

中文核心期刊
中国科技核心期刊
中国农业核心期刊
RCCSE 中国权威学术期刊
《中国科学引文数据库》C 库期刊
《CAJ-CD 规范》执行优秀期刊
中国科协精品科技期刊工程项目

草地学报

CAODI XUEBAO

ACTA AGRESTIA SINICA

第 6 期

第 28 卷

2020 年 11 月

1991 年创刊(双月刊)

主管:中国科学技术协会

主办:中国草学会

承办:中国农业大学

主 编:王 堃

编辑部主任:邵新庆

责任编辑:闵芝智

英文编辑:刘克思、张万军、

王克华

编 务:葛慧荣

编辑出版:《草地学报》编辑部

地址:北京海淀区圆明园西路 2 号

中国农业大学动科大楼 152 室

邮编:100193

电话/传真:(010)62733894

E-mail:cdxlb@cau.edu.cn

http://www.cdxlb.org

印刷:北京科信印刷有限公司

国内总发行:北京报刊发行局

订阅:全国各地邮局(所)

国内邮发代号:80-135

国内每期定价:55.00 元

国外总发行:中国国际图书贸易

总公司

国外发行代号:1949(BM)

刊号 ISSN 1007-0435

CN 11-3362/S

基本参数:

CN11-3362/S * 1991 * b * A₄

* 316 * zh * P * 55.00 * 500

* 37 * 2020-06

目 次

研究论文

- 土壤微生物群落多样性对高寒草甸退化程度的响应 姚玉娇,梁 婷,马 源,等(1489)
- 局地尺度高寒草原土壤真菌多样性对地上植物多样性与生产力关系的调控作用 王健宇,孟泽昕,王 瑞,等(1498)
- 青海野生草地早熟禾响应干旱胁迫的代谢通路及转录调控分析 张 然,马 祥,朱瑞婷,等(1508)
- 酸性土壤中决明属牧草高效根瘤菌的分离及筛选 杨 庆,王义祥,李欣欣,等(1519)
- GSH 对铅胁迫下多年生黑麦草幼苗抗氧化系统的调控 赵利清,彭向永,刘俊祥,等(1527)
- 甘肃省燕麦主产区白粉病调查及病原鉴定 孙浩洋,赵桂琴,张建贵,等(1535)
- 青藏高原高山嵩草叶、根抗寒性生理特征 李莉莎,徐海燕,吴晓东,等(1544)
- 干旱胁迫对“青燕 1 号”燕麦器官生长及水分利用效率的影响 刘凯强,刘文辉,贾志锋,等(1552)
- 渍水胁迫对不同磷水平下紫花苜蓿根系生长的影响 李丹竹,曾宁波,张志飞,等(1563)
- 外源硒对燕麦茎部特征及其抗倒伏性的影响 郝爽楠,秦 杰,刘攀峰,等(1572)
- 钾元素对苜蓿碳水化合物的分配及抗倒马的影响 李亚妹,曾文芳,胡桂馨,等(1580)
- 干旱胁迫及复水对燕麦根系生长及生理特性的影响 王晓雪,李 越,张 斌,等(1588)
- 践踏对不同植丝密度混合草坪质量的影响 陈雨峰,张桐瑞,周丽甜,等(1597)
- 外源谷氨酸对铝胁迫下多花黑麦草幼苗生长的缓解作用 施燕华,黄玉婷,东方智,等(1605)
- 宁南半干旱区饲用高粱品种生产性能和营养价值比较研究 孙玉琴,陈彩锦,吴 娟,等(1615)
- “甘农 4 号”小黑麦品种在青海省不同区域的适应性评价 王伟强,刘 晶,田新会,等(1626)
- 6 个裸燕麦品种在甘肃中部引洮灌区的生产性能及饲用价值比较 南 铭,景 芳,边 芳,等(1635)
- 阿拉尔野生一年生草木樨资源的生产性能和营养品质研究 陈立强,白小明,蒲胜权(1643)
- 基于 Biomod2 组合模型预测青藏高原特有属扇穗茅物种的潜在分布 刘 涛,刘玉萍,吕 婷,等(1650)
- 6 个种源红砂幼苗光合作用特性研究 魏晓芸,单立山,解婷婷,等(1657)
- 基于无人机可见光影像对喀斯特地区植被信息提取与覆盖度研究 尹林江,周忠发,李韶慧,等(1664)
- 农牧交错带复合生态经济系统的能值分析—以甘肃省定西市为例 陆燕花,李 广,马维伟,等(1673)
- 盐生草甸群落的植物多样性与土壤质地、盐分关系的研究 冯艳琼,何彤慧,陈向全,等(1682)
- 甘南和川西北地区草地植被 NDVI 变化及其驱动因素研究 李元春,侯蒙京,葛 静,等(1690)
- 青藏高原退化草甸土壤微生物量、酶化学计量学特征及其影响因素 喻岚晖,王 杰,廖学容,等(1702)
- 基于广义线性模型估算内蒙古荒漠草原及典型草原地上生物量变化 王秀梅,董建军(1711)
- 内蒙古典型草原羊草生长季内的地上生物量动态对降水的时滞响应 张 军,刘菊红,曹 娜,等(1719)
- 辽宁省西部低山丘陵区草地类型分布及植物区系特征 白 龙,段博文,陈 曦,等(1726)

