

# Ethnobotany

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Lecture 13

# Outline

- 1 Centers of cultivated plants origin

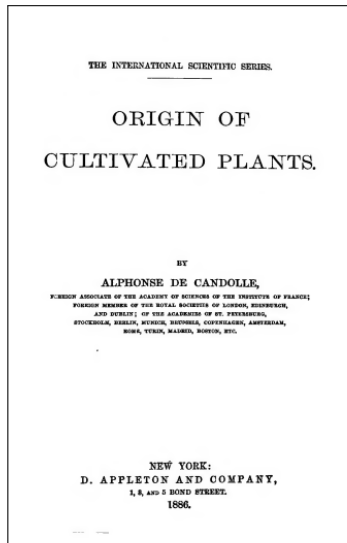
# Why knowing centers of origin is important

- Allows to trace history of civilizations alongside with history of plant cultivation
- Allows for historical discoveries
- Helps to find new landraces and wild relatives useful for selection

# Initial hypotheses: De Candolle (1882)

- Mentioned that distribution of ancient cultivated plants was very unequal
- Found three centers of plant origin: China, West Asia/Egypt and tropical Asia

# De Candolle's "Origin"



# Nikolai Vavilov work (1926)

- On the 5th International Genetics Congress, he presented his new classification of centers based on field and collection research
- Differential method: studying density of distribution on a level of varieties. Places where biggest densities were intersected become “centers candidates”
- In 1930s, he establishes “passports” of multiple territories which show ecological, economical and geographic traits

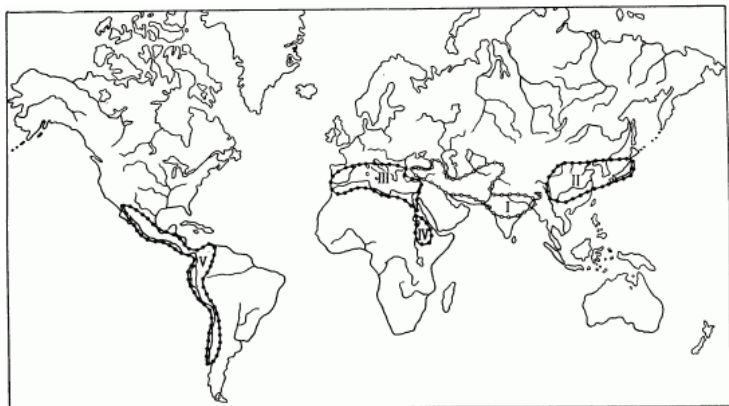
# Vavilov's centers (1926)

In 1926, he designated five centers of origin:

- 1 India
- 2 China
- 3 Mediterranean region
- 4 Ethiopia
- 5 South and Central America

