



# 香根草通讯

## Vetiver Newsletter

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### International Vetiver Network Winners List 2023

prize item	Winners and their countries	roughly described
Vetiver Champion	Mohammad Shariful Islam / Bangladesh	The laureates have conducted long-term, systematic, influential and wide-ranging research and publications on vetiver technology; tested and applied vetiver technology as a nature-based technology in Bangladesh and many other countries; had a broad and deep impact on vetiver work in Bangladesh and abroad, as well as in governments and international development agencies; and advocacy and education through numerous workshops and technical training.
<b>Vetiver Technology (VGT)</b>		
Climate Smart Agriculture and Soil and Water Conservation	Lu Yanhui, Zheng Xusong, Gao Guangchun, Xu Hongxing, Lu Zhongxian / China	Application of vetiver in the control of Chilo borer in China
Infrastructure Protection and Mitigation	Mohammad Shariful Islam / Bangladesh	Vetiver technology for infrastructure protection and disaster risk reduction: regional experience and global perspective
polluted land and water	Feng Ziyuan / China	Miniaturized sewage comprehensive treatment technology - ecological compound microcirculation
<b>Personal Contribution</b>		
Monty Yudelman Award	Pitayakon Limtong / Thailand	Outstanding contribution in sustainable agriculture and food security - outstanding, long-term and in-depth research and promotion of vetiver technology on behalf of the Ministry of Land Development of Thailand.
The Mark Dafforn prize	Lavinia & Seshu Umesh / India	For outstanding contributions to science and research.
Nick Dolphin Award	Jane Wegesa Fraser & team / Kenya	Her outstanding contribution to community engagement and effective participation has achieved great success - under her leadership, they have conducted a long-term and successful effort in the promotion, dissemination, and implementation of Vetiver technology, which has continued to achieve progress and success despite many challenges.
John Greenfield Award	Tho Ngo Duc / Vietnam	He has made outstanding contributions to the promotion and application of vetiver technology, especially to poor and rainfed agricultural farmers in terms of farm soil and water conservation - the founder of "Vietnam Vetiver Farmers Group", has made outstanding contributions to renewable agriculture and climate change adaptation in Vietnam, with great influence. Has a global reach.

## Vetiver papers published in domestic journals over the years (2018)

Category	Essay topic	Journal and Issue Number	Date	Author	First author affiliation
<b>1. Environmental protection</b>	Study on Water Purification Ability of Several Herbal Plants in South China	Journal of North China University of Water Resources and Electric Power (Natural Science Edition) , 39 (4)	2018	Jian Xiangyang, Feng Chengting, Gan Mina, Yang Huijun, Zhao Qiangmin	Palm Ecological Town Development Co., Ltd., Zhongshan , Guangdong 528415 jxy654@qq.com
	Phytoremediation using humic acid to improve mine soil and promote Cu and Zn uptake by vetiver	Humic Acid, 2018 (1)	2018	Carmen Vargas, Javier Perez-Esteban, written by Consuelo Escolástico, translated by Li Shuang	China Humic Acid Industry Association
	Soil pH and the effect of planting vetiver on it in the new hydrofluctuation zone of Danjiangkou Reservoir	Wetland Science, 16(3)	2018.	Zhang Longchong, Cao Lin, Li Yuying, Li Yongsheng, Han Xuemei, Zhu Xiuhong	College of Forestry, Henan Agricultural University, Zhengzhou 450002 <a href="mailto:zhuxiuhong001@126.com">zhuxiuhong001@126.com</a> <a href="mailto:zhanglch11@163.com">zhanglch11@163.com</a>
	Effects of gangue addition on the growth and physiological ecology of vetiver in copper tailings	Journal of Soil and Water Conservation, 32(2)	2018	Wang Xingming, Wang Yunmin, Chu Zhaoxia, Lu Xianwen, Chen Guangzhou, Zha Fugeng, Cui Hongbiao	School of Earth and Environment, Anhui University of Science and Technology, Huainan 232001, Anhui Province <a href="mailto:maswym@126.com">maswym@126.com</a> ; <a href="mailto:xmwang-2014@126.com">xmwang-2014@126.com</a>
	Preparation of vetiver biochar pairs at different temperatures Adsorption Characteristics and Mechanism of Cd <sup>2+</sup>	Journal of Agro-Environmental Sciences, 37(2)	2018	Deng Jinhuan, Gao Liyang, Zhou Wanwan , Du Weiting, Cai Kunzheng, Chen Guikui, Huang Fei	School of Resources and Environment, South China Agricultural University, Guangzhou 510642 , E-mail : <a href="mailto:1103216316@qq.com">1103216316@qq.com</a> <a href="mailto:feihuang@scau.edu.cn">feihuang@scau.edu.cn</a>
	Vetiver Growth Differences and Environmental Effects in Poyang Lake Sandy Area	Soil and Water Conservation Bulletin, 38(3)	2018	Zhang Ying, Zheng Lin, Huang Jiachao, Li Sheng	School of Geography and Environment, Jiangxi Normal University, Nanchang, Jiangxi 330022 <a href="mailto:nmg1993zy@163.com">nmg1993zy@163.com</a> <a href="mailto:xl5366@126.com">xl5366@126.com</a>
	Morphological foraging behavior of vetiver with different planting years in coal gangue	Prairie and Turfgrass, 38(1)	2018	Liu Hanyu , Hao Jun , Chao Chen , Wang Rui , Cheng Wei	College of Animal Science, Guizhou University ; Guiyang 550025, China
	Effects of	Journal of	2018.	Liu Shukai,	National Plateau Wetland

