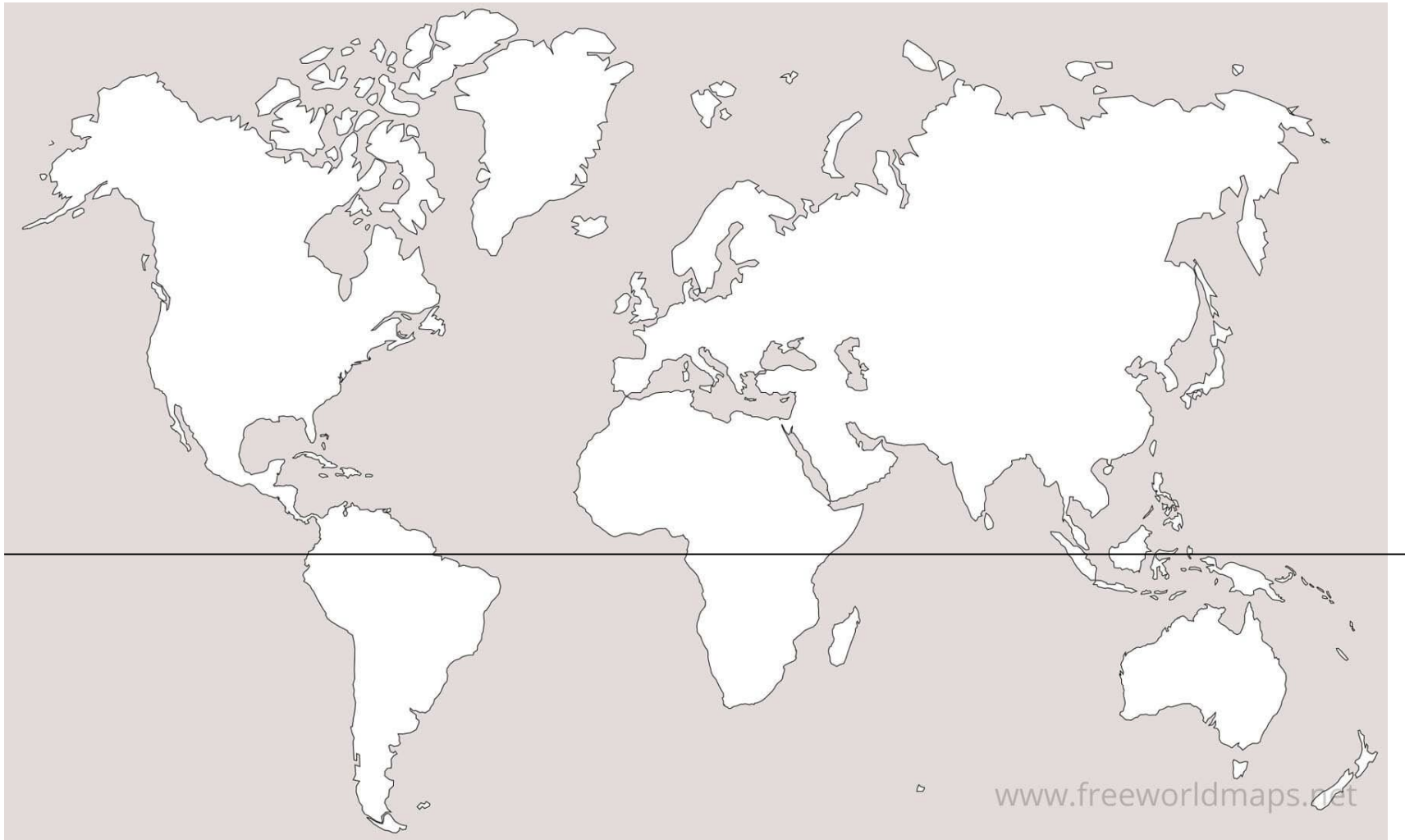


# Around the World with Onions

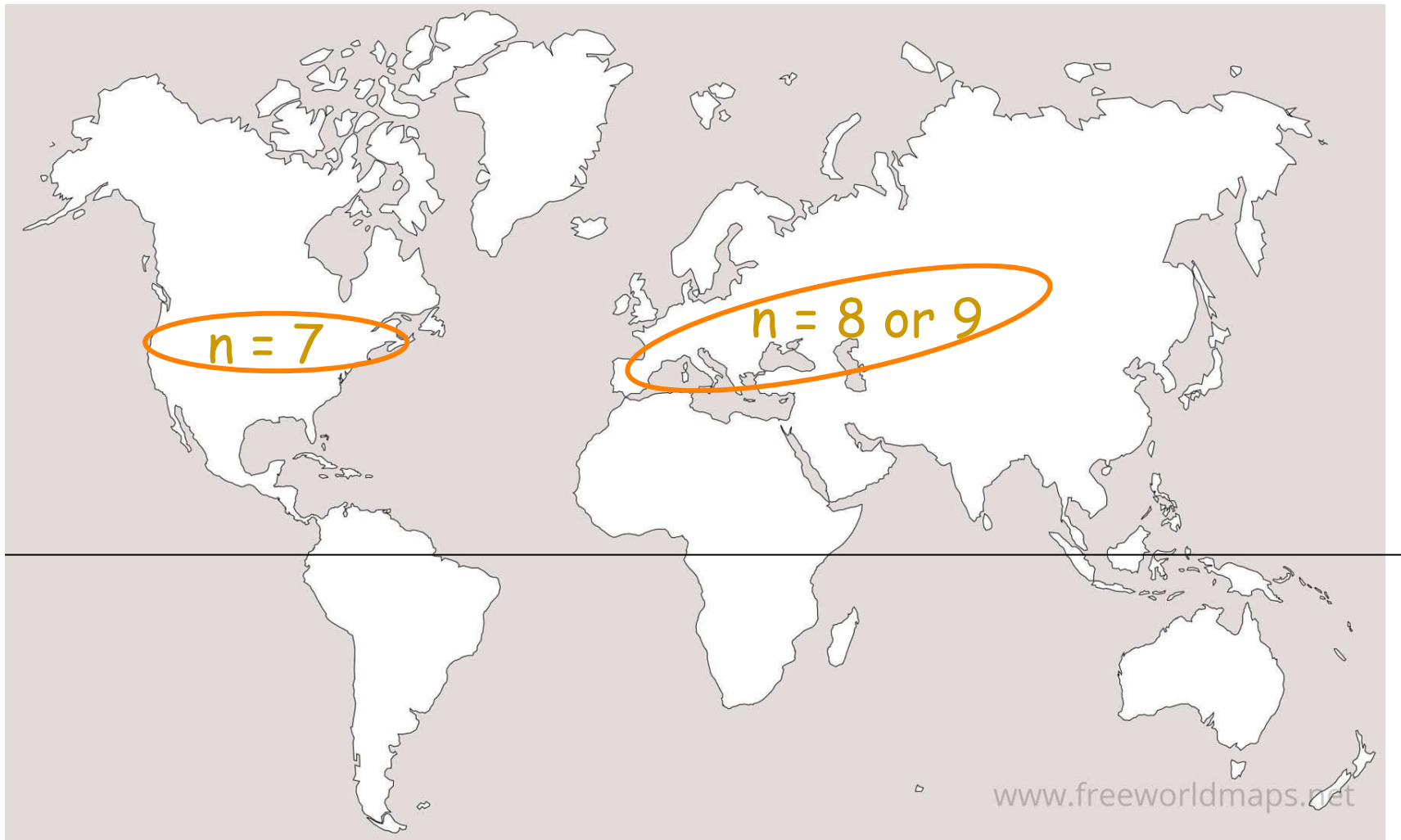
