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Original Article

Ziziphus spina Christi understanding of ecology perspective for managing watersheds in southern Iran (case study: fars - Darab)

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Abstract

Integrated watershed management to protect and improve the sponsor of soil and water resources are. Measures and management of biologically important and practical solutions towards an integrated watershed management is considered to. Using vegetation regardless of the circumstances and characteristics of something that went in vain and lead to waste of human and financial is. Drainage basins in southern Iran with regard to climate and geography and development edaphically species-specific vegetation management along with the target could be watershed management attention. Circumstances canopy extensive root of this plant and the plant resistance against drought stress, and economic and medicinal importance of these rates is native to southern Iran. The study in Darab city in Fars province was, and characterization of the ecological requirements include botanical characteristics, vegetative parts, how plants reproduce, the status of the soil texture, electrical conductivity, acidity, how to adapt, use and importance of the economy and how to how to protect soil and grazing by livestock was investigated. The results showed that this plant in soil with loam texture conduct electricity and the amount of acidity 5/7-7 5/3-2 grows. Average annual precipitation in the vegetative plant parts between 100 to 300 mm are. This plant with dense cover of rain and soil erosion by reducing wind speed helps prevent wind erosion. Overall we can conclude that, besides a way appropriate to revive and stabilize the soil and vegetation values for pastures south of Iran.

Keywords: *lotus - Integrated Watershed Management - ecological needs - biological management - Darab .*

INTRODUCTION

Plants in the ecosystems of arid and semi arid tropical regions of different aspects such as stabilized soil, forage for livestock production and wildlife produce pharmaceuticals and industrial wood production and wood, creating a haven for wildlife, etc. For Carbon Sequestration Human are important. On the other hand these ecosystems due to constraints such as having little downside and climate change in terms of high spatial and temporal rainfall has caused any operational principle of non-plant sources of these areas may delay or loss of plants much renewable natural vegetation lead to back. Thus exacerbate the situation and wind and water erosion risks is the stability of these ecosystems. So it will seek to dominant species and important ecosystems in terms of identification and ecological needs to be evaluated based on scientific data management can exploit the optimum and sustainable use in closed ecosystems. Fars province in terms of the wide extent and according to the different climate in different areas dominated it, with a wide variety of plants specific genetic variation in each

geographic area where you go. Forest and pasture species with a wide range of values is covered by the province. In addition to the use of edible and medicinal eventually balance the role of their importance in many ecosystems, species survival and fertility and soil protection oxygen for the planet's atmosphere has been created. So preservation of these resources to a national wealth that is considered essential looks. Unfortunately, today due to lack of proper utilization of forests and pastures, forests, shaving and excessive grazing, excessive urban expansion caused the loss or reduction of genetic resources in the province have made it. Considering the dry climate, semi arid province, identified as resistant to drought and their preservation is important.

Various studies on some species important to dry and semi-arid areas has been done. Asghari (1372) with habitat conditions study showed that this plant in soils with high amounts of lime are able to grow.

About native plant species along as Iran and About the only information about the flora balochi there only in the botanical botanical sources such as vegetable Flour Hero (1372) and Mozaffarian (1375) there is material Special study on this valuable and native plants has been done. The purpose of this study characteristics and ecological requirements, including botanical characteristics, distribution areas, how to reproduce the plant in southern Iran along, the situation of soil texture, electrical conductivity, acidity, Compatibility Mode, and the application of economic importance and the way how to protect of soil and grazing by livestock.

MATERIAL AND METHOD

The study in Fars province and rock catchments quartile, dowlatabadi, fasarood located near konar Haji Darab city took in the study of some ecological characteristics and requirements include botanical characteristics, vegetative parts, how Tksyrgyah, type of plant species along the southern side, the situation of soil texture, electrical conductivity, acidity, Compatibility Mode, and the application of economic importance and the way how to protect soil and grazing by livestock was investigated. For this purpose, first the desired range of areas in the 50,000-scale topographic maps: one was found. altogether referring to the habitat of this tree in the desired areas of soil sampling was conducted. Samples to the Soil and Water Laboratory college Agriculture and Natural Resources Darab transferred phisical factor soil texture and chemical factors of soil acidity and electrical conductivity were measured. Phenological stages of plant conducted field visits to the plant habitats in the region beginning with the record plant growth, flowering and maturity time seeds were determined. Botanical characteristics for this purpose along with the noticeable appearance of plants and flowers from plants with the help of the botanical sources have been described. In order to understand how plant regeneration sites visiting this plant in various areas desired information was measured.

Awareness of climate for governing *Ziziphus spina Christi* habitats along the long-term weather station data Hasanabad Darab in the study area were used. In this regard, annual precipitation and minimum and maximum degree of heat is taken into account.