	Nitrogen on Absorption and Removal of Promethazin by Vetiver	Southwest Forestry University, 38(1)		Wang Ming, Zheng Yi	Research Center, Southwest Forestry University, Kunming 650224 37165482@qq. C om zhengyi-64@163. com
	Simulation study on the adaptability of vetiver and bermudagrass to the flooding environment of the reservoir drawdown zone	Environmental Protection and Circular Economy 201804	2018	Kuang Chenkun, Zheng Meiyan, Li Jiansheng .	Guangdong Zhihuan Innovative Environmental Technology Co., Ltd., Guangzhou 510045
	A lead-cadmium resistant fungus Q7 on Absorption and Accumulation of Heavy Metals by Vetiver	Acta Applied and Environmental Biology, 24 (4)	2018	Huang Chengtao, Huang Weiquan, Shi Dingding, Xu Shaohui, Huang Zhigang, Jiang Daihua	Agricultural College of Guangxi University Nanning 530004 dhjiang2008@gxu.edu.cn
	Roots, stems and leaves of old mans wheat and vetiver under arsenic stress Arsenic Absorption Characteristics and Antioxidant Response	Grass Science, 35(3)	2018	Han Dongying, Li Shigang, Song Guilong, , Puyang Xuehua, Li Yinruizhi	Turfgrass Research Institute, Beijing Forestry University, Beijing 100083 1669362144@qq. C om; syihan@163.com
	Preliminary Study on the Screening of Suitable Plants in Gold Mine Tailings Assisted by Compost Sludge	Journal of Ecology and Rural Environment, 34 (2)	2018	Guo Kehuan, Ai Yanjun, Chang Xiaonan, , Xie Wenqian, Lu Sai, Yu Haoran, Li Fuping, Gu Haihong	School of Mining Engineering, North China University of Technology, Tangshan, Hebei 063000 haihonggu1982@hotmail. com
	Study on Physiological Response and Accumulation of Calendula officinalis to Heavy Metal Zn	Journal of Shaoguan University·Natural Science, 39(3)	2018	Pang Zhuo, Pan Chunxiang, Wang Jiahao	Hohhot Soil and Fertilizer Workstation, Hohhot 010020, Inner Mongolia, China
	Research and Practice on Ecological Restoration Strategy of Fluctuation Zone in Three Gorges Reservoir Area	Anhui Agricultural Sciences, 46(34)	2018	Zhao Qin, Chen Jiaobin	College of Horticulture and Landscape Architecture, Southwest University, Chongqing 400715
	Experimental Research on Vegetation Slope Protection	World Nonferrous Metals , 2018,20	2018	Chen Maolin	Dexing Copper Mine of Jiangxi Copper Industry Co., Ltd., Dexing, Jiangxi 334200