Michael Havey, Univ. of Wisconsin



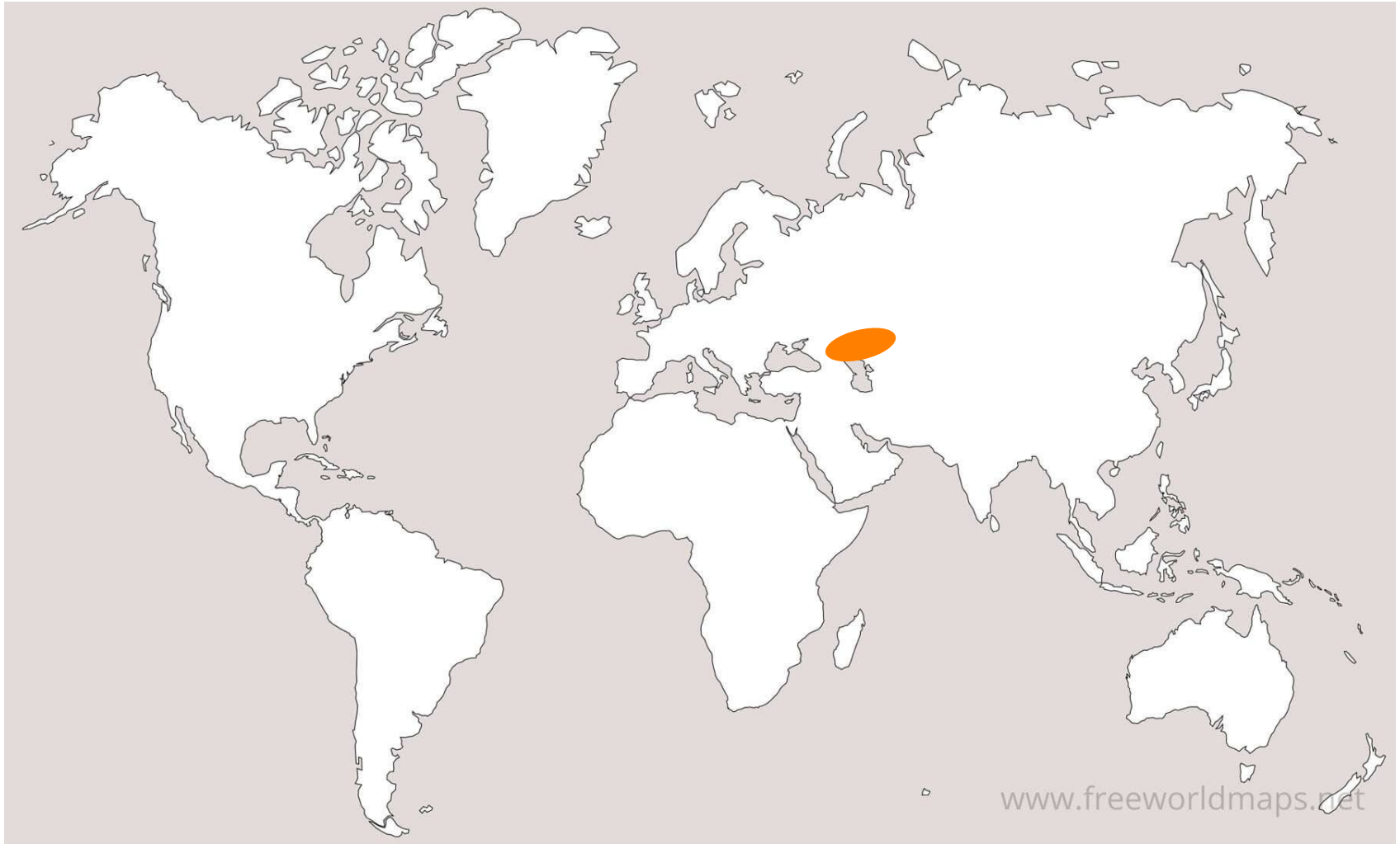
# No Alliums existed in Southern Hemisphere



