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Establishment of Truffiere, Management and Harvest

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Abstract

Truffle has privileged place in the table with a unique aroma and smell, each day corresponds to the reduction of natural areas, due to demand is increasing, their prices have increased. The most ideal area for installation and management of truffiere is the area where naturally grown. In this study for an optimal harvest, must have sufficient maturity.
Keywords: Truffle, truffiere, truffle plantations

Trüf Bahçe Kurulumu, Yönetimi ve Hasatı

Özet

Benzersiz aroma ve kokusuyla sofralarda ayrıcalıklı yeri olan trüf mantarı, doğal alanların her geçen gün azalmasına karşılık, talebinin artmasından dolayı fiyatı da giderek artmaktadır. Trüf bahçe kurulumu ve yönetimi için gerekli en ideal alan, trüfün doğal olarak yetiştiği alandır. Çalışmada optimum seviyede hasat için, trüf mantarlarının yeterli olgunluğa sahip olması gerekmektedir.
Anahtar Kelimeler: Trüf, , trüf bahçesi, trüf plantasyonu

1 Introduction

Hypogeous (underground) fungi known as truffles have been living in soil as depending on the roots of trees such as *Quercus* spp., *Pinus* spp., and shrubs. Truffles have hyphae which contribute to the development of plant roots with ectomycorrhizal associations [1].

Truffles increase the effeciency use of water and nutrient uptake of plants by their hyphal structure. Truffles are a sign of a healty forest, protect against erosion by improving the soil structure. Truffles are food source of wild animals, plays an important role in the ecosystem and are an important food source for people with their unique aroma [1, 2].

Prices of truffles, living the golden age of in 19th century, increased in the last century due to the decrease of amount collected from nature reserves and continuously increasing demand. Some commercial truffles (*Tuber magnatum* Picco, *Tuber melanosporum* Vittad, *Tuber aestivum* Vittad and *Tuber borchii* Vittad) grow naturally in a narrow space. This has encouraged the culture test for hundreds of years and are provided to a certain successful degree [2].

Nowadays, the culture of truffles are possible with the correct method of vaccination and to establish truffle orchards in appropriate places. In the nursery, there is a need to mycorrhizae to ensure that well developed seedlings to survive and adapt to soil. After the 18th century in France and in Italy has increased planting of an oak and hazelnut that are ectomycorrhizal relations with truffles [3]. The first time, ın terms that mean truffles gardens have been named “truffieres” in France and “tartufaie" in Italy. In continuation these truffles areas started project. So far in our country, especially in South West Anatolia including Aydın, Denizli, Muğla, Antalya and Burdur provinces were found very commonly and 12 different *Tuber* species which have economic importance have been identified [4, 5, 6, 7,8].

2 Methods

The primarily ideal place for the truffiere is the land where species of truffle grows naturally. Natural habitat is the most appropriate environment for the species of truffle in terms of soil structure, land and climate characteristics and dominant plant species. Secondly, Sloping lands are preferred to the planting.

The soil should be is pre-aged (previously empty or farming, such as vineyards) and has a good drainage for the best place for truffliere because of the danger of being a competitors ectomycorhizal fungus. In this study, adverse ectomycorrhizal fungi are intended to remain during a minimum level of development. As well as it is intended to be protected from other diseases and pests. Soil aeration is applied until a 5-10 cm depth by tractor. In terms of number of saplings and planting density of 280 trees according to a study conducted in Spain, 6 × 6 m intervals truffle exposed to shade truffliere has been relatively successfully [9,10]. Accordingly, there is a need for irrigation water each of 800 litres per acre planted 500 saplings in the truffiere. Sprinkler irrigation is provided to spread to large areas of the system.

Truffle fence construction and wind to prevent damages against truffle grafted seedlings in the garden should be created in the wall. In addition, half a meter in diameter around the seedlings to prevent accumulation of water at the base of trees and rainfall should be created with a circle 2 cm in height. Soil

around the seedlings shouldn't very compacted. Considering to increase the humidity level in soil shade; it should be ensured cool areas to increase the distance between the saplings will be planted in the garden truffle however in warmer regions it should be planted to create shade more often. It must mature enough to harvest truffles. Pruning should be done to come across a period of truffle harvest.

Figure 1. Prepared 4 hectars for truffiere in Muğla Sıtkı Koçman University campus.

Figure 2. A truffiere with seedlings planted at 6 x 6 m intervals in Yatağan district of Muğla (April, 2013).

Figure 3. Using a plastic for soil moisture conservation and prevention of grazing in Yatağan district of Muğla (May, 2013).

Figure 4. A truffiere of saplings completed the age of 1 in Yatağan district of Muğla [11].

3 Conclusion

Development is provided in the truffiere by planting truffle grafted seedlings which have ectomycorrhizal association. Thus, the highest amount truffles for a period of 50 years is harvested [12]. Also known as winter truffle *Tuber melanosporum* Vittad. and known as summer truffle *Tuber aestivum* Vittad.'s formation will be on the ground around the tree with brule gives a glimpse. Grafted seedlings planted in the ground will start to give the first harvest after 4 years.

According to the book, written by Francois picart in France in the 1970s, the booklet Truffle: the Black Diamond (1980): After 7 years of planting truffle orchards will be purchased with truffles between 56 grams to 1.8 kg per tree . When the obtained data one hectare planted 400 saplings were considered and assuming that 80% of truffle trees produce 18 kg to 580 kg of the product it has made it possible can be taken.

This study shows that we have the best conditions for the cultivation of seedlings with the growing natural of the truffle in our country. Truffle studies continue in Truffle Aplication and Research Centre of Muğla Sıtkı Koçman University.

Nowadays, known as the lungs of the world, forest areas are rapidly eroded, for a truffles diversity. It is possible to say that to establish truffle plantations, which require the most patience in the world but perhaps the most useful study.

4 References

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