	Technology for Outer Dam Slope of Tailings Reservoir				
	Allelopathic effects of ecological floating beds planted with different plants on planktonic algae	Journal of Sun Yat-sen University (Natural Science Edition), 57 (2)	2018	Lei Chunyi, Zhu Shuchao, Guan Yiyun, Li Shan, Liu Weiqiu	School of Life Sciences, Sun Yat-sen University, Key Laboratory of Plant Resources of Guangdong Province Guangzhou 510275 hsdlcy@126.com lsslwq@mail.sysu.edu.cn
<b>2 Bioengineering</b>	Field Test on Seepage Characteristics of Soil Cover Layer Under Vegetation	Rock and Soil Mechanics, 39(1)	2018	Chen Jinlong, Li Jinhui, Cheng Peng, Song Lei, Zhou Teng	School of Civil and Environmental Engineering, Shenzhen Graduate School, Harbin Institute of Technology, Shenzhen 518055, Guangdong, China <a href="mailto:scofieldlook@gmail.com">scofieldlook@gmail.com</a> jinhui.li@hit.edu.cn
	Study on tensile mechanical properties of vetiver roots in semi-arid rocky mountainous areas	People's Yellow River, 40(9)	2018.9 _	Wang Zepeng	Construction Management Center of Xishan Tihuang Irrigation Project, Shanxi Province, Taiyuan 030002 wangzepeng71@163.com
	Vetiver ecological characteristics and its application in road slope protection engineering	Modern Property (Mid-term Issue), 2018 (2)	2018	Penny	College of Horticulture and Landscape Architecture, Southwest University, Chongqing 400715
<b>3 Vetiver used in pest control</b>	Evaluation of the role of vetiver in the green control of rice borer	Agriculture and Technology 38 (08)	2018	Zhang Jianjun, Wang Wei, Xia Zhongwei, Wei Ying, Shao Tongxiang	Plant Protection and Inspection Station of Xuzhou City, Jiangsu Province, Jiangsu Xuzhou 221018
	Effect experiment of green control of rice borer pests	Agricultural Engineering Technology, 2018 (2)	2018	Xia Zhongwei, Zhang Xinfang, Wei Ying, Shao Tongxiang, Wang Wei	Plant Protection Station of Suining County, Jiangsu Province, Suining 221200, Jiangsu Province
	Integration and demonstration of green control technology for major rice diseases and insect pests	Agriculture and Technology, 38(22)	2018	Yu Haiyan, Zhang Qiang, Zhou Li	Agricultural Technology Promotion Center, Sucheng District, Suqian City, Jiangsu Province, Suqian 223800, Jiangsu Province
	Discovery and application of rice borer trapping and killing plant vetiver	Acta Applied Entomology, 55(6)	2018	Lu Yanhui, Zheng Xusong, Lu Zhongxian	Institute of Plant Protection and Microbiology, Key Laboratory Cultivation Base, Zhejiang Academy of Agricultural Sciences, Hangzhou 310021 <a href="mailto:luyanhui4321@126.com">luyanhui4321@126.com</a> ; luzxmh@163.com
	Control effects	Hubei	2018	Xie Chunfu,	Xiaogan Academy of