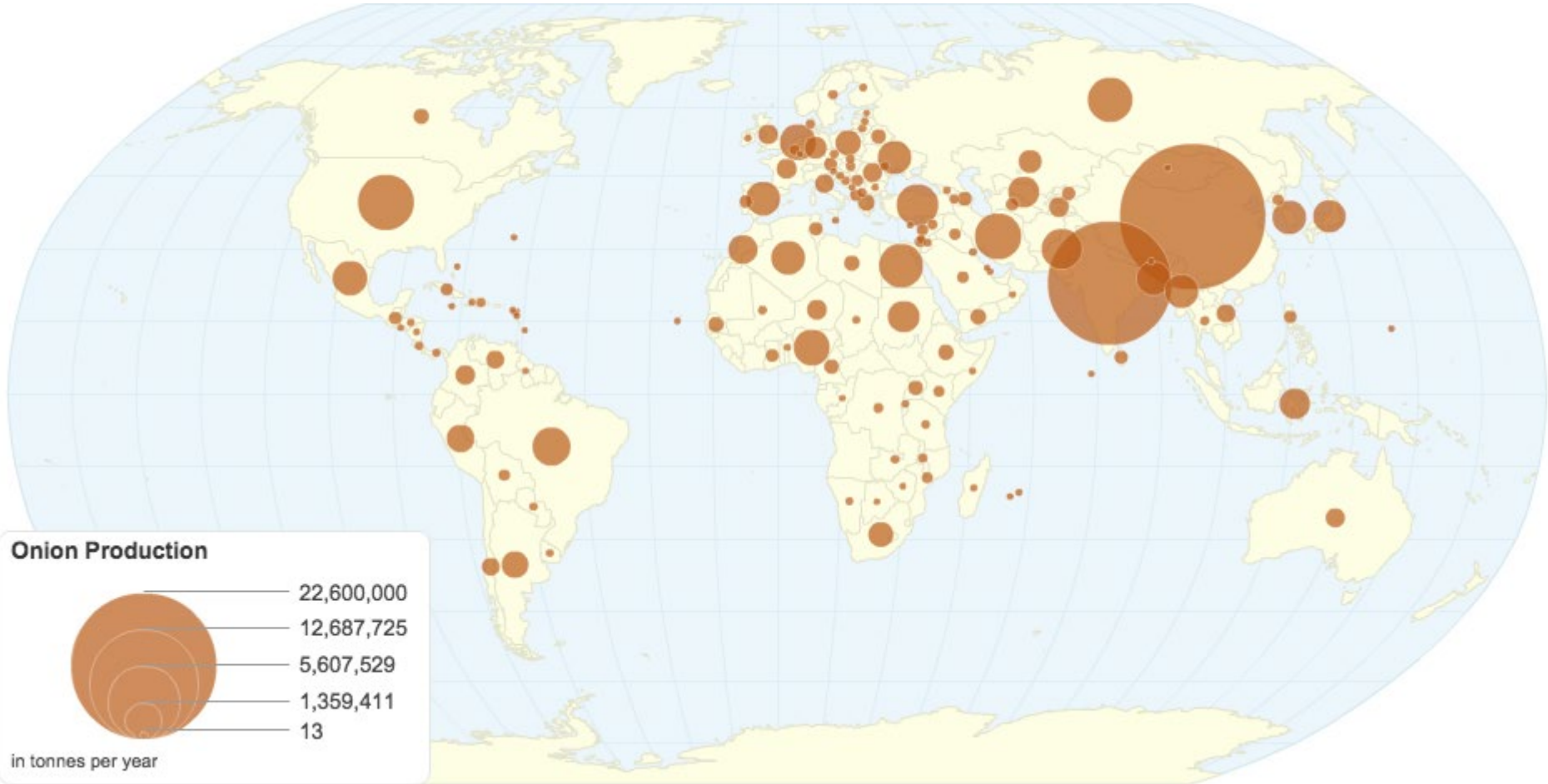
# Alliums are wide-spread across Northern Hemisphere