技术研发

- 布氏乳杆菌和甲酸对青藏高原不同物候期燕麦青贮饲料发酵品质和细菌群落的影响 陆永祥,赵 嫚,陈良寅,等(1736)
- 施氮和利用方式对黄土高原不豆混播草地产量、品质和水分利用的影响 徐然然,常生华,贾倩民,等(1744)
- 添加剂对全株燕麦青贮饲料发酵品质和有氧稳定性的影响 朱九刚,张 健,邵 涛,等(1756)
- 不同添加剂对饲用苕麻与麦麸混合青贮品质的影响 邓荟芬,刘 艳,揭红东,等(1762)
- 不同混播比例对燕麦和箭筈豌豆混播草地植物生长特征的影响 秦 燕,刘 勇,张永超,等(1768)
- 追氮时期对饲用燕麦茎秆理化特性和抗倒性的影响 康勇建,赵宝平,武俊英,等(1775)

研究专报

- 白羊草 R2R3-MYB 转录因子的挖掘及对干旱胁迫反应的研究 李春艳,王 曦,周胜花,等(1784)
- 人工补播对退化高寒草甸土壤真菌群落特征的影响 尹亚丽,李世雄,马玉寿(1791)
- 饲草高粱茎秆特征与抗倒性关系分析 李 源,赵海明,游永亮,等(1798)

欢迎投稿 欢迎订阅

《草地学报》是中国科协主管、中国草学会主办、中国农业大学承办的学术刊物,是了解草地科学前沿科技、创新成果和草业发展的重要窗口。刊登国内外草地科学研究及相关领域的新成果、新理论、新进展,以研究论文为主,兼发少量专稿、综述、简报和博士论文摘要,主要面向从事草地科学、草地生态、草地畜牧业和草坪业及相关领域的高校师生和科研院所、所、站的科研人员。稿件要求详见本刊《投稿须知》。

《草地学报》被国内外多家重要检索机构收录,入编北京大学图书馆和北京高校图书馆期刊工作研究会主持完成的《中文核心期刊要目总览》(2011 年版),2012 年影响因子为 1.202(据中信所 2013 版《中国科技期刊引证报告(核心版)》)。

本刊逢单月月末出版,国内外公开发售。国内邮发代号:80-135;国外代号:Q1949。每期定价 55 元,全年 330 元。若错过邮订时间,可直接向本刊编辑部订购(中国草学会会员订阅可优惠 30%)。

开户名:中国草学会 开户行:北京农商银行海淀新区支行农大分理处
账 号:0407030103000000056

ACTA AGRESTIA SINICA

No. 6, 2020

Vol. 28

Started in 1991 (Bimonthly)

Administration Agency

China Association for Science
and Technology

Sponsored by

Chinese Grassland Society
China Agricultural University,
Beijing 100193

Editor-in-Chief

WANG Kun

Responsible Editor

MIN Zhi-zhi

Edited by

Editorial Board of A .A .S .