	of four green control techniques on rice pests	Agricultural Sciences, 57(6)		Wang Ji'an, Liu Huashu, Li Yongjun, Wang Wen, Liu Mengze	Agricultural Sciences, Hubei Xiaogan 432000, xghbscxx@163. com hbalwja@126. com
<b>4 other</b>	Research progress on extraction and separation of volatile components of vetiver and their agricultural biological activities	Journal of Pesticide Science 20(3)	2018	Li Zhongshan , Cheng Jingli , Li Anbang , Zhao Jinhao , Du Yongjun , Zhu Guonian	Key Laboratory of Molecular Biology of Crop Diseases and Pests, Ministry of Agriculture, Zhejiang University / Institute of Pesticides and Environmental Toxicology, Hangzhou 310029 <a href="mailto:21616178@zju.edu.cn">21616178@zju.edu.cn</a> jinhaozhao@zju.edu.cn
	Effects of Water Extraction of Vetiver Aerial Parts on Seed Germination and Seedling Growth of Several Plants	seeds, 37(6)	2018	Sheng Meiqun, Cheng Wei, Hao Jun, Long Shuiyi, Zhou Li, Wang Wenliang	College of Animal Science, Guizhou University, Guiyang 550025, China <a href="mailto:1057452816@qq.com">1057452816@qq.com</a> <a href="mailto:wcheng@gzu.edu">wcheng@gzu.edu</a>
	Response Surface Surface Optimization of Ultrasonic Assisted Extraction of Vetiver Oil and Its Components	Food Research and Development, 39(4)	2018	Wang Saidan, Chen Qiliang, Sun Renken, Li Tao, Ren Baozeng	Zhengzhou University , Zhengzhou, Henan 450001
	Research status of extraction methods and volatile components of vetiver oil	Henan Chemical Industry 35 (6)	2018	Chen Qiliang, Wang Saidan, Sun Renzhen, Li Tao, Ren Baozeng	School of Chemical Engineering and Energy, Zhengzhou University, Zhengzhou, Henan 450001 litao912@ zzu. edu. cn
	Response Surface Surface Optimization of Ultrasonic Assisted Extraction of Vetiver Oil and Its Components	Food Research and Development, 39(4)	2018	Wang Saidan, Chen Qiliang, Sun Renken, Li Tao, Ren Baozeng	School of Chemical Engineering and Energy, Zhengzhou University, Zhengzhou, Henan 450001
	Research on key measures and models of stony desertification prevention and control in Xichuan County	People Yellow River, 40(10)	2018	Wu Qing, Chen Zishao, Xu Jianzhao, Zhang Lu, Zhao Pei, Yang Liu, Pan Wenling, Liu Zhe	North China University of Water Resources and Electric Power, Zhengzhou, Henan 450045 564783271@qq. com
	Study on the Drought Resistance Performance of Three Common Slope Plants in Simulated Drought Environment	Journal of Grass Industry, 27(2)	2018	Xu Pianpian, Wang Jianzhu	School of Biology and Pharmaceutical Sciences, China Three Gorges University, Yichang, Hubei 443002, China 262800715@qq.com wangjianzhu@126.com

	Research on Introduction and Cultivation Techniques of Vetiver in Saline-alkali Land in Yellow River Delta Region	Shandong Forestry Science and Technology, 2 Issue 3, 2018	2018	Su Jing	Dongying Technician College, Dongying, Shandong 257000
	Changes of Physiological Metabolic Enzymes of Vetiver Grass Tolerance to Salt Stress	Shandong Forestry Science and Technology, 2018.6	2018	Su Jing	Dongying Institute of Technology, Dongying, Shandong 257000

### Vetiver papers published in domestic journals over the years (2019)

category	Essay topic	Journal and Issue Number	Date	author	First author affiliation
1 Bioengineering	three herbaceous plants to soil anti-erosion characteristics	Grass Science, 36(2)		Cheng Liang, Zhan Haige, Guo Zhonglu 1	Soil and Water Conservation Research Center, Huazhong Agricultural University, Hubei Wuhan 430070 <a href="mailto:1601558599@qq.com">1601558599@qq.com</a> <a href="mailto:zlguohezau@163.com">zlguohezau@163.com</a>
	Study on shear performance of soil slope under different root distribution patterns	People Yellow River, 41(4)	2019	Shi Haoting, Xie Chunyan, Li Xueer, Wu Dako	College of Engineering Technology, Southwest University, Chongqing 400716 1138287332@qq.com
	Shanxi Earth and Rock Mountains Root-pulling characteristics of three kinds of herbs	Soil and Water Conservation Research, 26(3)	2019	Zhang Chaobo, Zhou Xia, Li Dongrong, Jiang Jing, Wei Yang	Taiyuan University of Technology, Taiyuan 030024 <a href="mailto:zhangchaobo@tyut.edu.cn">zhangchaobo@tyut.edu.cn</a>
	Lake West Waterway Ecological Protection Benefit Analysis of Energy Saving and Emission Reduction of Slope Engineering	Environmental Protection and Circular Economy 42		Zhou Yong	Xuzhou Waterway Management Office, Xuzhou, Jiangsu 221000
	Effects of Roots of Vetiver and Bermudagrass on Soil Infiltration	rural technology	2019	Yang Xun	Sichuan Agricultural University, Ya'an, Sichuan 625014
	Study on the Stress-Strain	Public Standardization	2019	Jiang Weichang, Li	1. Central South University of Forestry

