

# Truffles in Croatia: Review of Legal Regulation

Mushrooms & Truffles Science to Practice Event

27. 06. 2019., Jastrebarsko

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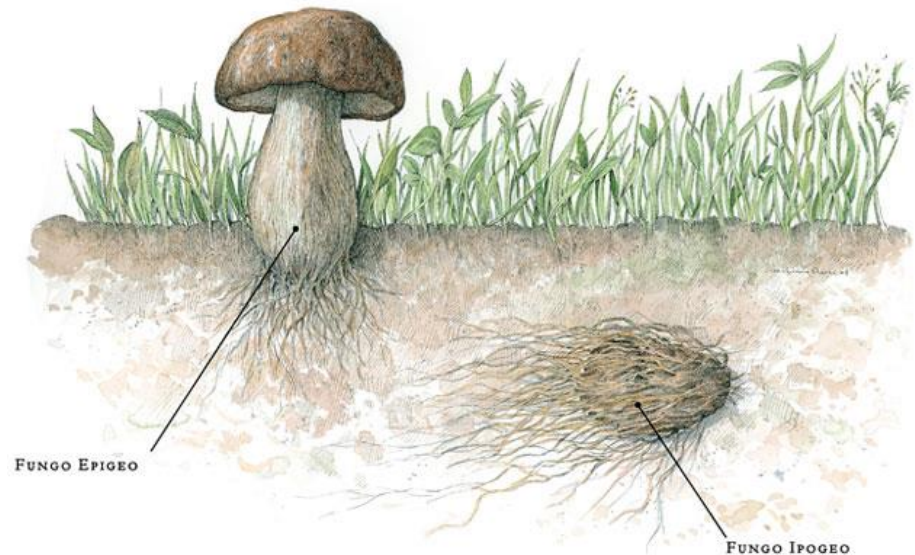


This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 774632

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# Introduction

- Truffles are culinary diamond and are considered as delicacy
- Most expensive fungi in the world
- Underground (hypogeous) fungi difficult to find
- They live in symbiosis (mycorrhizae) with trees and shrubs



# Historical background and current status

- The first truffles were found in Istria region in 1929 by Carlo Testoni & Pietro Giovannelli
- Organized collecting starts in 1931
- Baroness Barbara von Hütterott & Massimo Sella with associates (Testoni & Giovannelli) established the company „Azienda del Tartufo – Sella, Hütterott e C. Levade” in 1933



- After 1945 truffles were mainly traded and marketed by state forest companies until 1990-es
- Black market development during 1980-es
- Smuggling to nearby Italy
- Operation „Truffle” in Asti-Alba / Piedmont / Italy (2011) – commercial frauds, only 10% of truffles from Piedmont, 15% from Croatia
- Illegal activity, kept in secret, not recorded in statistics
- In 2002, Regulation on Fungi Protection was relished in official gazette (Narodne novine 34/02), the most important document for truffle collection, trade and protection

