



中国.河北.涉县旱作梯田的特点与保护实践

Characteristics and Conservation Practice of Dryland Terrace System in Shexian County, Hebei Province, China

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1.地理位置及地理气候特点

Geographical Location and Geographical Climate Characteristics

- 涉县地处中国第二阶梯的太行山深处，位于东经 $113^{\circ}26' \sim 114^{\circ}$ ，北纬 $36^{\circ}17' \sim 36^{\circ}55'$ ，海拔203m ~ 1563m；
- Shexian County is located in the depths of Taihang Mountains, China's second staircase.
- Location: $113^{\circ}26' \sim 114^{\circ}\text{E}$, $36^{\circ}17' \sim 36^{\circ}55'\text{N}$
- Altitude: 203 ~ 1563m



1.地理位置及地理气候特点

Geographical Location and Geographical Climate Characteristics

- 这里是典型的石灰岩深山区，属半湿润偏旱气候区，年降雨540毫米，年蒸发量1720毫米，年均气温12.4℃。
- It is a typical deep limestone mountain area, a semi-humid and semi-arid climate zone, annual rainfall of 540 mm, annual evaporation of 1720 mm, annual average temperature of 12.4 °C.
- “山高坡陡、石厚土薄”，“缺水少土”是这里的典型特征
- The typical feature here can be well summarized as “high mountains , steep slopes, thin rocks and thick soil” as well as “lack of water and soil”.



2. 涉县旱作梯田系统的特征 Distinguishing Feature of Dryland Terrace System in Shexian County

(1) 规模宏大的旱作石堰梯田景观

Grandiose Dryland Terrace Landscape



(1) 规模宏大的旱作石堰梯田景观

Grandiose Dryland Terrace Landscape



- 涉县旱作梯田总面积17000公顷，核心区王金庄村的230公顷梯田，由46 000余块土地组成，分布在12平方公里24条大沟120余条小沟里。
- The total area of Dryland Terrace System in Shexian County is 17000 hectares. The 230-hectare terraced field in the core area of Wangjinzhuang Village is composed of 46,000 pieces of land, distributed in more than 120 ditches in 24 ditches of 12 square kilometers.

(2) 独特的山地雨养农业生产技术体系

Unique Technology System for Rain-fed Agricultural Production in Mountainous Areas



水窖蓄水
Water cellar storage



作物适应栽培用水
Adaptive use of limited rainfall
for cultivated crops



土壤蓄水保墒
Soil water storage and soil
moisture conservation



塘坝蓄水
Reservoir and dam
storage

(3) 高效的水土资源保护与利用模式

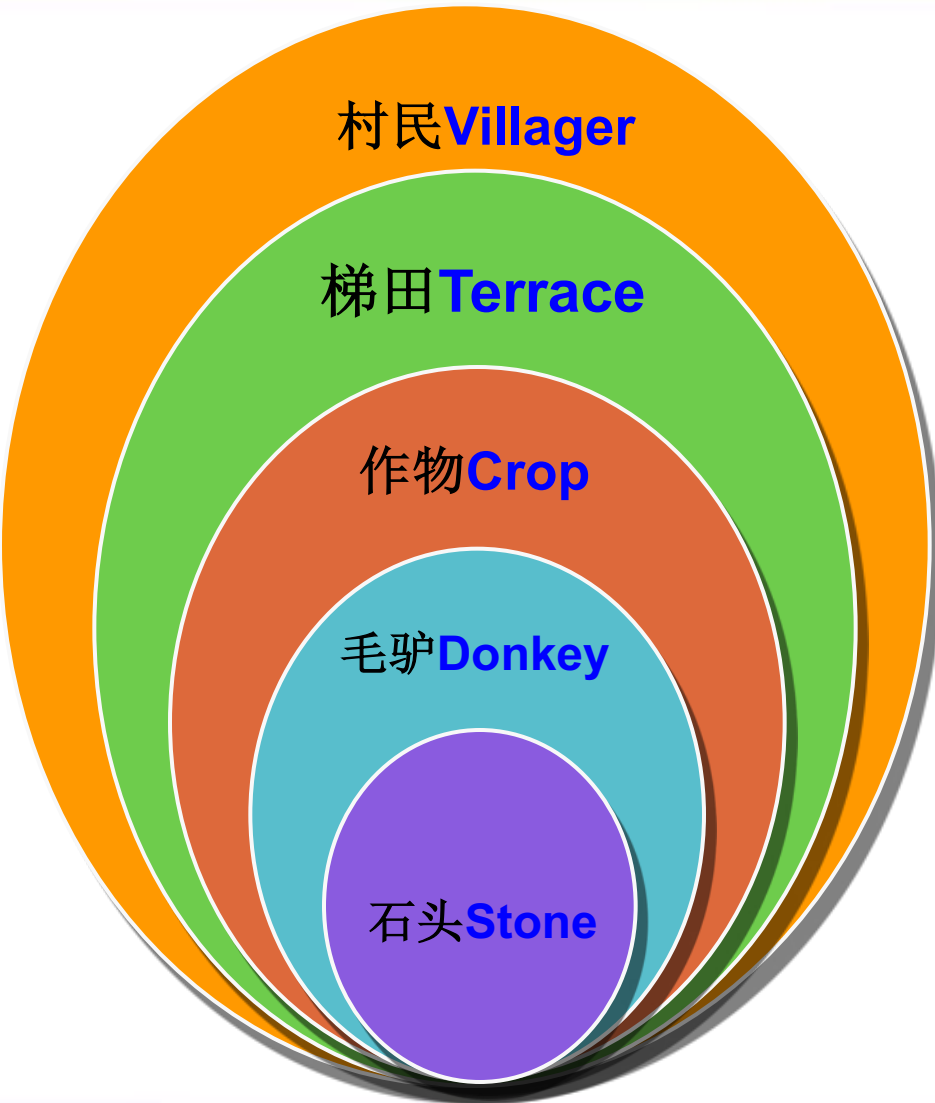
Efficient Protection and Utilization Mode of Water and Soil Resources