	Relationship Characteristics of Vetiver Root-Soil Complex	2019.16		Xiaobing, Li Huatao	and Technology, Changsha, Hunan 410073
2 Environmental protection	Study on Extraction and Bacteriostasis of Vetiver Oil	Chinese Condiments 44 (5)	2019	Yang Jing, Su Haijian, Wang Liudong, Yan Qifeng, Bai Bing, Yang Pengfei, Luo Haitao	Food and Biological Engineering, Zhengzhou Institute of Light Industry , Zhengzhou 450002
	Vetiver on Cd , Study on Absorption and Accumulation Characteristics of Pb and Zn	Anhui Agricultural Science Bulletin, 25 (18)	2019	Hu Changxing, Li Bo,	United Taize Environmental Technology Development Co., Ltd. Yunnan Branch, Kunming, Yunnan 650033
	Canna / Vetiver Plant Floating Bed System	Water Technology, 13(1)	2019	Ning Yu, Ma Xingguan, Du Yuchun	School of Municipal and Environmental Engineering, Shenyang Jianzhu University, Shenyang 110168 , Liaoning 1647009146@qq.com
	Diversity of soil bacterial communities and PICRUS function prediction analysis of vegetation in the coastal zone of Danjiangkou Reservoir Area	environmental science	2019	Sun Feng, Tian Wei, Zhang Fei, Chen Yan, Ren Xuemin, Pang Fahu, Li Yuying, Yao Lunguang, Chen Zhaojin	School of Agricultural Engineering, Nanyang Normal University, 961774647@qq.com Zhaojin_chen@163.com
	Physiological responses of vetiver to cadmium toxicity Using Fourier transform infrared spectroscopy ( FTIR )	Acta Ecology 39(19)	2019	Yu Shunhui, Zhang Jing , Chen Huahua, Zhang Bo, Hu Chaosheng , Deng Hongping	Chongqing Three Gorges University, Municipal Key Laboratory of Water Environment Evolution and Pollution Control in the Three Gorges Reservoir Area, Chongqing University, Wanzhou 404100 denghp@ swu.edu.cn
	Growth inhibition of vetiver on Microcystis aeruginosa and its component analysis	Shanghai Agricultural Journal 35(1)	2019	Pan Qi, Liu Yaqin, Zou Guoyan, Zhou Wenzong, Fu Zishi, Liu Chang'e, Song Xiangfu	Shanghai Academy of Agricultural Sciences, Shanghai 201403
	Response of vetiver to the stress of water-soluble heavy metal components in polluted soil	Journal of Agricultural and Environmental Sciences 38(12)	2019	Song Qingmei, Cai Xinde, Wu Yingxin, Wu Jiahui, Chen Xianbin, Wu Wencheng	South China Institute of Environmental Science, Ministry of Ecology and Environment, Guangzhou 510655 : songqingmei@scies.or