Later, he added some (Central Asia) and split some of them

# Five Vavilov's centers

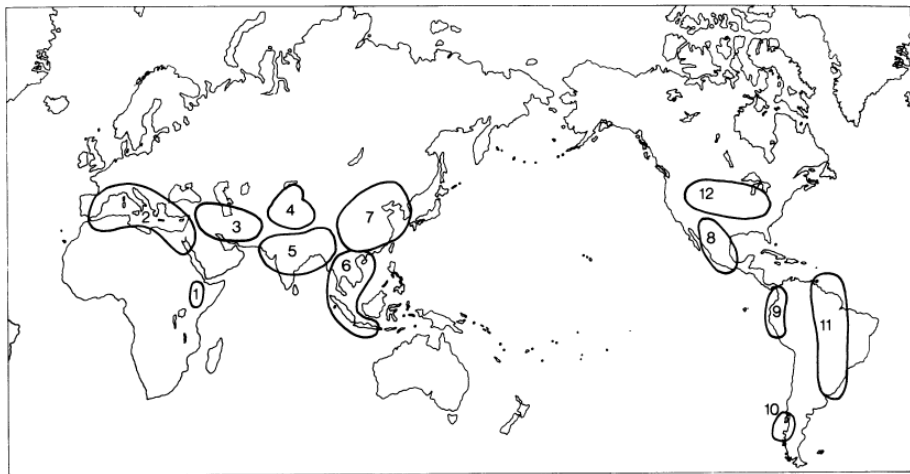




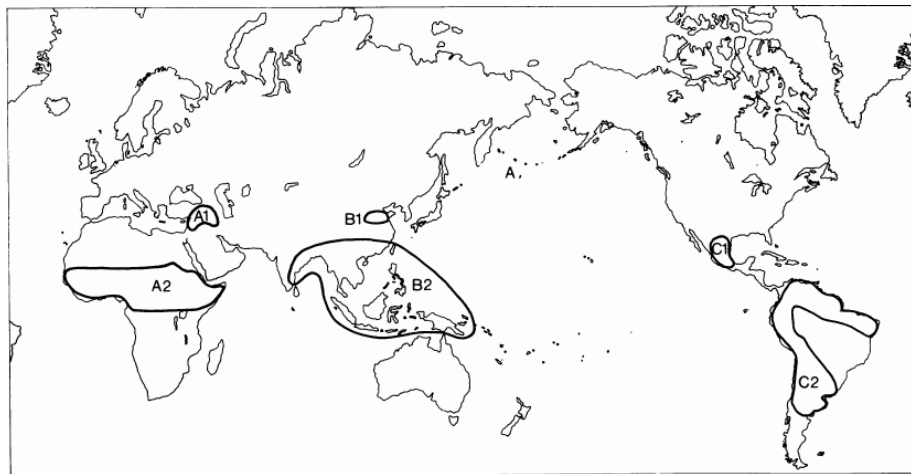
# More recent hypotheses

- Darlington (1952): several American centers, twelve centers in total
- Harlan (1971): “centers of agricultural beginnings”: only six
- Zhukovskij (1965–1982): 12 “megacenters” (regions). All Vavilov’s centers listed, plus several which do not produce substantial amounts of cultivated plants but still separate

# Darlington's centers



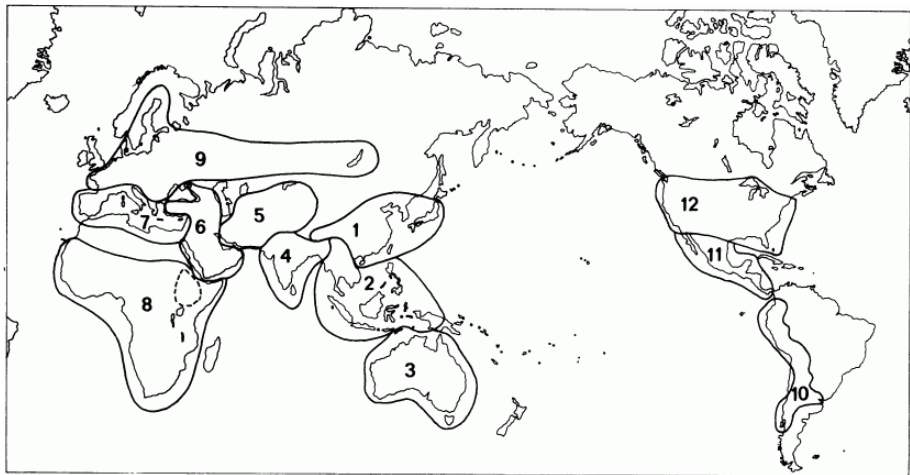
# Harlan's centers of agricultural beginnings



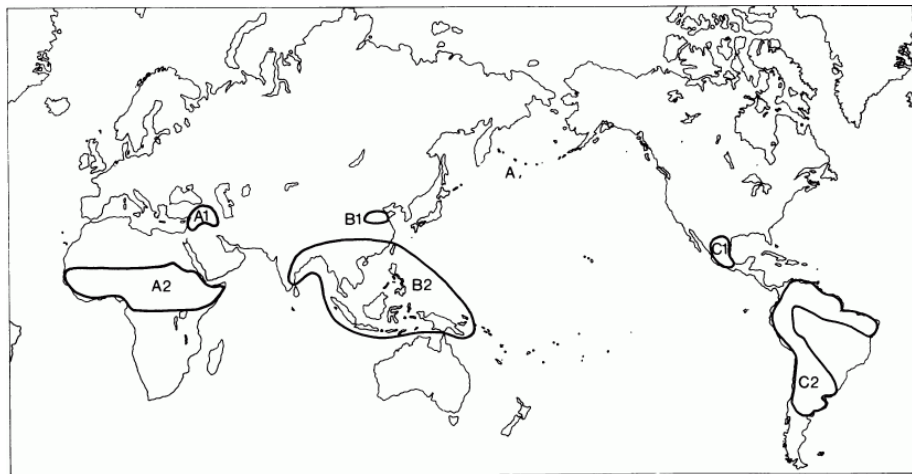
# Centers of origin from Zhukovskij

- China
- Indochina—Indonesia
- Australia—New Zealand
- India
- Central Asia
- West Asia
- Mediterranean
- Africa
- Europe—Siberia
- Central America
- Bolivia—Peru—Chile
- North America

# Zhukovskij's regions (centers)



# We will follow Harlan (1971)



# Summary

- According to Harlan (1971), there are 6 centers (regions) of initial plant cultivation

# For Further Reading



A. Shipunov.

*Ethnobotany* [Electronic resource].

2011—onwards.

Mode of access:

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



P. M. Zhukovskij.

*Cultivated plants and their wild relatives* [Electronic resource].

Commonwealth Agricultural Bureaux, 1962. Abridged translation from Russian.

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