

山东乐陵枣林复合系统风貌特征

CHARACTERISTICS AND STYLE OF LAOLING JUJUBE FOREST COMPLEX SYSTEM OF SHANDONG PROVINCE

► 山东乐陵枣林复合系统是中国面积最大的人工结果林，也是唯一一处栽培历史最长、品质最好的原始枣林，也是我国目前面积最大、株数最多、保存最完好的枣林复合系统，被国家列入中国面积最大的人工林产地保护范围。其栽培“始于商周，兴于魏晋，盛于明清”，已有 3000 多年历史。系统突出“原始自然、高效生态”两大特征，不仅是传统生产生活方式的见证，也是适应社会经济变化的动态性和适应性体现。

► Shandong's Laoling jujube forest composite system is China's largest area of artificial fruit forests, but also the only cultivation history of the longest, best quality of the original jujube forest, but also China's current area of the largest, the largest number of plants, the best preserved jujube forest composite system, was included in the state of China's largest area of planted forests in the area of the protection of the origin range. Its cultivation "began in Shang and Zhou, flourished in Wei and Jin, and flourished in Ming and Qing Dynasties", with a history of more than 3000 years. The system highlights the two major characteristics of "primitive nature and efficient ecology", which is not only a testimony of the traditional way of production and life, but also a reflection of the dynamics and adaptability to social and economic changes.



品类繁多的种质资源

MULTIPLE GERMLASM RESOURCES

► 乐陵市系华北平原的一部分，由黄河冲积而成，适宜的气候和肥沃的土壤为枣树品种多样性提供了得天独厚的条件，在上千年的种植过程中，当地人民培育了多种枣树品种。乐陵市枣林复合系统内汇集了596个枣树品种，种质资源极为丰富，有千年以上古枣树376株，树龄 800 年以上 6500 株，500 年以上古枣树 12000 株。

► Laoling City is a part of North China Plain, formed by the alluvial deposits of the Yellow River, the suitable climate and fertile soil provide unique conditions for the diversity of jujube varieties, and in the process of thousands of years of cultivation, the local people have cultivated a variety of jujube varieties. Laoling city jujube forest composite system brings together 596 jujube varieties, germplasm resources are extremely rich, there are more than 1,000 years of ancient jujube tree 376, more than 800 years of age 6500, more than 500 years of ancient jujube tree 12000.



繁种多样的生物群落

DIVERSE BIOMES

► 独特的地理环境和气候条件为生物多样性提供了可能，据调查，系统内共有植物 55 科 117 属 210 种，其中木本植物 30 科 59 属 88 种，草本植物 25 科 58 属 122 种；动物有白玉鸟、喜鹊等 48 种。繁种多样的生物群落，形成了枣林生态系统独特的自然环境和较高的系统再生能力，经过千百年的风霜雪雨，枣树与其他生物和谐共生、相得益彰。

► The unique geographic environment and climate conditions provide the possibility for biodiversity. According to the survey, there are 55 families, 117 genera and 210 species of plants in the system, among which there are 30 families, 59 genera and 88 species of woody plants, 25 families, 58 genera and 122 species of herbaceous plants; and there are 48 species of animals, such as the white jade birds and magpies. The diverse biological communities have formed the unique natural environment and high system regeneration ability of the jujube forest ecosystem, and after thousands of years of frost and snow, the jujube tree and other organisms coexist harmoniously and complement each other.



和谐稳定的生态系统

HARMONIZED AND STABLE ECOSYSTEMS

► 山东乐陵枣林复合系统是一个典型的农林牧复合系统，整个系统内农业品种多样。在生产过程中，人们利用枣树发芽晚，落叶早，枝疏叶小，根系分散，水肥需求高峰与农作物相互交错，枣树和农作物的生长具有互补性，发明了“枣粮”“枣药”“枣蔬”等多种作物间作模式，适时在林间种植小麦、花生、油菜、中药材等作物，有效改良了土壤，同时在树下散养鸡、鸭、鹅等家禽，既提高了经济收益，也有效防治了树木的病虫灾害，形成人类与动植物和谐共生的良性生态系统。

► Shandong's Laoling jujube forest composite system is a typical agriculture, forestry and animal husbandry composite system, with a variety of agricultural species throughout the system. In the production process, people use jujube tree germination late, early leaf fall, branch thinning leaf small, root system dispersion, water and fertilizer demand peak and crop interlacing, jujube tree and crop growth has complementary, invented "jujube grain" "jujube medicine" "Jujube vegetables" and other crops intercropping mode, timely planting of wheat, peanuts, oilseed rape, Chinese herbs and other crops in the forest, effectively improving the soil, while raising chickens, ducks, geese and other poultry under the tree, not only to improve economic returns, but also effectively prevent and control the trees of pests and diseases, the formation of a benign ecosystem of harmonious coexistence between humans and animals and plants.



底蕴深厚的农耕文化

DEEP-ROOTED FARMING CULTURE

► 乐陵金丝小枣有3000多年的栽培历史，乐陵枣文化渊源流长。枣文化主要表现在文艺、政治、经济、哲学以及社会生活的各个方面。描写枣或者与枣有关的文学艺术作品是乐陵枣文化的灵魂，主要包括枣的传说、历史故事、小说、诗词、散文等30多个品类，由此衍生出枣神娘娘、徐福东渡、母子树等故事100多个，“早生贵子”、“嫁女送枣”等与小枣有关的民俗和独特的枣树开甲（环剥）技艺也蕴藏着深厚的文化内涵。

► There are more than 3,000 years of cultivation history of Laoling Golden-silk Jujube, and the culture of Laoling jujube has a long history. Jujube culture is mainly manifested in literature and art, politics, economy, philosophy and all aspects of social life. Literary and artistic works depicting jujube or related to jujube are the soul of Laoling jujube culture, mainly including jujube legends, historical stories, novels, poems, essays and so on more than 30 categories, which derive from the jujube goddess, Xu Fu's eastward voyage, mother and child tree and so on more than 100 stories, "give birth to a noble son", "marrying a girl to send jujube" and so on with the small jujube. The folk customs related to small jujube and the unique jujube tree opening armor (ring peeling) technology also contain profound cultural connotations.