# Onion Traces Back to Central Asia



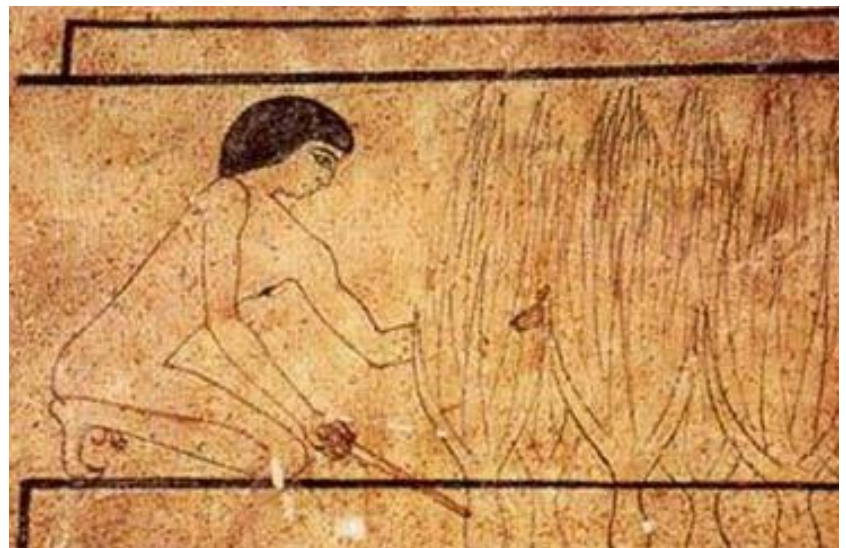
# Onion Production





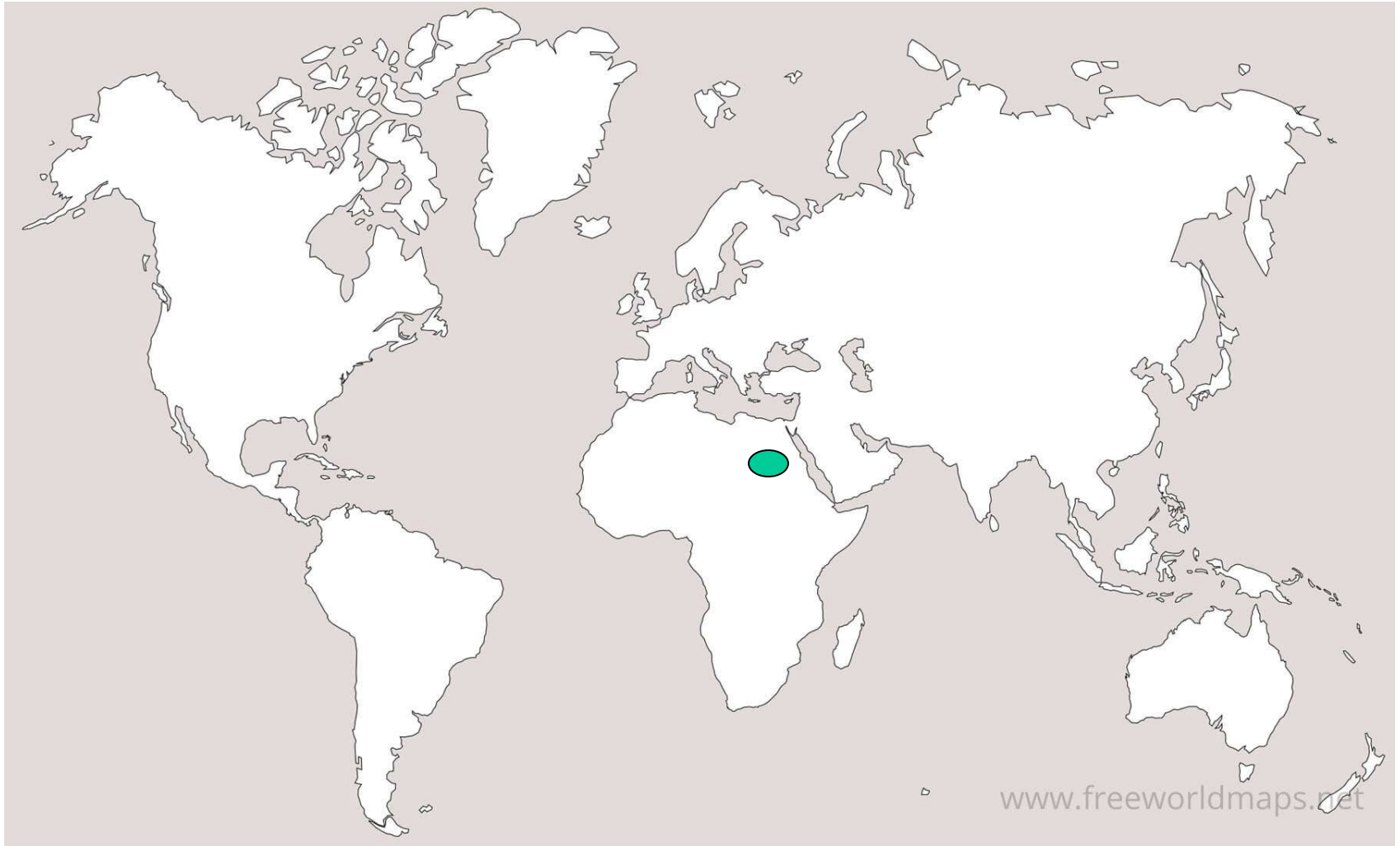