- 小雨留到地，大雨蓄到池；小雨不冲土，大雨不毁田。
- Light rain stored in the soil while heavy rain stored in the pond, therefore soil and field are well-preserved.



(4) “梯田-村民-作物-毛驴-石头” 五位一体的生态系统

“Terrace - Villager - Crop - Donkey - Stone ” Form a Five in One Ecosystem.

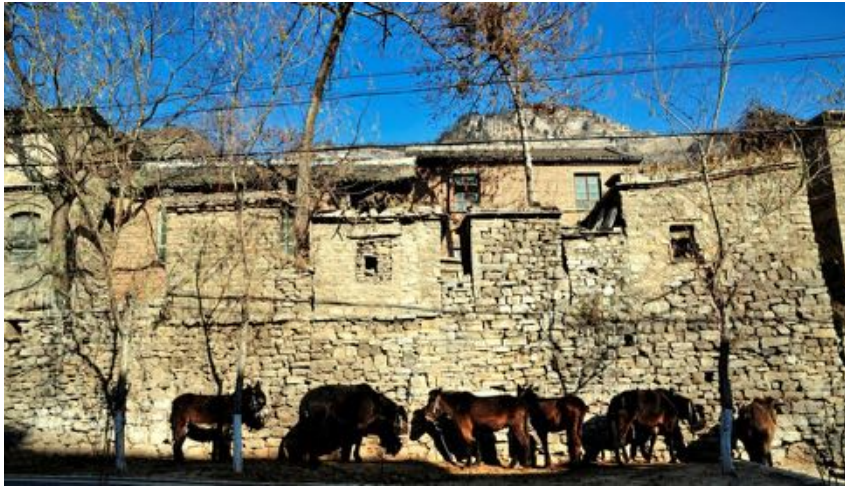


旱作梯田系统是可持续发展的生态系统，依山而建的石头梯田、颇为丰富的食物资源、兼具生产功能、运输功能和生态功能的毛驴、随处可见的集雨水窖、散落田间的石屋，在人的作用下巧妙结合，**石头、梯田、毛驴、作物、村民**相得益彰，融为一个五位一体的可持续发展的旱作农业生态系统。

Dryland terrace system is an ecosystem of sustainable development. Stone terraces, abundant food resources, donkeys with production, transportation and ecological functions, rainwater cellars and stone houses scattered in the fields are ingeniously combined under the action of human beings. **Stones, terraces, donkeys, crops and the villagers** complement each other and become a five in one sustainable agricultural ecosystem.