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	Effects of Humic Acid on Absorption and Removal of Promethazin by Vetiver	Southwest Forestry University Report 39(2)	2019	Jia Jiwei, Zhang Kun, Li Xinyuan, Sun Shixian	School of Ecology and Soil and Water Conservation, Southwest Forestry University, Kunming, Yunnan 650224 gracewei223@163.com shine1009@sina.com
	Effects of high manganese stress on mineral element absorption and photosynthetic system of vetiver	Journal of Agricultural and Environmental Sciences, 38(10)	2019	Shen Xuren, Dong Mingyang, Wang Chaoyong, Wang Jie, Zhou Qiang	Hunan Provincial Key Laboratory of Plant Resource Conservation and Utilization, Jishou University, Jishou 416000, Hunan, China 2833316897@qq.com 6494796@qq.com
	Chromium detoxification mechanisms induce growth and oxidation responses in vetiver	Journal of Central South University 2019 (26)	2019	Manikandan RAJENDRAN An Wenhui, Li Weizhan, Venkatachalam PERUMAL Wu Chuan, Shivendra Vikram SAHI, Santosh Kumar SARKAR	Central South University, Changsha 410083, wuchuan@csu.edu.cn;
	Study on Nitrogen and Phosphorus Removal Effects of Immobilized Algae-Vetiver Floating Bed System	Science and Technology Innovation 2019.04		Du Yuchun Ma Xingguan	School of Municipal and Environmental Engineering, Shenyang Jianzhu University, Shenyang 110168, Liaoning
	Ecological effects of stabilizing arsenic-contaminated soil on three remediation plants	Chinese Environmental Science, 39(9)	2019	Zhao Shuhua, Zhang Taiping, Chen Zhiliang, Pan Weibin, Luo Fei	.Shenzhen Academy of Environmental Sciences, Shenzhen 518001, Guangdong, China
	Modification of Vetiver and Its Adsorption of Hexavalent Chromium in Water	Industrial Water Treatment 39(1)	2019	Sun Renzhen, Chen Qiliang, Wang Saidan, Li Tao, Ren Baozeng	School of Chemical Engineering and Energy, Zhengzhou University Zhengzhou, Henan 450001 <a href="mailto:1012363430@qq.com">1012363430@qq.com</a> litao_0912@126.com.
<b>3 Sustainable Agriculture</b>	Sensitivity of rice borers to insecticides after feeding on	China Rice Science 33(3)		Song Ruixue, Lu Han, Lu Yanhui, Zheng	Cultivation Base of National Key Laboratory of Plant Pest Prevention and



	vetiver			Xusong, Lu Zhongxian *	Control in Zhejiang Province / Zhejiang Academy of Agricultural Sciences Institute of Plant Protection and Microbiology, Hangzhou 310021 luzxmh@163.com; luyanhui4321@126.com
	Study on green control mode of organic rice diseases and insect pests under continuous cropping mode of shrimp and rice	Anhui Agricultural Science, 47(17)		Fang Fei, Xu Guangshu, Cao Yuhong	Ma'anshan Agriculture and Rural Bureau, Ma'anshan, Anhui 243000
	Characteristics of vetiver and its cultivation techniques in green control of rice production areas	Farming and Cultivation, 39(1)	2019	Wang Hua, Wang Hailin, He Shenghua, Ke Fu Wen	Guizhou Zhuohao Agricultural Technology Co., Ltd., Guizhou Zunyi 563100
	Green prevention and control technology of rice diseases and insect pests based on ecology and biocontrol	Farmer Technology Training 201909	2019	Guo Rong	National Agricultural Technology Extension Service Center
	Application effect of vetiver in green control of rice borer	Agricultural Disaster Research 9 (6)	2019	Ling Xuelin, Wang Shuyue, Lu Xiaofeng	Bacheng Agricultural Service Center, Kunshan City, Kunshan, Jiangsu 215300
4 Soil and water conservation	Effects of vetiver hedgerow width on aborted sand production on purple soil slopes	Journal of Soil and Water Conservation 33(4)	2019	Liu Xiaohong, Li Tie, Chen Yun, Xiang Minghui, Chen Yi, Tang Han	School of Resources and Environment, Southwest University, Key Laboratory of Ministry of Education for Ecological Environment in the Three Gorges Reservoir Area, Chongqing 400715 <a href="mailto:631361269@qq.com">631361269@qq.com</a> ; <a href="mailto:sy22478@126.com">sy22478@126.com</a>
	Effects of planting years of vetiver on physical and chemical properties of gangue dump matrix	Gansu Agricultural University report 54(1)	2019	Wang Rui, Cheng Wei, Liu Hanyu, Sheng Meiqun, Long Shuiyi, Chen Chao	School of Animal Science, Guizhou University, Guiyang, Guizhou 550025: <a href="mailto:rwanggzu@163.com">rwanggzu@163.com</a> wcheng@gzu.edu.cn

