

North American Mushroom Conference Vancouver - 2013

Mushrooms worldwide
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Mushrooms - Composting - Agro projects

Different species

- White button mushrooms.
- Exotic mushrooms
- Medicinal mushrooms
- Magic mushrooms



Studied mushrooms



Agaricus blazei
(=brasiliensis)



Agaricus bisporus



Coprinus comatus



Grifola frondosa
("Maitake")



Sung, Jae-Mo
Cordyceps militaris



Lentinus edodes
("Shiitake")



Pleurotus pulmonarius



Phellinus linteus



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Magic mushrooms



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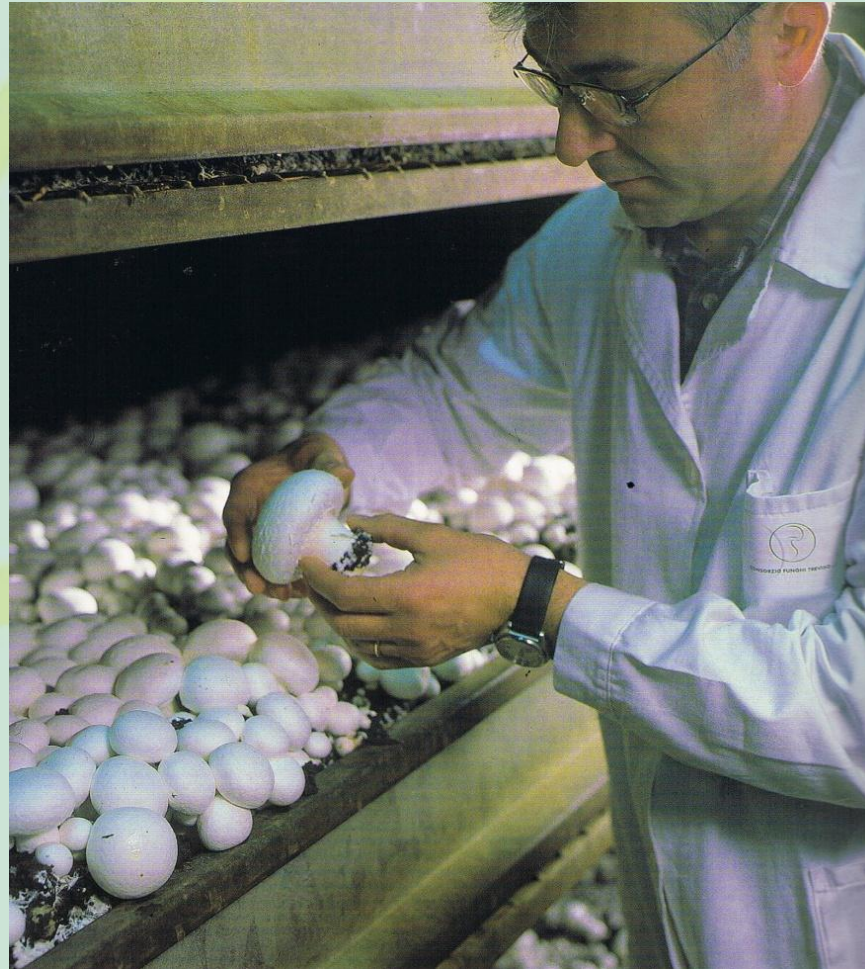
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Exotic mushrooms



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White button mushroom



Mushroommarket worldwide

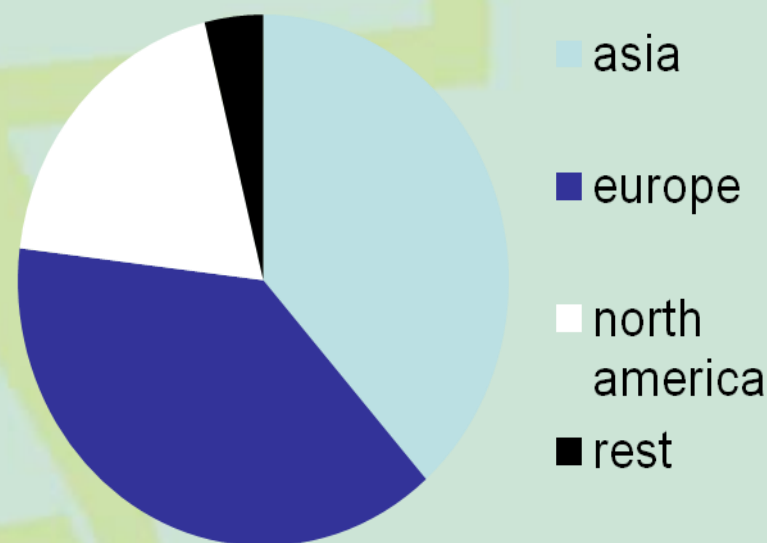
Production

- Europe 1.000.000 mt.
- North America 500.000 mt.
- Asia 1.000.000 mt.
- South America 5.000 mt.
- Africa 10.000 mt.
- Australia 30.000 mt.