(5) 以毛驴为基本要素的梯田农业生产体系

Terraced field agricultural production system with donkey as basic elements



(6) 丰富的生物多样性

Rich biodiversity

- 丰富的物种多样性，为人们提供了多样性的食物资源，
- Abundant species diversity provides people with various kinds of food resources.
- 丰富的遗传多样性，为农业可持续发展提供了物质基础；
- Abundant genetic diversity provides a material basis for sustainable agricultural development.
- 丰富的生态多样性，为农村社区发展提供了安全保障
- Abundant ecological diversity provides a guarantee for the development of rural communities.



(6) 丰富的生物多样性

Rich biodiversity

2017年拥有5件中国国家地理标志保护产品

In 2017, there were 5 Chinese national geographical indication protection products.

涉县核桃 Walnut

涉县花椒 Chinese Pepper

涉县黑枣 Black date

涉县柴胡 Bupleurum

涉县连翘 Forsythia



涉县核桃



涉县柴胡



涉县花椒



涉县连翘



涉县黑枣

(6) 丰富的生物多样性

Rich biodiversity

- **2016年《涉县古树名木》记载 , Records of ancient and famous trees in Shexian County in 2016**
 - 树龄百年以上古树19科、23种 , 151株 ; There are 19 families, 23 species and 151 strains of ancient trees over 100 years old.
 - 其中100 ~ 500年的106株 ; 106 trees aged 100~500 years.
 - 500 ~ 1000年的30株 ; 30 trees aged 500~1000 years
 - 1000年以上的15株 ; 15 trees above 1000 years.
- **2014年《涉县中药志》记载 : Records of Shexian County Chinese medicine 2014**
 - 药用植物176科1872种 , 其中国家重点保护药用植物11种。 There are 1872 species of medicinal plants in 176 families, among which 11 are the most important protected medicinal plants in China.
- **2009年《涉县农业志》记载 : Records of Shexian County agricultural records 2009**
 - 动物307科、791属、1080种 , 其中省级重点保护动物4种。 There are 307 families, 791 genera and 1080 species of animals, including 4 species of key protected animals at provincial level.



丰富而多样的食物——粮食

Rich and Various Food - Food



丰富而多样的食物——杂粮油料

Rich and Various Food -- Coarse Cereals and Oilseeds



丰富而多样的食物——蔬菜瓜果

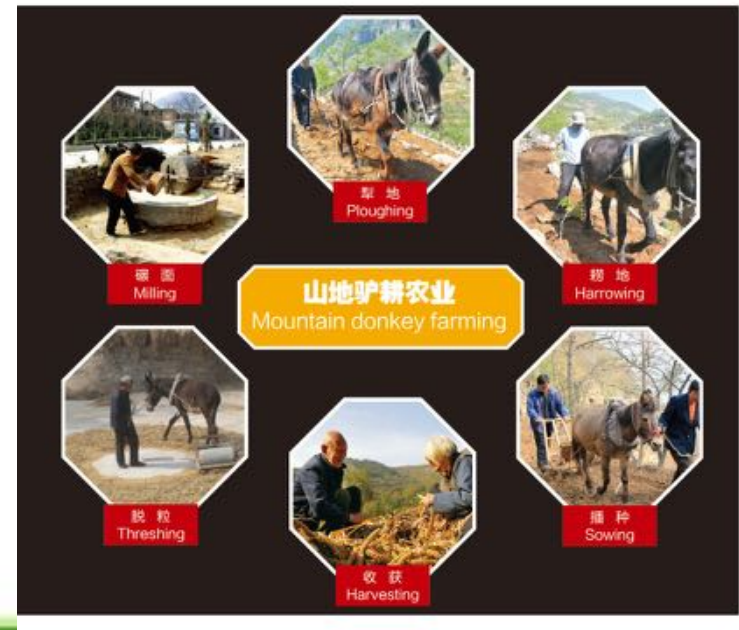
Rich and Varied Foods -- Vegetables and Fruits



(7) 独特的生存智慧

Unique Survival Wisdom

- 在石厚土薄、降雨极少的石灰岩山区，人们凭着坚韧不拔的性格，顽强拼搏的精神，充分利用当地丰富的食物资源，通过藏粮于地的耕作技术、存粮与仓的贮存技术，节粮于口的生存智慧，凿石山而筑田，蓄雨露而润薄土，历经700多年的旱作梯田，对揭示自然与人类协同发展、水土流失治理、生物多样性保护、生态循环农业发展提供了可资借鉴的宝贵经验。
- In the limestone mountains with thin soil and little rainfall, the local people make full use of abundant traditional food resources with strong willpower and persistent spirit, through the farming and storage technology and the survival wisdom of thrift. They cut stones to make the farmland and collect rainwater to irrigate their fields. With over 700 years of history, the Dryland Terraces has provided valuable experience for nature-human collaborative development, soil erosion control, biodiversity conservation, and the development of circular agriculture.**



