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Original Article

Ecological characteristics of the Tecomella undulata tree Case study(Iran - Fars - DARAB)

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Abstract

Tecomella undulata One of the valuable native plant species and is compatible with arid and desert of Iran. This plant To Title Species A Important For Protection Areas Dry, Fixation Sand At Areas Talented Erosion And Also Adequate shelter For Life Wildlife Are. According to Chen, the purpose of protection, and the pharmaceutical industry, forage and green plant native to Iran, Iran is still in extensive research on this plant is not endangered. For this purpose, this research needs to examine the ecological and ecological characteristics of the pomegranate tree, native to the devil in the province - city of Fars and in two Fasarod (with latitude 28 10 N And longitude 54 11 E) And the Paskhn (with latitude 28 47N And longitude 54 17 E) Which had a larger distribution of this species were performed. Factors evaluated included soil electrical conductivity (EC), Osmotic pressure of soil (OP), And soil acidity (PH) Respectively. Soil test results showed that the T.undulata Pomegranate Fat sandy loam soil and soil with growing frequency will neutralize the acidity. Electrical conductivity that is representative of soil salinity on plant indicates that this plant growing in soil can also be quite salty. The middle of the rainfall is 150 mm and can be required for the growth temperatures Low (less than 5 degrees) and can tolerate temperatures above 50 degrees. Estrogen levels plant anal leaves with atomic absorption (Atomic absorbtion) Showed that the plant contains the elements zinc, manganese, iron, sodium and potassium. Because past climax plant community (climax) vegetation zone has been investigated, but now due to improper use of the plant endangered plants are located in Iran.

Keywords: *pomegranate Devil (Tecomella undulata) - Ecological requirements - soil, climate.*

INTRODUCTION

Pomegranate Satan *Tecomella undulata* (Roxb.) Seem.)) Tree with height up to 15 meters, or shrubs with branches standing and of family (Bignoniaceae) Is and only species native the family at south of Iran at provinces Fars, Hormozgan, Bushehr, Khuzestan and Sistan and Balochistan are is that with names teak smil and wilderness read are be. *T . undulate* of species of Wooden and very resistant to land areas tropical and dry the is that to form mass of natural Small and scattered At most points South the there the be. These plant of species of with value that at habitat of natural own as non- official by residents region the no visits people aboriginal of benefits drug and biology environmental the plant, about interest degree of different the the and at now degradation is (M. Zadeh, 1389). Organs case interest degree the species includes wood, leaf , flowers and skin be. The species have wooden firm and with quality up and tissue dense is that at industry as lnjsazy application many , the (Tewari, 2009) the characteristics physical it because the main cut trunk and interest degree of it by is . Leaves, flower and branches of young the plant case use trap of style and heavy the be to the Bbecause at most habitat and head branch and or by people for livestock and fuel cut of and or by own trap and case why the Is. Hosseini and collaborators(1379). Jindal et al, (1990) and anonymous and colleagues and

Shankaranarayan colleagues at year 2003 the species The To title species a important for protection areas dry, fixation sand at areas talented erosion and also adequate shelter for life wildlife introduction have. According to Chen's use of protective devices, pharmaceuticals and industrial, forage and green plant native to Iran, Iran is still in extensive research on this plant is not endangered. For this purpose, this research needs to examine the ecological and ecological characteristics of the pomegranate tree, native to the devil in the province - city of Fars and in the two regions Paskhn- Fasarod who had done more of this distribution.

MATERIALS AND METHODS

This research needs to examine the ecological and ecological characteristics of the pomegranate tree, native to the devil in the province - city of Fars and in two Fasarod (with latitude 28 10 N And longitude 54 11 E) and the Paskhn (with latitude 28 47N And longitude 54 17 E) That this species Distribution had done more. To this earth in order to investigate the characteristics of growth in both areas where the soil was sampled. Factors evaluated included soil electrical conductivity (EC), Osmotic pressure of soil (OP), And soil acidity (PH) Respectively. Soil samples in Shiraz University - Department of Agriculture Natural Resources Darab analysis were worked out. Also needs climate for this plant, the nearest weather station to the plant data (weather station Hassan Abad in Fars) was used. During the Amplitude is measured as the cover and plant and associated species were also recorded. Also to the knowledge of the elements in the plant, the preparation of plant samples with atomic absorption (Atomic absorbtion) Elements in the plant were measured.