5,000 years BCE

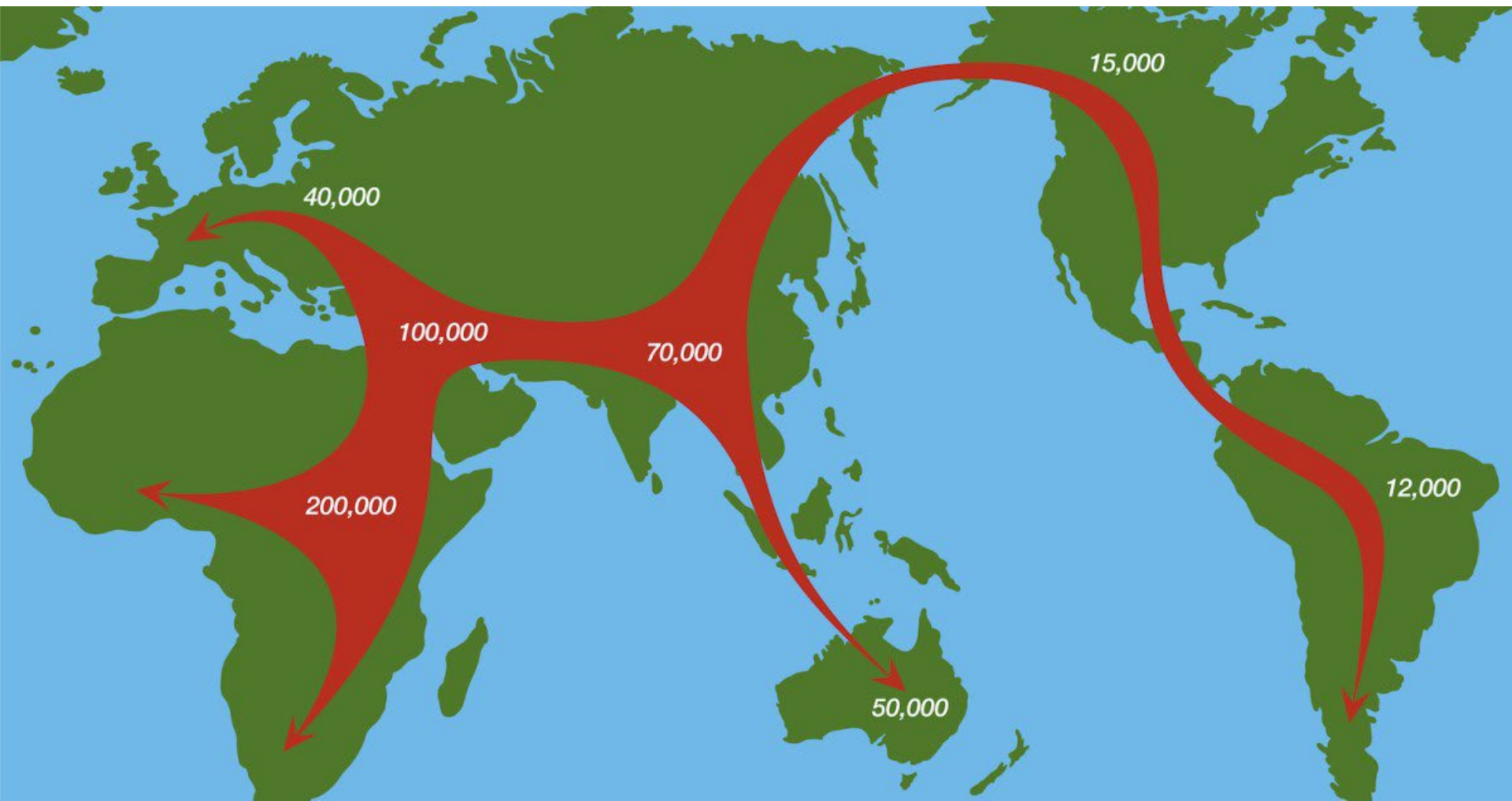
<https://www.bbc.com/news/magazine-30549150>



