

RESEARCH ARTICLE

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GENETIC DIVERSITY OF SUBTROPICAL SPECIES IN WEST NORTH REGION

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Abstract

Subtropical tree is considered to be excellent tree for growing in subtropical condition. Subtropical tree has been used traditionally in our country. Fruits are from cultivated trees, semi – domesticated, wild. In the region, it occurs in general fig tree, pomegranate tree, date tree, and last years are cultivated actinidia deliciosa. In this regions founded together cultivated species and wild species, for example in the same place founded wild pomegranate and cultivated pomegranate, cultivated fig and wild fig, cultivated date tree and wild date tree, and actinidia cultivated with two female varieties and one male varieties, planting according one scheme, one male actinidia varieties and two actinidia varieties. Those species are very popular in local market. Destinations are for consumer preference, preferred use, and market. There is great variability among pomegranate genotypes, fig genotypes, date tree genotypes in terms of fruit characters: size, skin, color, aril number, aril color hardness of seed, juice, content and it acidity, sweetness, etc for at all species subtropical tree, according descriptor IPGRI, when for 4 fig varieties are characterization with molecular analyses with RAPD.

Keywords: *in situ, on farm, variety, ecotype, genotype*

1. Introduction

Arial Adriatic – Jonian

Space includes the western coastal lowland from Koplik to Saranda, while inside, extended to the borders of the Mediterranean climate, hilly area. Range from North to south and from west to the east, makes the action of factors formers climatic and geographic scope, to distinguish three zones: Westnorth region: Lezha,. Shkodra, Big Mountain (location with Shkodra) with characteristic: Minimum temperature – 5 @ C to – 7 @C, 30 WITH ICE, temperature vegetative around 10 @ C, April – November, rain intensity 1500 m – 1800 m. In this growing fig, pomegranate, date tree and actinidia deliciosa in the last year, jujube tree, etc. The fig tree has been and continue to be associated of all generation, the family garden it is everywhere from the formers block of fig trees. The varieties selected for high quality exported trade is more varieties. Fig are a highly nutritious food that contain iron, calcium and potassium. They have more fibers than most other fruits, including both soluble and insoluble. Fig is considered as one of the oldest fruit trees in the Mediterranean region. The genus Pomegranate consist of two species , Punica

granatum and Punica Protopuntica. Pomegranate is one of the oldest fruits know to morekind. It is important for its taste nutritional and medicinal value. The origine of pomegranate tree is Central Asia from it has spread to the rest of the world. This tree is present in the westnorth region in Albania, with two species. Persimmon is generally to the Oriental Persimmon (Diospyrus kaki thumb) presumably originated in China, being Diospyrus lotus L and Diospyrus virginiana L, to related species used as rootstock in many areas. Is, a polygamous dioic species, produces fruit by partenocarpy as after pollination, the fruit has astringent as nonastrigent depently on the tannin soluability content at harvest time. The persimmon is hardy species, the trends of market is positive and the world production reached are 3.8 million ton.

Actinidia deliciosa

Actinidia is plant of family Actinidiaceae, genus Actinidia Including 36 kind, This fruit is “know “ with other name“ kivi“. Is dioic plant, heterozigot, fruit is bake, more taste, and reached with vitamin c. Is plant of subtropical tree ,

preferred temperature 7 °C for 900 – 1200 hour. When temperature is low until – 15 °C. Has long vegetation, go out from relative quite, and finished late vegetation plant, like long summer.,

2. Material and Methods

In situ, on farm surveys were performed in 2013, 2014, 2015 with the aim of collecting different accession of cultivated, wild, ½ wild of subtropical tree throughout westnorth region. The explored were concentrated in three zones : characterized from Mediterranean climate, hot summer, more rainfall and more water resource, to wet from sea, lake, and two river. The number of accessions species, ecotypes, forms, genotypes sampled per stand ranged from one to five depending on stand size and habitat diversity. For each species collecting 4 accessions for fig, 10

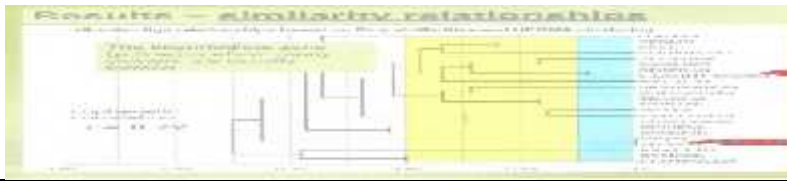
3. Results and Discussion

In the westnorth region including three zones (Lezha, Shkodra, Malsi e madhe south) characterization from genetic diversity of subtropical tree, such is fig germplasm, pomegranate germplasm, permission germplasm, jujube germplasm and kivi. In there region founded cultivated variety, forms cultivated and wild or ½ wild pomegranate accession, permission. Mainly varieties of fig germplasm are: Tivarash, Patllixhan, Bajun and Melacak. For each accession, a descriptive list was established with 15 morphological traits related fruit characteristics and leaves characteristics. There accession has diversity genetic in forms leaves, in color fruit, in maturity fruit period, in internal color fruit, in cavity form, in dimension ostiol, number seed, taste fruit, neck of fruit, destination of patllixhan accession is for fresh consum when bajun accession is for dry, melacak accession is for fresh consum and dry, tivarash accession is for fresh and for dry, in this region dominate

autumn to late and early spring. From flowering to maturity require 160 – 180 days. Don't like zones with more wind and more rain during flowerings periods.