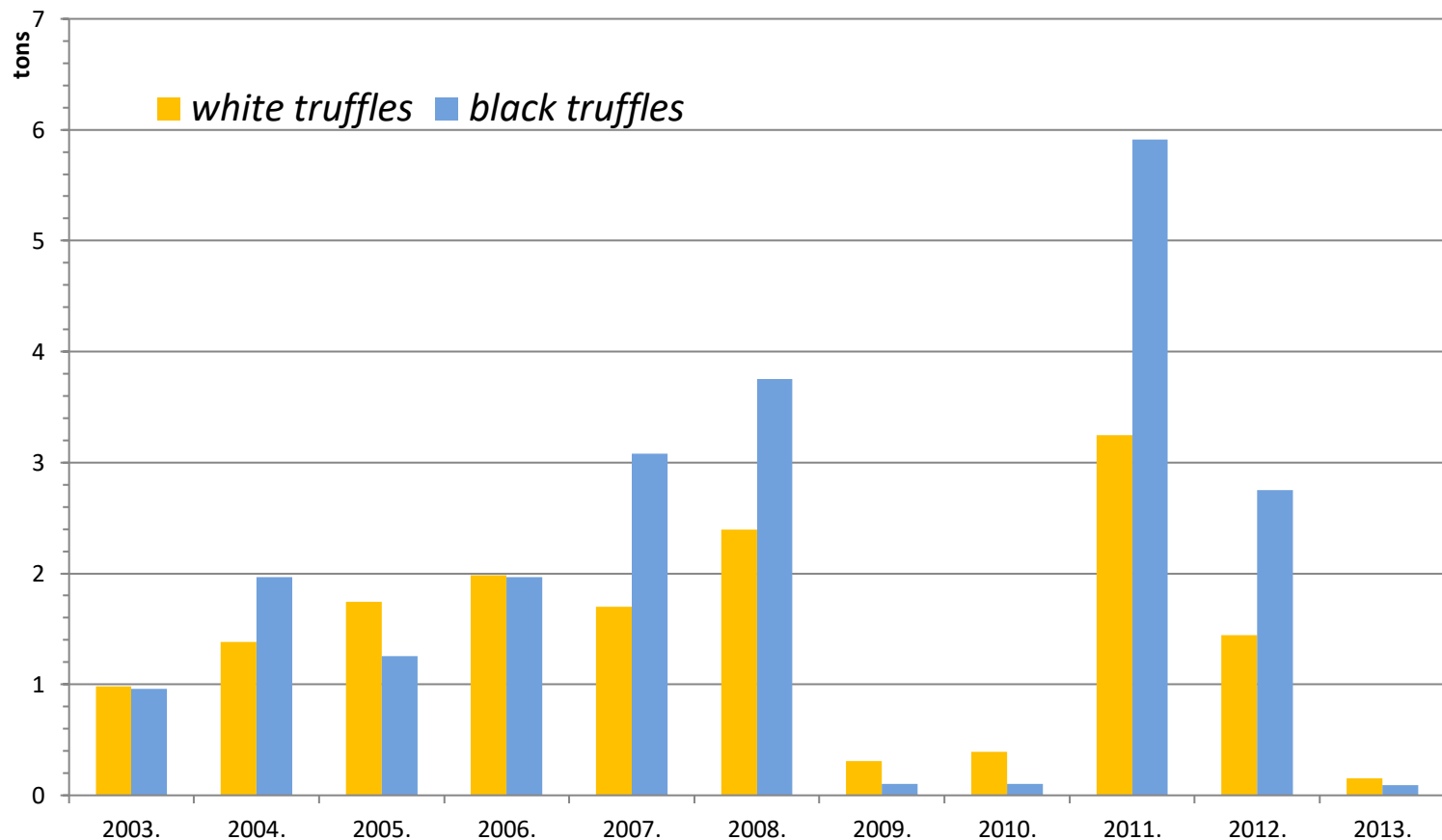


- New regulation issued in November 2017 (NN 114/17)
- M&T incorporated with all other organisms (plants, frogs, snails...)
- Official body is Ministry of environmental protection and energetics



- Total Croatian truffle production is collected from natural habitats
- *T. magnatum* habitats are small and patchy
- River valleys, along side of streams and creeks
- *T. aestivum* is present in most parts of Croatia
- No data on *T. melanosporum*
- No „truffle management”
- Ecological problems (floods, soil pollution, tree dieback, diseases and pests, unfavorable water management)
- Climate change (extreme draughts or rainfalls)
- Lack of research and scientific data
- Wild boar issue

# Commercial truffle species collected in Croatia from 2003-2013 based on commercial pickers annual reports (in t/year)



# Truffle regulation in Croatia

- **Old Regulation on Fungi Protection** ([NN 115/98](#), [NN 34/02](#))
  - status of truffle pickers, species, dimensions, quantities
  - collecting season
  - number and status of dogs for truffle collection
  - commercial truffle species
  - methods of collecting
  - tools for collecting...





- Commercial truffle species in Croatia (past):

- *Tuber asa,*
- *T. borchii,*
- *T. maculatum*
- *T. magnatum*
- *Tuber aestivum,*
- *T. brumale,*
- *T. hiemalbum,*
- *T. macrosporum,*
- *T. malenconii,*
- *T. melanosporum,*
- *T. mesentericum*
- *T. aestivum* var. *uncinatum*





# Current (&past) definitions and problems:

- Commercial truffle pickers must pass an exam and possess an ID from the Ministry
- All collected quantities by commercial pickers had to be sold to companies with permission for trade issued by the Ministry
- Trade companies are limited by the quotations
- All traded quantities must be reported to Ministry on yearly basis



- The season was limited to 15 Sep-31 Jan
- Collecting time 0-24 h during the season
- Collecting was permitted with 1 trained dog and 1 in the training process
- Daily quantity is limited to 0,5 kg
- Sporocarps smaller than 15 mm must be returned to soil (*Tuber magnatum* only)



- New regulation issued in November 2017 (NN 114/17)
- Step forward but still needs improvements
  - Individual seasons for all commercial truffle species
- Updated species and seasons for truffle collecting:
  - *Tuber magnatum* - **od 1. rujna do 31. prosinca,**
  - *Tuber borchii* - **od 1. siječnja do 31. ožujka,**
  - *Tuber melanosporum* - **od 1. studenog do 31. ožujka,**
  - *Tuber aestivum* - **od 1. lipnja do 31. srpnja i od 1. do 30. rujna**
  - *Tuber aestivum* var. *uncinatum* - **od 1. listopada do 31. siječnja,**
  - *Tuber brumale* - **od 1. prosinca do 31. ožujka,**
  - *Tuber mesentericum* - **od 1. rujna do 31. siječnja,**
  - *Tuber macrosporum* - **od 1. rujna do 31. prosinca**



- Forest 'working time' 6-22 h
- Truffle hunting with 2 dogs
- M&T collectors can sell directly to final consumers
- Education for commercial pickers revoked
- 'Expert background', possible review every 3 years





- Croatian forests L.t.d. NWFPs Regulation on use of NWFPs and pricelist (2014 & 2018)
- Collectors must buy permits to harvest in state forests
- Low rate of control because of work rationalization (forest keepers don't work after 15:00 h)!!!



# Conclusions

- Legal Regulation in Croatia is/was more an obstacle than it really regulates the market and resource protection
- Legal Regulation should be:
  - Simple
  - Based on scientific knowledge
  - Feasible
- Important to define and regulate production in plantations and planting material





**Thank you for your attention!**

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