Figure (1) plants before flowering (Source: Author)

Figure (2) *T . undulate* flowering time) Source: Author)

RESULTS

Botanical characteristics T. undulate With a raised trunk, skin dingy, young branches (antennae) is leafy and green, bluish leaves a short petiole, leather - golden yellow flowers with a bayonet and a short peduncle, complex clusters of small flowers almost terminal, calyx small, bell-shaped with five teeth with the back end, with 4 flag, with a anthers, fruit a linear capsule has a flat surface and the bag is long flowering season is in April and May. (Field visits 1, 2 and 3 And 4).

Figure 3: improper use of plant *T . undulate* (peel skin for drug use) (source: author).

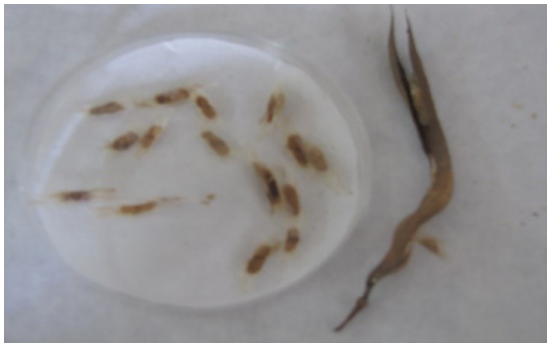

Figure (4): seed, and the capsules in *T . undulate* (source: author)

Plant soil needs

The results of soil analysis is given in Table 1. The results show that the T . undulate sandy loam soil with Fat And soil acidity will counteract the growing frequency. Also measured Electrical conductivity that is representative of soil salinity on plant indicates that this plant growing in soil can also be quite salty.

Table 1: Results of soil tests

The T-site studies	PH	Electrical conductivity (EC) Dsymnz m	%Sand	%Silt	%clay	Soil texture	Soil osmotic pressure (atm)
Fasrod area LATITUDE) 28 47N) And 54 17 E LONGITUDE)	7.11	1.84	56.8	40.8	2.4	Sandy loam	0.66
Paskhn area LATITUDE) 28 10N) And 54 11 E LONGITUDE	7.09	1.33	51.6	42	6.4	Sandy loam	0.85

leaf analysis of T . undulate H. The results of leaf analysis T . undulate In Table 2 are:

Table 2: Results of leaf analysis

Element	Zn	Mn	Fe	Na	K
PPm	82	61.6	463.1	800	600

The results show the percentage of sodium and potassium salts accumulate in the leaves of this plant is high and it can be can result in soil salinity Rather also be established.

Climate

For this purpose, data from weather station was used by Hassan Abad in Fars (Table3).

Table3. Climate data

YEAR PRECIPITATION	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	92.3	55.3	60.5	12.7	0.3	2.7	2.7	2.2	0.6	1.4	6.4	55.6	292.7

YEAR RELATIVE HUMIDITY	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	61	56	51	39	25	21	24	25	27	30	42	54	37

YEAR AVERAGE OF DRY BULB TEMPERATURE	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	ANNUAL
MEAN	10.9	13.4	16.9	23.1	29.9	34.4	36.1	35.2	31	25.2	18	13.6	24

Agroforestry

Agronomy and Forest try Agroforestry called. T . undulate can plant plant is suitable for South Agroforestry areas.

Economic value

T . undulate Species A Very Full Value in Between Species Of Economic For Wood With Value And Very With Quality And Properties of wood The Plant Appropriate For Engraving And Embossing Work, Furnishings House And Furniture Game The Is (But, 1382 Bhau , (2007

And brain Wood It Have Lapachvl The Is And Have Property Antifungal And Against Termite The (The 2006 and (Tewari & Singh And . , 2009 Kumar et .

Medicinal properties

M. Of And Collaborators (1389) Part Of Skin Middle That Have Material A Slimy Is For Treatment Syphilis And Eczema Use The Be Were extracted. H uman (2007) Existence Acid Lnvyyk, Acid Avrsyyk And Acid Btvlvnyk At Leaf It Combination If they are strong Stkhraj. Environment and Snzadh Collaborators 1389 And 2008AZT Report By That Derived Acid Lnvyyk And Acid Btvlynyk 24 In leaf Load Active More Of pharmaceutical Effective At Treatment Disease AIDS HIV Use The Be. Soil conservation and erosion Due to extensive vegetation cover pomegranate One of Satan Of Species Of Very With Value Is That Role Very Important The For Protection Of Resources Natural And Also For Protection Of Soils Of compacted At Land Dry Is And Source The main And Important Timber At Between Other species Of Aboriginal Areas Desert Hot The Is . Wood It Very strong, Hard And Hardy The Is And For Firewood And Coal Very Appropriate Is . Tripathi & Jalmini, 2002.

Associated species

The plants are growing pomegranates devil is in the table4.

