fermentation on Five Strains of *Lyophyllum decastes*  
..... ZHOU Hui-ming, ZHANG Yan-zhen, XI Ya-li, et al(159)
- Study on Uniform Design for Screening of Pesticides on the Hypha Growth of Several Edible Fungus ..... ZHU Yan-mei, SHI Qiang(163)
- Study on Culture Medium Formulation of *Pleurotus eryugii* (DC. :Fr.) Quel Liquid Spawn ..... LI Chao, XIAO Qian-ming(168)

## ◆ Chinese Traditional Medicine ◆

- Guizhou *Morus* Prospects and Comprehensive Utilization of Plant Resources ..... HUANG Peng-yu, ZHANG Zhen-ming, XIE Hua, et al(170)
- Potentilla Different Harvest Seasons Determination of Chemical Composition Analysis ..... LI Jun-qiao, WEN Xin, BAO Jin-yuan, et al(173)
- Sclerotium Yield Comparison and Internal Quality Evaluation of Different *Poria cocos* Strains ..... XU Lei, CHEN Ke-li(176)

## ◆ Soil and Fertilizer ◆

- Effects of AM Fungi on Alfalfa Growth and Drought Resistance Under Water Stress ..... KONG Jing, PEI Zong-ping, DU Min, et al(179)
- Effect of Different Nitrogen Concentration on Physiological Property Strawberry in Greenhouse ... WANG Xue-lin, PENG Xiao-dan, HAN Xiu-jun, et al(182)
- Effect of Cracks of Coal Mining Subsidence on Soil Available Nutrients ..... HE Ming-hui, GAO Yong, CHEN Xi, et al(186)
- Effects of Applying Calcium in Soil on Peach Quality of Greenhouse Nectarine During Storage Periods ..... LI Zhong-yong, GAO Dong-sheng(189)

## ◆ Industry Forum ◆

- The Research of Current Situation and Cultivation History of *Xanthoceras sorbi folia* in Shanxi Province ..... ZHANG Dong-xu, AO Yan, MA Lv-yi(192)

## ◆ Summarize ◆

- Research Progress on Saline-Alkali Tolerance of *Helianthus tuberosus* L. .... XUE Zhi-zhong, YANG Ya-hua, LI Ke-ye, et al(196)
- The Research Situation and Conservation Strategies of *Juglans mandshurica* ..... ZHANG Shu-yuan, DU Feng-guo(199)
- Research Progress on Ecology of Natural Enemies of Tea Geometrid ..... GAO Yu(203)

## ◆ Agricultural Relevant Issues ◆

- Analysis of Situation in Plant Powdery Mildew Founded by the National Natural Science Foundation of China ..... LI Ying, WANG Dian-dong(206)
- Study on Measure of Ecological Value of *Populus euphratica* Forest in Xinjiang Southern Tarim ..... WANG Wu-xu, XU Chong-zhi, LI Qing(210)
- Present Situation and Countermeasure of the Development of Leisure Agriculture in China ..... LI Juan, WANG Jian, REN Zhe(214)

# 《北方园艺》第四届编委会

主任委员 韩贵清  
副主任委员 李景富 秦智伟 李天来 陈青云 杨文月 陶可全  
                  耿月伟 闫文义 任长顺  
委 员 (以姓氏笔画为序)  
                  于泽源 车代弟 王秀峰 王傲雪 冯国军 刘延杰  
                  刘洪章 李玉花 李 敏 齐红岩 朱延明 毕洪文  
                  陈立新 陈宗礼 吴凤芝 高庆玉 王清章 栾非时  
                  许 勇 许修宏 邹志荣 巩振辉 崔继哲 赵尊练  
                  高智谋 黄家风 徐启江  
主 编 毕洪文  
责任编辑 黄峰华  
编 辑 李晓晨 孙冬晔 王 超 李 想  
美术编辑 许 真  
广告发行 白晓琳

## 《北方园艺》

(半月刊, 1977年创刊)

2014年第9期(5月上), 总第312期

## NORTHERN HORTICULTURE

(Half Monthly, Started in 1977)

No.9, 2014 (The First Half of May), Total No.312

**主管单位** 黑龙江省农业科学院

**主办单位** 黑龙江省农业科学院  
黑龙江省园艺学会

**编辑出版** 《北方园艺》编辑部

**地 址** 哈尔滨市南岗区学府路368号

**邮政编码** 150086

**电 话** 0451-86674276

**电子信箱** bfybjb@163.com

**网 址** www.haasep.cn

**印 刷** 天元铸成实业有限公司

**国内发行** 哈尔滨市邮局

**国内邮发代号** 14-150

**国外发行** 中国国际图书贸易总公司  
(北京399信箱)

**国外邮发代号** BM 5011

**广告经营许可证号** 2301070000009

**出版日期** 每月15、30日

**Responsible Institution** Heilongjiang Academy of Agricultural Sciences

**Sponsored by** Heilongjiang Academy of Agricultural Sciences;  
Horticulture Society of Heilongjiang Province

**Edited and Published by** Editorial Department of Northern Horticulture

**Address** 368 Xuefu Road, Nangang District, Harbin, P. R. of China

**Postalcode** 150086

**Tel** 0451-86674276

**E-mail** bfybjb@163.com

**Web** www.haasep.cn

**Printed by** Tianyuan Zhucheng Industrial Co. LTD.

**Domestic Distributed by** Harbin Post Office

**Domestic Distributing Code** 14-150

**Oversea Distributed by** International Book Trading Corporation P.O.  
Box 399 Beijing, P.R. of China

**Oversea Distributing Code** BM 5011

**Advertising Business Permit Number** 2301070000009

**Publishing Date** Half Monthly 15th, 30th

ISSN 1001-0009



国内统一连续出版物号 CN 23-1247/S

国际标准连续出版物号 ISSN 1001-0009

定 价: 7.00元