3. 涉县旱作梯田系统的特性 Specific Property of Dryland Terrace System in Shexian County

(1) 活态性：Living State,
起源于1290年



The stone tablets
originated in 1290

证明元朝建村
的明代碑文



(1)活态性 Living State



(2) 适应性 Adaptability

- 依赖梯田生存的人们在脆弱的生态环境系统中通过生物多样性的保护和文化遗产性的传承实现了农耕社会的可持续发展。
- People who rely on terraces to survive in the fragile ecological environment system through the protection of biodiversity and cultural diversity heritage achieve sustainable development of agricultural society.



(3) 复合性 Compounding

以梯田为核心的自然生态系统与以村落为中心的
社会文化系统融为一体

The natural ecosystem with dryland
terrace as the core is integrated into a
village social and cultural system.



(4) 战略性 Strategy

旱作梯田的保护和传承，将为全球农业的可持续发展，为解决干旱、缺水及其对粮食安全、农业和农村发展等方面的影响提供可资借鉴的经验。

Conservation and inheritance of dryland terrace will provide useful experience for sustainable development of global agriculture, and for solving drought, water shortage and its impact on food security, agriculture and rural development.



(5) 多功能性 Multifunction

旱作梯田是典型的多功能复合生态系统，
不仅在过去满足了人们的生计安全保障，
更为人们提供就业增收、生态保护、观光
休闲、文化传承、科学研究等多种功能。

Dryland terrace is a typical multi-functional complex ecosystem. It not only meets people's livelihood security in the past, but provides people with job opportunity, ecological protection, sightseeing and leisure, cultural heritage, scientific research and other functions.



(6) 濒危性 Endangered

- 随着城市化进程的加快和现代石油农业的迅猛发展以及人们对传统农业意识的淡漠，导致传统的农业生产方式正在被逐渐放弃。
- With the acceleration of urbanization, the rapid development of modern agriculture and people's indifference to traditional agriculture, the traditional mode of agricultural production is being gradually abandoned.



4、梯田保护的思考 Consideration on Conservation of Dryland Terrace

- 农业文化遗产的形成是一个历史过程，在其历史发展过程中，既传承保留了其以往传统农耕文明的精华和典型特质又与时俱进的不断地吸收、引进当代人类所创造的优秀的农业新品种、新技术、新成果。
- The formation of agricultural heritage systems is a historical process. In the course of its historical development, it not only inherits and retains the essence and typical characteristics of its traditional farming civilization, but continuously absorbs and introduces excellent new agricultural varieties, new technologies and new achievements.
- 保护和传承农业文化遗产，首先需要明确农业文化遗产要保护什么？
- **To protect and inherit the agricultural heritage systems, we firstly need to make clear what the agricultural heritage should protect.**



4、梯田保护的思考 Consideration on Conservation of Dryland Terrace

(1) 梯田保护，保护什么？ What to protect?

- 特有的梯田的景观系统 landscape system of dryland terrace
- 独特的传统雨养农业技术体系 Unique traditional rain-fed agricultural production technology system.
- 以毛驴为基本要素的梯田农业生产体系 Terraced field agricultural production system with donkey as basic elements
- 丰富的农业生物多样性保护 Abundant protection of agricultural biodiversity.
- 优秀的传统民俗文化 Traditional folklore



4、梯田保护的思考 Consideration on Conservation of Dryland Terrace

(2) 梯田保护，怎么保护？ How to protect?