Table4. The plants are growing pomegranates devil is in the following table:

Persian name	Scientific name	Family Name
Next	*Ziziphus spina christi*	*Rhamnaceae*
Tamarisk	*Tamarix spp*	*Tamaricaceae*
Shrub species	*Astragalus spp*	*Fabaceae*

Pests and diseases

Major Pests That On On T.undulata View By Is And Effects Destructive On It With Have Are Of : Butterfly Flower Eater , Ant Formicidae Butterfly On Gkhvar disease Cytospora spp Wick Orange Ceptoria spp And Chow The Bkhvarh Buprestidae Are included.

Importance Recognition Species Of Aboriginal

Species Of Aboriginal At Comparison With Species Of Non- Native, Problem Diseases And Serious pests No And Or At least Vehicle Diseases And Pests New Not . Entry Diseases And New pests At A Region Not Only Flora Region The Threat Will Be But No problems Number For Products Garden And Agronomic The Will Be At The At If the Primary Species Of Aboriginal To Rarely With And Injury Will Was And Of There That Species Of Aboriginal Compatible Region The Are So Of Spent Be Flashpoints Settlement Primary Plan Of Plant Work With Species Of Aboriginal With Ambiguity And Risk Not encountered But Future So Project Apply Guaranteed M. Ygrdd . Of There That Species The Imported Because Lack Adjustment With Conditions Environmental Region With Efficiency Up Not Are The identification Species The Native Direction Increase Efficiency Growth Of Importance Special A Have . (Is (Najafi 1374 Many Of Project Of Forest Work To Because Incompatibility Species Of Imported With climate Specific Same Areas, To Because Pest Built Or Heat And Cold Of Between The The loss Financial The At On Is . Management And Interest Degree Species Of Aboriginal Easier Azgvnh Of Exotic Is . Problem Competition And To Risk Fall Flora Region And Composition change It To By Species Of Non- Aboriginal The Always Be Fashion View The The And It needs Ecological Species Of Aboriginal The Easy More The Power Evaluation Be . At If Study Request Of Ecological Species Of Non- Aboriginal And Of Power Its production And At Conditions Environmental , The Problem To View The Be Because Species Of Plant The Usual To Alone Reagent Conditions Environmental Not Is But Society Plant That It Conditions The Show M. Ydhd To To Phrase Other, Set Every kind of plant An area Conditions Ecological The Specified The To .

Role Trees And Shrub And At Areas Dry

At Land Dry Without Existence Trees And Shrub , The Nurture Trap Non- Been possible Is As Grasses Grassland And Other Species Of Forage O, When That Layer Surface Soil Moisture Own The Of Hand The They Of Between The Process And Or At least To sleep Gone And Growth Stop By And State Woody To Own The Are But Tree Roots Of Moisture Deep Earth Use Have And More Growth The To . The Plants Title Fixation

Manufacturer Soil Been And Root Davani They Soil The Deep Made And properties Physical Soil The Improvement The Will .

CONCLUSION

The Iran Of Sentence Countries Is That On On Belt Dry Korea The earth By Is . So More Areas Iran Component Areas Dry And Semi- Dry And Southern It Sometimes Component Areas Learn Dry As The Be . And The Position Specific geographical And Existence String Height Alborz At North And Zagros At West And Cloudy Heights Areas Central It Cause Diversity Water And Air And Climatic By And The The factors Eruption Of Varied At Instead of Instead of Country And The Flora Rich With More Of 8000 Species At The Land By So Iran Of View Diversity Species A One Of Points Unique World That Unfortunately Because Lack Knowledge Interest Surveyors And Interest Degree Inappropriate and Lack Management Principled Of Relationship Between Species Of At Ecosystem Of Particularly natural Forest And Pasture, Cover Plant At Most Points The With Injury Jdyshdh By To So That Very Of Species Of Plant Of Field Resources Natural Elimination Or At Now Extinction And Destruction Is. Recognition The exact Ecosystem Of Natural And Relationship Between Factors Live Non Its alive And Fragility Vhsasyt It And At The Iran Direction The Management Correct and Consciously At Interest Degree And Each Species Income And Possession At The Ecosystem And Of essential The most Matters Is That Must Considered Leaders And Hand Involved Karan And interest Surveyors Of Resources Natural (Cover Plant Water, Soil And , ...) The Be And On Research centers Is That With Production Science And Knowledge And Promotion And Transmission It To Section Run, Leaders Executive In The In Empowerment Formation . Up to With Weapon Science And Knowledge Also of interest Degree Scientific Vhsab By Reserves Genetic Plant Our The That At The treasure A Great And With Value Of Thousands Species Plant Protection is And Maintenance To Paryab And Et al (1382).

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