Tel . /Fax :010-62733894

E-mail :cdxb@cau.edu.cn

http://www.cdxb.org

Printed by

Beijing Kexin

Printing Co., Ltd.

Distributed by

Beijing Bureau for Distribution
of Newspapers and Journals

Domestic

All Local Post Offices in China

(Periodical No. 80-135)

Foreign

China International Book Trading
Corporation (P.O. Box 399, Beijing,
China) (Code: 1949BM)

CONTENTS

Response of Soil Microbial Community Diversity to Degradation Degree of Alpine Meadow	YAO Yu-jiao, LIANG Ting, MA Yuan, et al. (1489)
Soil Fungal Richness Regulates Positive Aboveground Plant Richness-Productivity Relationships in Alpine Steppe at Local Scale	WANG Jian-yu, MENG Ze-xin, WANG Rui, et al. (1498)
Metabolic Pathway and Transcriptional Regulation of Qinghai Wild <i>Poa pratensis</i> in Response to Drought Stress	ZHANG Ran, MA Xiang, ZHU Rui-ting, et al. (1508)
Isolation and Screening of Effective Rhizobial Strains of <i>Cassia</i> (<i>Chamaecrista</i> spp.) Pasture in Acidic Soils	YANG Qing, WANG Yi-xiang, LI Xin-xin, et al. (1519)
Effects of Glutathione (GSH) on Antioxidant Defense System of <i>Lolium Perenne</i> Seedlings under Lead Stress	ZHAO Li-qing, PENG Xiang-yong, LIU Jun-xiang, et al. (1527)
Incidence of Oat Powdery Mildew and Pathogen Identification in the Main Oat Production Areas of Gansu Province	SUN Hao-yang, ZHAO Gui-qin, ZHANG Jian-gui, et al. (1535)
Cold Resistance Physiology Characteristics of Leaf and Root of <i>Kobresia pygmaea</i> on the Tibetan Plateau	LI Li-sha, XU Hai-yan, WU Xiao-dong, et al. (1544)
Effects of Water Stress on Organ Growth and Water Use Efficiency of <i>Avena sativa</i> 'Qingyan No. 1'	LIU Kai-qiang, LIU Wen-hui, JIA Zhi-feng, et al. (1552)
Effects of Waterlogging Stress on the Root Growth of Alfalfa under Different Phosphorus Level	LI Dan-zhu, ZENG Ning-Bo, ZHANG Zhi-fei, et al. (1563)
Effects of Exogenous Selenium on Stem Characteristics and Lodging Resistance of Oat	HAO Shuang-nan, QIN Jie, LIU Pan-feng, et al. (1572)
Effect of Potassium Application on Carbohydrate Distribution and Alfalfa Resistance to Thrips (Thysanoptera: Thripidae)	LI Ya-shu, ZENG Wen-fang, HU Gui-xin, et al. (1580)
Effects of Drought Stress and Rehydration on Root Growth and Physiological Characteristics of Oats	WANG Xiao-xue, LI Yue, ZHANG Bin, et al. (1588)
The Influence of Traffic Frequency on the Quality of Stitched Hybrid Turf with Different Density	CHEN Yu-feng, ZHANG Tong-rui, ZHOU Li-tian, et al. (1597)
Alleviation of Exogenous Glutamic Acid on Seedling Growth of Italian Ryegrass under Aluminum Stress	SHI Yan-hua, HUANG Yu-ting, SHU Fang-zhi, et al. (1605)
Studies on the Production Performance and Nutritional Value of Forage Sorghum Varieties in the Semiarid Area of South Ningxia	SUN Yu-qin, CHEN Cai-jin, WU Juan, et al. (1615)
Evaluations on the Adaptability of <i>Triticosecale</i> Wittmack 'Gannong No. 4*' in Different Regions of Qinghai Province	WANG Wei-qiang, LIU Jing, TIAN Xin-hui, et al. (1626)
Comparison of Production Performance and Feed Value of Six Oat Varieties at Tao River Irrigation Middle -Area in Gansu province	NAN Ming, JING Fang, BIAN Fang, et al. (1635)
Study on Production Performance and Nutritional Quality of Alar Wild Annual <i>Melilotus</i> Resource	CHEN Li-qiang, BAI Xiao-ming, LIN Sheng-quan (1643)
