

# Ethnobotany. Lecture 6

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# Outline

- 1 Main food source plants: grains
  - “European” grains
  - Rice



# Presentations



# Main food source plants: grains

“European” grains



# Summary: "European" grains

- Wheats (*Triticum*) are ancient cultivated plants, originated in West Asia
- Tetraploid and hexaploid wheats are intergeneric hybrids
- **Barley** is an ancient culture well adapted to agriculture in mountain regions
- **Rye** and **common oat** were originated from weeds



# Main food source plants: grains Rice



# Rice (*Oryza sativa*)

- Belong to the tribe Oryzeae
- Has panicle as an inflorescence, flowers with 6 stamens (uncommon in grasses)
- More than half of human population use rice as a main food source
- Cultivated mostly in tropics and subtropics, below 42° latitudes



# Rice features

- High calories (360 cal / 100 g), up to 10% of proteins, including lysine amino acid (!)
- White (polished) rice does not contain embryo and therefore deficient of many vitamins; beriberi disease is a deficiency of vitamin B<sub>1</sub> (thiamine) originated in richer families of Indonesia (because they were wealthy enough to buy a “better” rice)
- Rice is not used for bread, if cooked it become extremely brittle
- Yield is higher than wheat,  $\approx 6$  ton/hectare
- Rice is a coastal plant, requiring water, especially when young; seedlings are often manually planted in the soil covered with water
- Ancestrally, rice requires monsoon climate: first season is wet (rice germinates), second is dry (rice matures)





# Summary

- **Rice** is the old culture with extremely complicated agriculture but high yield



# For Further Reading



P. Stamp.

*Virtual cereal cultivar garden* [Electronic resource].

2008.

Mode of access:

<http://www.sortengarten.ethz.ch/?content=start>



A. Shipunov.

*Ethnobotany* [Electronic resource].

2011—onwards.

Mode of access:

[http://ashipunov.info/shipunov/school/biol\\_310](http://ashipunov.info/shipunov/school/biol_310)