accessions for pomegranate, 3 accessions for date tree, 3 accessions for kivi, 2 accessions for jujube tree. Tree were chosen depending on their age (minimum 7- 10 years) Samples of 10 fruit were collected on one of each accession. Mainly trait were studied according IPGRI descriptor for each species, according fig descriptor, according pomegranate descriptor, permission descriptor, jujube descriptor, kivi descriptor and according to EMFTSD descriptor, fruit size, fruit taste, maturity dates, fruit weight, ostiol size, skin colour, ect for each species.

destination for fresh consum and dry. Maturity dates were determinate for comparison different ecogeographic conditions. Four accessions were considered mid season maturity, same time maturity. Other traits is same is productivity which is unifier for four accessions, different traits founded in color fruit, size fruit, color internal fruit, form fruit, taste fruit, length neck amount seed, and forms leaves, type lives, no of lobes, those trait exposed clearly distinguished mainly differently genetic diversity. Forms fruit varying pyriform turbiniform, cucurbitiform. Skin cracks is present only Tivarash accession. Internal color varied between light brown to red and dark red, each accession has distance for color internal fruit. Color fruit varied white green to copper, brown violet, violet, in this trait have distance but and similar. Patllixhan accession founded and other country such is Turkey, Italy, same name, and same observe traits, for more analyses will continue other study in the



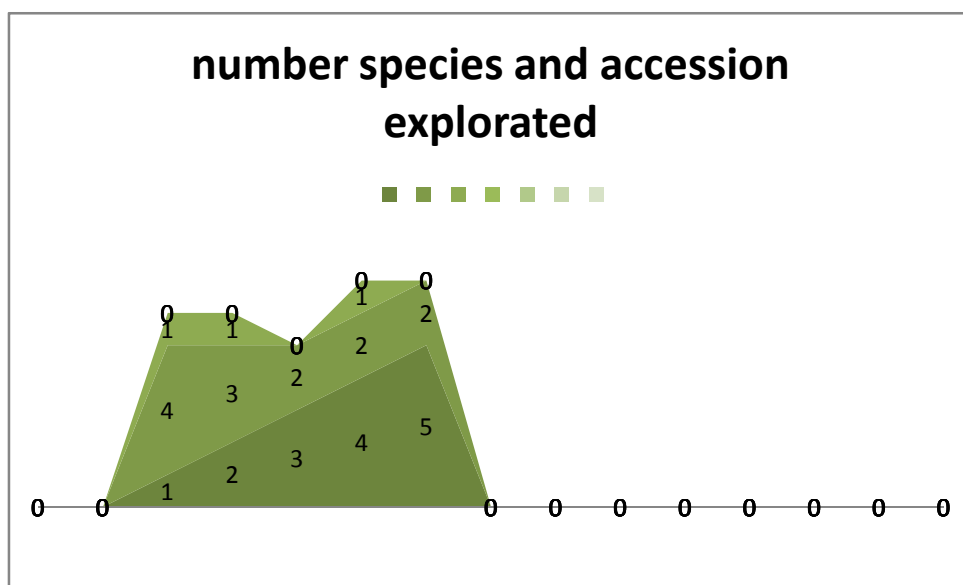
For exposed and studying relationships accession variability within each group, is dendrogram based on the characterization traits where determination different and similar traits of accession fig which is realized in 2006 according molecular study for this accession figs and this region.

Pomegranate is mainly fruit in this region, founded cultivated such is Tivarash and Devedishe and other forms, wild and $\frac{1}{2}$ wild and introduction pomegranate. In this study were explored and characterization there genetic resource pomegranate for westnorth region. Is very reach in ecotypes, genotypes and forms pomegranate, with different use for fresh consum, for juice, and for ecosystem of region because is region wet from more water. For each accession a descriptive list was established with 10 morphological traits related fruit. Diversity between caccessions distinguish in color fruit varied yellow to green to pink, pink, pink to red,

red, dark red. Color seed varied white, pink, red, dark red. Weight of fruit depent from variety or forms, range from 150 gr, 200 gr, 250 gr, 300 gr, 350 gr, 400 gr, 50 gr, 600 gr to 800 gr. Number of arils varied from 150 -300 – 450 arils. Taste varied sweet, more sweet, few sweet, sweet with aromatic, maturity period is in October – November, similar trait. Dimension of fruit is link trait with weight, arils amount is link trait with weight of fruit. Wild pomegranate has small size, green to red color, round forms, weight of fruit 26.7 gr, 34.5 gr, 30 gr, 18.2 gr, is shrub, color of seed is pink, taste is tartness.

Persimmon germplasm of west north founded on farm and garden family, cultivated and wild. Tree is hight, over 15, 20, 30 age. Size of fruit is metium to big, color fruit is orange, maturity period is last November, % of sugar 15.5 – 15.5. When over maturity % of sugar increase and wet fruit.



Table no 1: Number of species explored og northsouth region (fig, pomegranate, kakii, jujube, kivi)

5. Conclusions

In this study explored and value on farm kivi fruit, fruit which cultivation last year. Male variety and female variety, diversity genetic in this fruit is in form of leaves, in productivity. Application planting according scheme; one row with female plant and other row alternative female plant and male plant, for 7 plant female one plant must be male plant. Cultivar Hawyard,

medium to big fruit, form of fruit is eliphtic to ovale, dimension fruit 5 cm with 4 cm (length to width), sink fruit is brown color, internal fruit is green color, amount seed is medium, more liquid, weight of fruit 40 gr – 70 gr, % of sugar 12-14 %.

6. References

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