Potential Distribution of <i>Littledalea</i> , an Endemic Genus from the Qinghai-Tibet Plateau, Predicted by Biomod2 Models	LIU Tao, LIU Yu-ping, LV Ting, et al. (1650)
Study on Photosynthesis Characteristics of Six Provenances <i>Reaumuria soongorica</i> Seedlings	WEI Xiao-yun, SHAN Li-shan, XIE Ting-ting, et al. (1657)
Research on Vegetation Extraction and Fractional Vegetation Cover of Karst Area Based on Visible Light Image of UAV	YIN Lin-jiang, ZHOU Zhong-fa, LI Shao-hui, et al. (1664)
Emergy Analysis On Complex Ecological Economic System of Agro-pastoral Transitional Zone-A Case of Dingxi in Gansu	LU Yan-hua, LI Guang, MA Wei-wei, et al. (1673)
Study on the Relationship between Plant Diversity and Soil Texture and Salinity of Saline Meadow Community	FENG Yan-qiong, HE Tong-hui, CHEN Xiang-quan, et al. (1682)
NDVI Changes and Driving Factors of Grassland Vegetation in Gannan Prefecture and Northwest Sichuan Region	LI Yuan-chun, HOU Meng-jing, GE Jing, et al. (1690)
Soil Microbial Biomass, Enzyme Activities and Ecological Stoichiometric Characteristics and Influencing Factors along Degraded Meadows on the Qinghai-Tibet Plateau	YU Lan-hui, WANG Jie, LIAO Li-rong, et al. (1702)
Estimation of the Aboveground Biomass of Desert Steppe and Typical Steppe in Inner Mongolia Using Generalized Linear Model	WANG Xiu-mei, DONG Jian-jun (1711)
Time-lag Response of Aboveground Biomass Dynamic of <i>Leymus chinensis</i> in the Growing Season on Precipitation in Inner Mongolian Typical Grassland	ZHANG Jun, LIU Ju-hong, CAO Na, et al. (1719)
Distribution of Grassland Types and Floristic Characteristics in the Low Mountains and Hilly of Western Liaoning Province	BAI Long, DUAN Bo-wen, CHEN Xi, et al. (1726)
Effects of <i>Lactobacillus brucei</i> and formic acid addition on fermentation quality and bacterial community of oat silage of different harvest stages in the Tibetan Plateau	LU Yong-xiang, ZHAO Man, CHEN Liang-yin, et al. (1736)
Effects of Nitrogen Application and Utilization Methods on Yield, Quality and Water Use of Grass-Legume Mixed Grassland in Loess Plateau	XU Ran-ran, CHANG Sheng-hua, JIA Qian-min, et al. (1744)
The Effects of Additives on Fermentation Quality and Aerobic Stability of Whole-plant Oat Silage	ZHU Jiu-gang, ZHANG Jian, SHAO Tao, et al. (1756)
Effects of Different Additives on the Quality of Mixed Feeding Ramie and Wheat Bran Silage	DENG Hui-fen, LIU Yan, JIE Hong-dong, et al. (1762)
Effects of Mixed Ratios on Plant Growth Characteristics in Mixed Grassland of the Oat and Vetch Pea	QIN Yan, LIU Yong, ZHANG Yong-chao, et al. (1768)
Effects of Different Nitrogen Topdressing Stage on the Stalk Physical and Chemical Characteristics and Lodging Resistance of Forage Oats	KANG Yong-jian, ZHAO Bao-ping, WU Jun-ying, et al. (1775)
Excavation of R2R3-MYB Transcription Factor and Its Response to Drought Stress in <i>Bothriochloa ischaemum</i>	LI Chun-yan, WANG Xi, ZHOU Sheng-hua, et al. (1784)
Effects of Replanting on Soil Fungal Community Characteristics in Degraded Alpine Meadow	YIN Ya-li, LI Shi-xiong, Ma Yu-shou (1791)
Analysis of the Relationship between Stem Traits and Lodging Resistance of Forage Sorghum	LI Yuan, ZHAO Hai-ming, YOU Yong-liang, et al. (1798)