	Effect of Planting Vetiver on Vegetation Restoration of Coal Gangue Dump	Agricultural Technology Services 36 (7)	2019	Wang Yini, Zhang Mingjun, Wu Jing, Yang Xuedong, Chen Xiuhua	Guizhou Grassland Technology Experiment and Promotion Station, Guiyang, Guizhou 550025
	Effect of Planting Vetiver on Water Quality Around Coal Gangue Dump	Agricultural Science & Technology, 20(1)	2019,	Zhang Yujun, Wang Puchang, Chen Chao , Zhao Lili, Cheng Wei, Hao Jun	Institute of Grass Industry, Guizhou Academy of Agricultural Sciences, Guiyang, Guizhou 550006 zhangyj_92@163.com
	Study on canopy coverage and root system distribution of soil and water conservation grass species in Juiwei mountainous area	People's Yellow River, 41(3)	2019	Zhang Chaobo, Zhou Xia, Li Dongrong, Jiang Jing	School of Hydraulic Science and Engineering, Taiyuan University of Technology, Taiyuan, Shanxi 030024, China
	Dynamic change and allometric relationship analysis of nutrient distribution in different organs of vetiver in coal gangue	Grass Science, 36(8)	2019	Sheng Meiqun, Hao Jun, Long Shuiyi, Xu Zhongdan, Mao Yuanyuan , Cheng Wei	Department of Grassland Science, College of Animal Science, Guizhou University, Guizhou Guiyang 550025 <a href="mailto:meiqunsheng@126.com">meiqunsheng@126.com</a> wcheng@gzu.edu.cn
5 planting techniques	Study on Plantlet Regeneration in Vitro from Axillary Buds of Stem Nodes of Vetiver	molecular plant breeding, 17(4) 2019	2019	Wang Dong, Cao Yuannan Ma Le, Chen Xiuwen Zhang Fei, Chen Jibao	Nanyang Normal University, Key Laboratory of Ecological Security in Water Source Regions of the South-to-North Water Diversion Middle Route, Henan Province, Nanyang , 473061, chenjibao2012@163.com

## Vetiver papers published in domestic journals over the years (2022 )

category	Essay topic	Journal and Issue Number	Date	author	First author affiliation
1Environmental protection	Effects of dismantling electronic waste polluted soil and applying sludge fermentation residue on the uptake and transport of	Journal of Agro-Environmental Sciences, 41(7)	2022	Guo Jiangshan, Gu Weihua, Bai Jianfeng, Dong Bin, Zhuang Xuning, Zhao Jing, Wang Jingwei	School of Resources and Environmental Engineering, Shanghai Second Polytechnic University, Shanghai 201209

	heavy metals by vetiver				
	Study on the Potential of Vetiver to Remediate Water Polluted by Sulfonamide Antibiotics	Journal of Ecology and Rural Environment, 38 (6)	2022	Rong Yuhong, Zhang Fafa, Yang Juan, Li Liang, Wu Ke, Sun Shixian, Zheng Yi	College of Landscape Architecture, Southwest Forestry University, Kunming, Yunnan 650233
	Characteristics of soil alkaline phosphatase gene bacterial community and its relationship with heavy metals under five vegetation restoration measures in acidic mines	Journal of Environmental Science, 42(12)	2022	Yang Xianfang, Zheng Lin, Wan Zhiwei, Wang Yuandong, Meng Lihong, Yu Dajie	School of Geography and Environment, Jiangxi Normal University, Nanchang 330022
	Effects of biochar on microbial activity and vetiver enrichment of copper, cadmium and lead in polluted soil in copper mining area	Journal of Soil and Water Conservation, 36 ( 6 )	2022	Ai Yanmei, Wang Yang, Li Jiaqi, Zhang Chenyang, Xu Xiaoyang, Feng Jinping, Zhou Jihai	School of Ecology and Environment, Anhui Normal University, Collaborative Innovation Center for the Restoration and Reconstruction of Degraded Ecosystems in the Wanjiang River Basin, Wuhu, Anhui 241002
	Study on the Absorption and Removal Efficiency of Proturin in Different Wetland Plant Configurations	Journal of Nuclear Agriculture , 36( 9 )	2022	Zhang Kun , Sun Shixian , Shi Aoao , Zheng Yi	School of Plant Protection, Yunnan Agricultural University, Kunming, Yunnan 650201, China
	Effects of earthworm-vetiver joint action on heavy metals Cr, Cu, Pb and Zn in reclaimed soil	Journal of Ecology and Rural Environment, 38 ( 9 )	2022	Lu Fuqing, Wang Xingming, Chu Zhaoxia, Fan Tingyu, Xu Xiaoping	School of Earth and Environment, Anhui University of Science and Technology, Huainan 232001, Anhui Province
	Talking about the Function of Ecological Slope Protection in Waterway Improvement	China Water Transport, 22 (7)	2022	Yang Kai, Jiang Xiaobo	Yangtze River Nanjing Waterway Engineering Bureau
	Study on Erosion Resistance of Guiyang Red Clay Plant Slope Protection	China Water Transport, 22 ( 2 )	2022	Huang Yang, Chen Jun, Huang Yang, Wang Lianrui	School of Resources and Environmental Engineering, Guizhou University, Guiyang, Guizhou 550025, China
	Riverbank Erosion Control Based on Vegetation and Geotextiles	Sichuan Water Conservancy, 4	2022	Liang Guiyu	Taining County Xinhui Water Conservancy and Hydropower Engineering Co., Ltd., Sanming, Fujian, 354400