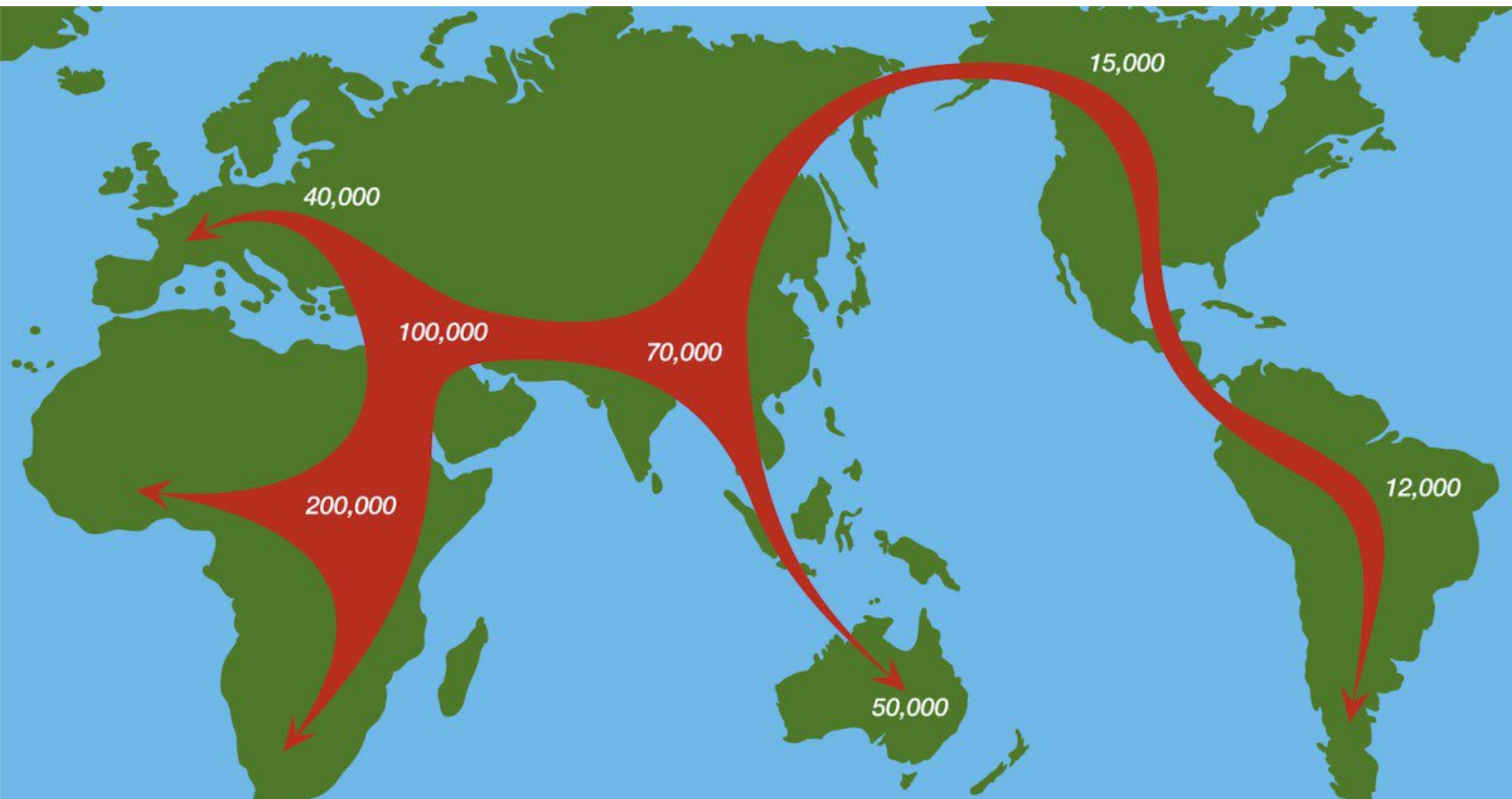
Onions introduced during  
Middle Kingdom ~ 2,000 BCE











**Hunter-gatherer: 1 person/10 km<sup>2</sup> = 2500 acres**

Hermanussen, 2003



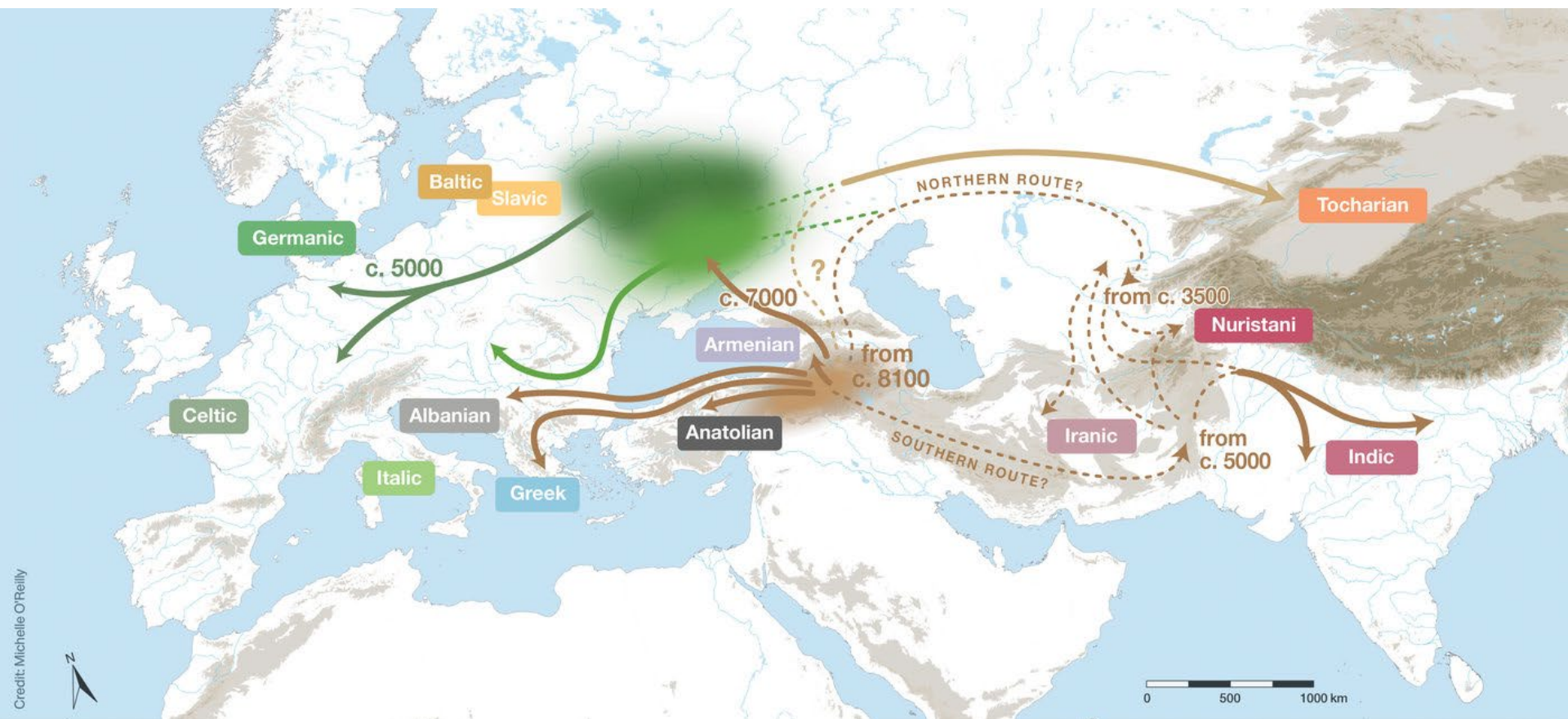
First invention of agriculture occurred  
12,000 years ago at end of last ice age