50% cannery and preserved

50% fresh market

market



Fresh Market

Europe	700.000 MT
USA	300.000 MT
Asia	100.000 MT
Australia	30.000 MT
Rest	100.000 MT



Cannery and IQF market



Europe	500.000 MT
USA	100.000 MT
Asia	250.000 MT



EUROPE



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One Europe

- 30 countries
- 15 languages
- 10 currency
- 2000 growers
- 4 growingsystems ,shelf etc
- 5 different growinghouses
- Phase 1,2,3,4 compost



Shelving with or without automatic picking lorrie



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Picking line for trays



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Bag growing



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Mushroom growing in a cave



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Europe

- Scandinavia no production
- Ireland and UK, Monaghan and Walsh.
- Germany. 4 farms 60 000 MT
- Holland + Belgium, 6 big traders; 100 growers
- France, Bonduelle, trayfarm for cannery
- Spain, Champinter and Ayecue
- Italy, Consortio di Treviso
- Greece, had 5 farms, only one left



Europe

- Currency difference Zloty-euro 3.4 or 4.8
- Prices raw materials, straw, chicken litter
- Picking cost. Poland construction.
- holiday work
- 10 cents in Russia
- 50 cents in Holland
- Price: \$1.60 per kg fresh market
- \$0.80 per kg canned



Netherlands strength

- Strong in cannery market
- 4 week cycle .2.000 MT / worker / year
- No chemicals and pesticides
- 1000 farms to 100 same production.
- All phase 3 compost. Good casing soil
- Good supplement. Good climate control
- Cheap compost from horse manure
- GMO granted by EU for cooperatives



Netherlands weakness

- Already 20 years weak fresh market
- Since one Europe,
- Bad image odour, shit, workers, nicotine
- Market share supermarkets > 75 %
- High labour cost : 20 dollar per hour
- Fair Produce label, Poland construction.
- Mushrooms are nowhere in the world picked by autochtone population



Italy

- 100 years old
- Sartor famely
- Franciscutti
- Funghi Treviso
- No import
- New farms.
- Compost from Holland



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East Europe

- Poland expansion: 15 compost yards.
- 1000 growers: 275.000 MT
- Russia: no compost yard.
- Romenia: no compost yard only one big grower.
- Hungary: Bio-fungi , Korona Mushroom
- Ukraine is fast growing
- Rest coming up



Packing station Poland



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Composting Plant Poland



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Farm in Poland



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Mushrooms in Russia

- Every city had his own farm in the past.
- Import 120.000 MT preserved product.
- Import 60.000 MT fresh mushrooms.
- Own production very small . Risky !!
- New farm for 20.000 MT
- Many farms for oyster mushrooms.
- Largest compost yard stops production



Mushroom farm in Moscow



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Farm in Russia



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China mushroom farms



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Mushrooms in salt



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Emptying a pool



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New mushroom farm in China



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New Mushroom project in China



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Mushroom farm India



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Packed without cooling



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Reefer containers for compost transport in Malaysia



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Mushrooms in supermarket Asia



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Mushroom farm Chile



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Mushroom growing in Colombia



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Australia

- Very good marketing system
- % per kg of spawn. Government rule
- Production 30.000 MT.
- Mushroom Exchange 60% M-share
- Tolson family 20% M-share
- Rest 20 %M-share
- Price: 4 to 5 dollar per kg or \$10 per lb



Mix of mushrooms in Asia



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Ricestraw mushroom



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Enoki



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Automatic packing line



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Vietnam



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Exotic mushrooms in Europe



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Sheds in Italy



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Agrocybe



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Oyster mushrooms in Italy



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A few "medicinal"



Agaricus blazei
(= *brasiliensis*)



Ganoderma lucidum



Coprinus comatus



Grifola frondosa
("Maitake")



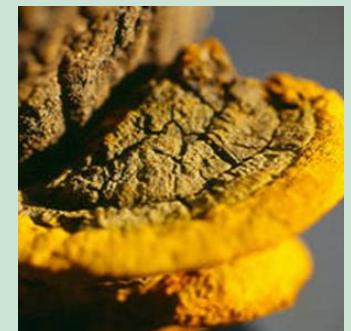
Cordyceps
militaris



Lentinus edodes
("Shiitake")



Trametes versicolor



Phellinus linteus



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Perception: medicine or drug



African, 9000 yr BC



Hellenic, 1500-500 yr BC



Maya, 1500-500 yr BC



Aztec, 16th century



Netherlands, 20th century



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Medicinal mushrooms



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Blazei Murill



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Market changes

- * Hightech farms, all year around growing
- * More money for fresh mushrooms.
- * Less canned mushrooms
- * Better quality through better understanding.
- * Higher prices in the future.
- * Supermarkets have to be more open to the growers.
- * No new farms are build



New innovations

- Automatic trayfarms: To slow handling
- One layersystem : not the good climate
- Shelf system with one layersystem.
- Shelf system with automatic pickinglorry
- Whole day picking 15% more yield.
- Bed cooling with higher supplementation
- Automatic watering



Solarpanels on the farm



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Automatic watering



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Bed cooling to grow 500 kg per MT Ph3 compost



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Mushrooms cooked in own juice



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Mushrooms ready to pick



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Summary

- Mushrooms are a superfood.
- Low in fat and energy, compare with meat in weight
- Nothing is proven on humans.
- Keep telling how healthy it is and try to prove it in the meantime.





OUR GOAL !



QUESTIONS?



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