“农业文化遗产保护需要建立“政策激励机制”、“产业促进机制”，以及有政府、科技、企业、农民、社会构成的‘五位一体’的多方参与机制”

"Agricultural cultural heritage protection needs to establish a 'policy incentive mechanism', 'industry promotion mechanism' and a 'five in one' multi-party participation mechanism composed of government, science and technology, enterprises, farmers and society"



5、梯田保护的实践 Practice of Dryland Terrace Conservation

(1) 加强政府层面 Policy Incentive Mechanism

- 完成了遗产保护的组织和制度建设：建立了一整套政策激励机制，先后投入4000万元，对遗产地的道路、景观等基础设施进行恢复重建，有效地促进了遗产地旅游及农产品开发。
- The organization and system construction of heritage protection have been completed: a set of policy incentive mechanism has been set up, and 40 million yuan has been invested in the restoration and reconstruction of the road and landscape infrastructure of heritage sites, effectively promoting the tourism and agricultural product development of heritage sites..



(2) 与科研院校合作开展农业文化遗产研究 Research on Agricultural Cultural Heritage in Collaboration with Scientific Research Institutions

- 一是与中国科学院合作，开展传统农耕技术的科学研究，如谷子不同中耕管理对小米品质的影响，毛驴在梯田系统中的作用，梯田花椒生物埂对水土保持的作用等。
- The first is to cooperate with the Chinese Academy of Sciences to carry out scientific research on traditional farming techniques, such as the effect of different intercropping management on millet quality, the role of donkeys in terrace system, the role of pepper stem in terrace on water and soil conservation, etc.
- 二是配合中国农业大学孙庆忠教授团队开展梯田核心区社会人类学研究及社区营造实践。
- The second is to cooperate with Professor Sun Qingzhong's team of China Agricultural University to carry out the research on Social and Anthropology in community-building practice in terraced core area.
- 通过几年的科学研究，已完成10多项自然科学和社会科学学术成果，为遗产的保护和利用提供了科技支撑。
- Through several years of scientific research, more than 10 scientific and social sciences have been accomplished, providing scientific and technological support for the protection and utilization of heritage.



(2) 与科研院校合作开展研究

Collaborate with Research Institutions in Research



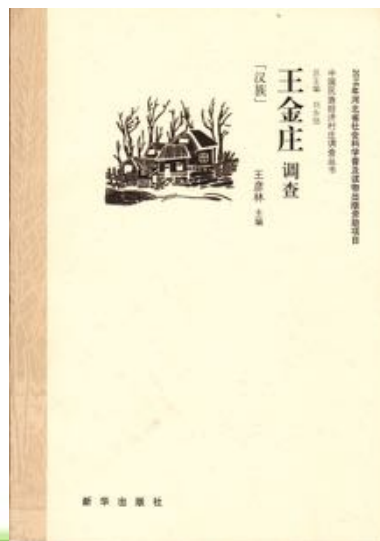
第5届全国农业文化遗产研讨会

1990年以来河北涉县旱作梯田土地利用与景观格局演变

刘洋 杨荣娟

中国科学院地理科学与资源研究所

2018.7.20



(3) 在农民参与方面

In terms of Farmers' Participation

- 通过社区营造，开展农业文化遗产的保护与利用培训，举办农事文化节庆，激发农民参与农业文化遗产保护
- Through community-building, to train in the protection and utilization of Agricultural Cultural heritage, hold agricultural cultural festivals and encourage farmers to participate in the protection of Agricultural Cultural Heritage.



(3) 在农民参与方面

In terms of Farmers' Participation

- 今年我们首次举办以“魅力乡村，椒香涉县”为主题的中国·涉县首届花椒采摘节。
- This year, we held the first Chinese pepper picking festival in Shexian County, China.



(4) 在社区层面

At the level of Public Participation

- 引导成立了民间组织“涉县梯田保护与利用协会”，将关心梯田保护与利用的村干部、企业家以及老农民、老手工艺人组织联合起来，共同参与梯田保护与利用。
- We have led to the establishment of a non-governmental organization, the Shexian Terrace Protection and Utilization Association, which unites village cadres, entrepreneurs and organizations of old farmers and craftsmen to participate in the protection and utilization of terraces.



(5) 在企业层面 , At the enterprise level, we should guide the development of characteristic agricultural products.

先后引导10多家农业龙头企业参与梯田农产品的开发，为它们搭建市场平台，帮助他们走出去闯市场，以此提高梯田生产效益，增加农民收入。

More than 10 leading agricultural enterprises have been guided to take part in the development of terraced agricultural products, build a market platform for them, help them to go out and break the market, so as to improve the production efficiency of terraced fields and increase farmers' income.



(5) 在企业层面，引导开发特色农产品

At the enterprise level, we should guide the development of characteristic agricultural products.





谢谢聆听！

Thank you for listening !