RESULT AND DISCUSSION

Botanical characteristics

Cedar plant with scientific name *Ziziphus spina Christi,* which in Arabic and the southern side and say the names of books aside, cedar, weighs Georgian, half, Zal, and Tiger has been called pedigree. This plant is evergreen tree with the average height of 10 meters, with branches and leaves from white to gray, heart shape and set with three prominent vein that has become ligule the Thistle, the plant, a dicotyledonous perennial herbs of the category of family Ramnas·h

((Rahmnaceae and is native to southern Iran, which over three thousand years makes. have simple leaves with shoulder vein and is ligule. yellow flowers and is a regular male and female (the hero, or. 1372.) flowering time of early Summer starts. cedar branches are pulled away beside. wood of this tree is white and thick and strong and in some species of wood is a little red. cedar leaves contain tannins, like Herbal Astrvlhay Btasytvstrvl, Btasytvstrvl Glvkzyd and is Sapvnyn Ablyn Laktvn . Sapvnyn operating in cedar cedar floor is produced in leaves (Mir Heidar, 1373). This plant is classified in terms of botany Papo ecologist French, they host phanerophytes (Moghaddam, M.. 1379) flower and fruit shape in figure 1.

Fig 1: flower and fruit shape

Geographical distribution

Alongside countries such as Nygarya, Sudan and Oman, UK and France and China have been seen. But also the resources showed that this plant is native to southern Iran. The plant in the southern and tropical regions of Iran, particularly on the south coast, Baluchistan, Fars, Bushehr, Khuzestan and Kerman has published (the hero, or. 1372). This plant in Fars Province in the city of Darab, Larestan, Mishan Mamasani, Kazeroun, home Lamerd Znyan and has expanded.

Application and economic importance

Cedar along with local public opinion among the South as a sacred tree that is most sacred places are going around. Powdered leaves of old trees along as a matter hair and body cleansing are used and still use it is common. Powdered leaves near Cedar is known. Ablyn Laktvn obtained from the next batch of steroid Sapvnynhay and as raw material to produce steroid hormones can be used. Fruit oval and yellow and is edible. Small plants and fruits and edible red with tart flavors are pleasant and sweet. Ripe fruit, unripe fruit of the bile and laxative and astringent it is flatulent (Habib Beigi, 1373). Also mentioned is that the aqueous antimicrobial, antifungal and anti-pain (Ayatollahi Mousavi et al, 1375). In addition to the use of small animal medicine including sheep and goats from the leaves of the fruit as fodder palatabity it useful and specific kind of beside the name Hrnv to treat neonatal jaundice is used. These trees provide wood for firewood and charcoal is desirable. Also supplies of wood for the preparation of agricultural raw

wood, for example for the preparation of the Bill is used as shepherds and livestock in the summer, often from the shadows as the rest of them are using. Livestock also leaves its high protein and delicious because of being given the plant canopy, which produces massive erosion due to rain and reducing wind speed helps prevent wind erosion. This plant with deep roots in times of drought resistant are. Considering the above characteristics of this plant as the plant could be suitable for biological management of drainage basins south of the country it is used. And instead of non-native species such as eucalyptus, acacia and Tryplks it could be used. Unfortunately Watershed Flood plans Grybaygan Fasa botany studies due to lack of vegetation for development in the watershed of the eucalyptus plant are used which non-native plant species that the evaporation of water from leaves is high. While in this area could be the next native plant that is above law tickets to use. Cover Figure 2 shows the side.

Fig 2: large canopy trees along

Relationship with soil:

Based on field observations and laboratory results, the more plants on loamy soils texture is growing.

Soil chemical analysis results taken from this plant showed that the habitat of this plant in soil with electrical conductivity and 5/3-2 5/7-7 acidity value grows.

Climatic requirements:

This plant is native to tropical south where rainfall and 100-300 degrees are going

For a tree next to a very robust and combining agriculture and forestry because of Milimeter Move at least 60 degrees above zero and the maximum can tolerate.

Phenology and how revitalization:

The average plant height of 5 meters, with white flowers and two sexual flowers in August and septamber appears. Seeds of this species in November and December reach. This plant naturally through seed revitalization continues. This plant can be the seeds in plastic bags and planting week after reaching the leaves moved in the field.

Agriculture and Forestry (Agrofarstry):

soil moisture levels, are resistance to drought. This plant a tree is suitable for forstry in dry land

CONCLUSION

Given the importance of plants in arid and semiarid ecosystems south tropical arrangements should think about exploiting the plant. Due to the plants in the not too distant past, a wide range of these areas were covered. Result of population growth and exploitation of non-normative number of plants has been reduced. This native plant in southern Iran as the dominant plant or with many plant species in areas with lower elevation expanded. Considering the characteristics of this plant in the above mentioned, including being a native resistance to environmental stresses such as drought and cold, dense canopy cover, forage production with high protein value and karbohydrate can be for this plant biological management of the watershed south of the country will use it. In this goal while protecting soil and water and prevent water and wind erosion, the production of livestock forage can use. Also according to the drug can also be economic value. All along in a way this tree is suitable for vegetation restoration and soil stabilization and valuable for the pastures south of Iran.

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