	Study on the effect of ecological floating bed in situ restoration of landscape water body	Journal of Safety and Environment , 22 (2)	2022	Chen Maohua	Fuyang Vocational and Technical College, Fuyang, Anhui 236031
	plant root growth form on shear strength of expansive soil slope	Journal of Central South University (Natural Science Edition) , 53 (1)	2022	Li Zhenyu, Ouyang Miao, Xiao Hongbin, Lin Yuliang, Yang Guolin	School of Civil Engineering, Central South University of Forestry and Technology, Changsha, Hunan, 410004
	Application of vetiver in wind and sand control of flood control canal on the north side of Pingtan Sanliujiao Lake	Water Technology, 1	2022	Zheng Yundong	Agricultural and Rural Development Service Center of Pingtan Comprehensive Experimental Zone, Pingtan, Fujian 350400
	Research on the Restoration and Application of Vetiver in Ionic Rare Earth Heap Leaching Field	Chinese Journal of Rare Earth , 40 (1)	2022	Li Tiantian, Kang Luhua, Li Ping, Wang Yuying, Cai Zhenfeng	Jiangxi Huagan Environmental Technology Research and Development Co., Ltd., Nanchang, Jiangxi 330000
	Physiological response and accumulation of vetiver and ryegrass to heavy metal lead	Environmental Technology , 28 (1)	2022	Li Dong , Song Hang, Chen Zhenpu , Wan Jianxin , Wang Xifa	Qingdao Shuangrui Marine Environmental Engineering Co., Ltd., Qingdao 266101, Shandong
<b>2 Bioengineering</b>	Mechanical properties of roots of slope protection plant vetiver under pulling action	Journal of Agricultural Engineering, 38(11)	2022	Xiao Hai, Zhang Qianheng, Xia Zhenyao, Hu Huan, Zhu Qingwen , Yan Rubing, Zhang Lun, Yang Yueshu	Ministry of Education Key Laboratory of Geological Hazards in the Three Gorges Reservoir Area, Yichang 443002
	Crack evolution and mechanical properties of composite loess under dry-wet cycles	Hydropower Energy Science , 40 (7)	2022	Xu Yonggang, Ren Jianmin	7 , Gansu 30070
	Quantitative evaluation and selection of plants for slope protection of gold mine tailings dam	Journal of Hunan City University (Natural Science Edition , ) 31 ( 4 )	2022	Gong Feilong , Jiang Xueliang, Yang Hui, Zhang Xianjun, Zhao Shaodong, Liu Kai, Liu Yong	School of Civil Engineering, Central South University of Forestry and Technology, Changsha 410004
	Combined regulation of rice straw mulching and vetiver hedgerows on the distribution of carbon and	Soil , 54(4)	2022	Li Jiwen, Liu Kailou, Yu Xichu, Du Jiangxue, Shen Zhe, Li Hao, Zhang Huimin	Institute of Agricultural Resources and Agricultural Regional Planning, Chinese Academy of Agricultural Sciences, Beijing 100081

	potassium in soil aggregates in red soil sloping farmland				
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**Host: China Vetiver Network, Nanjing Institute of Soil Science, Chinese Academy of Sciences, Box 821 , Nanjing, No. 71 , Beijing East Road, Nanjing**  
**Zip code: 210008 , Tel: (025) 86881269 , Fax: (025) 86881000**  
E-mail: lyxu@issas.ac.cn Homepage: <http://www.vetiver.org.cn>