**Hunter-gatherer: 1 person/10 km<sup>2</sup> = 2500 acres**  
**Early agriculture: 1 person/2.5 km<sup>2</sup> = 620 acres**

Hermanussen, 2003

# Indo-European Languages Spread with Agriculture



# *Allium vavilovii*

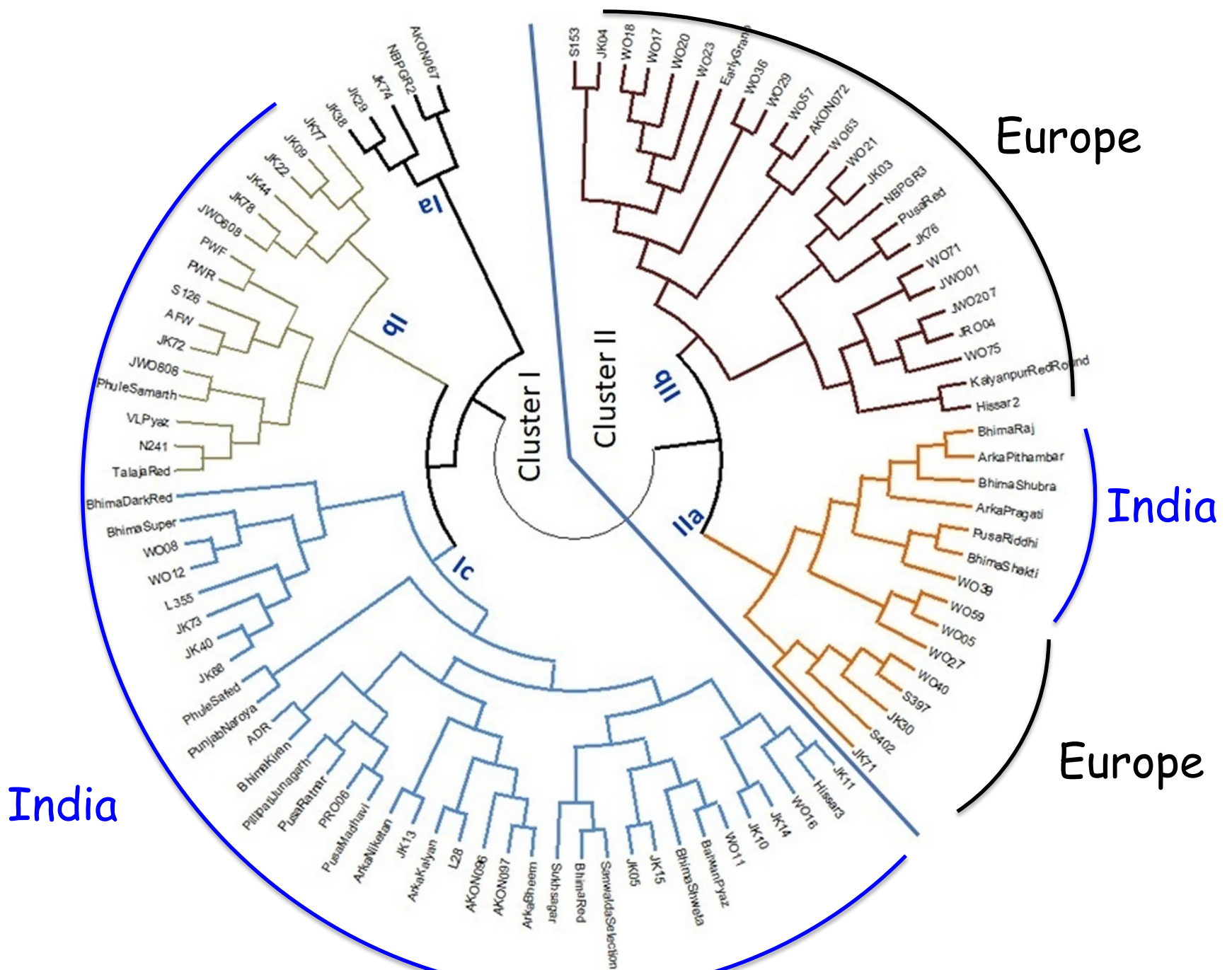


# *Allium vavilovii*



# Early Domesticated Onions

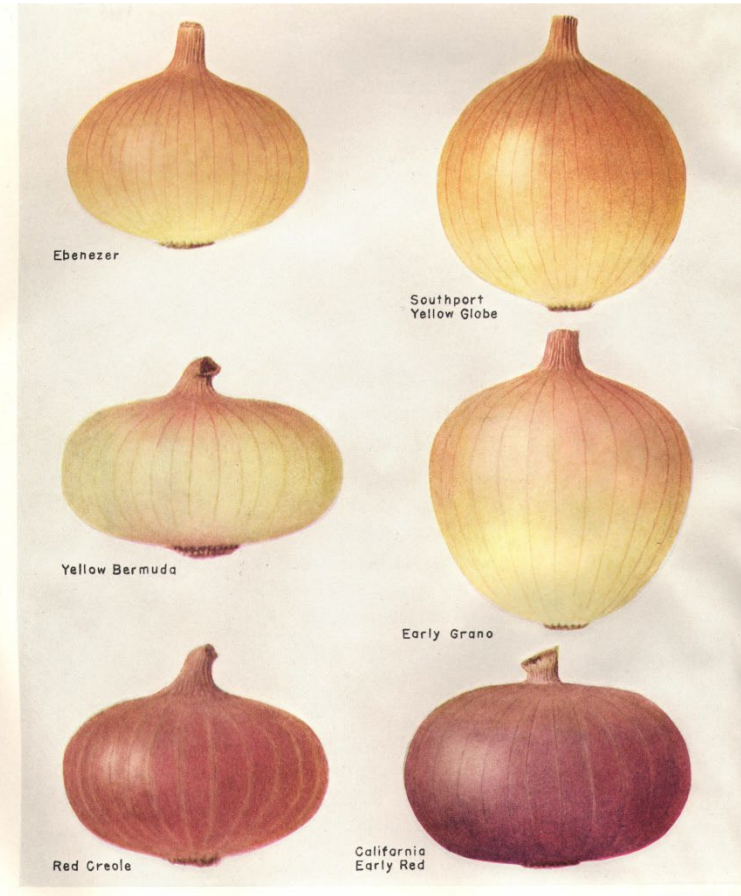
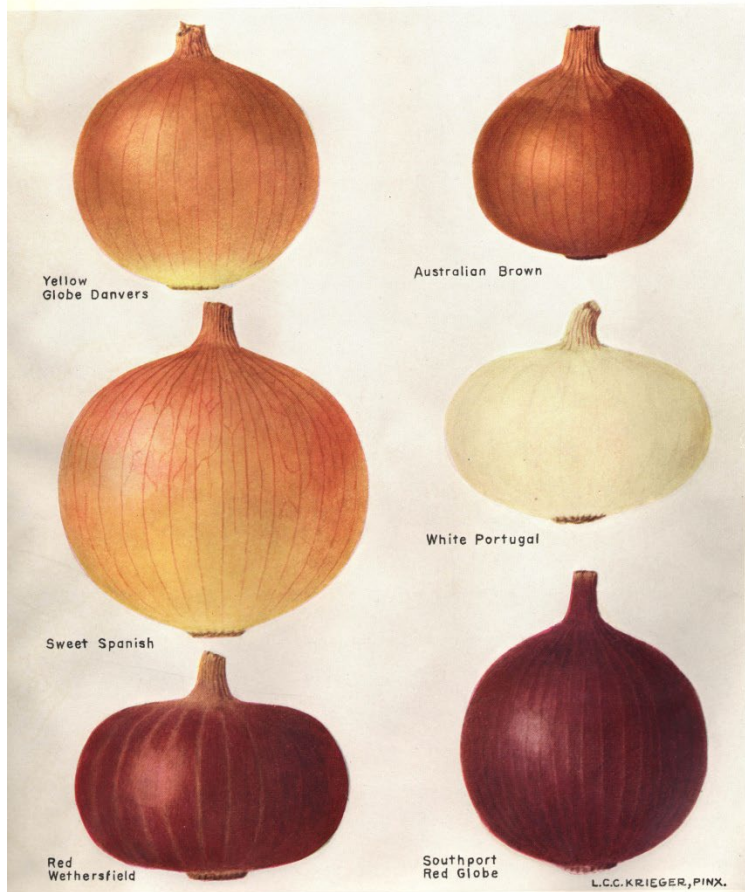




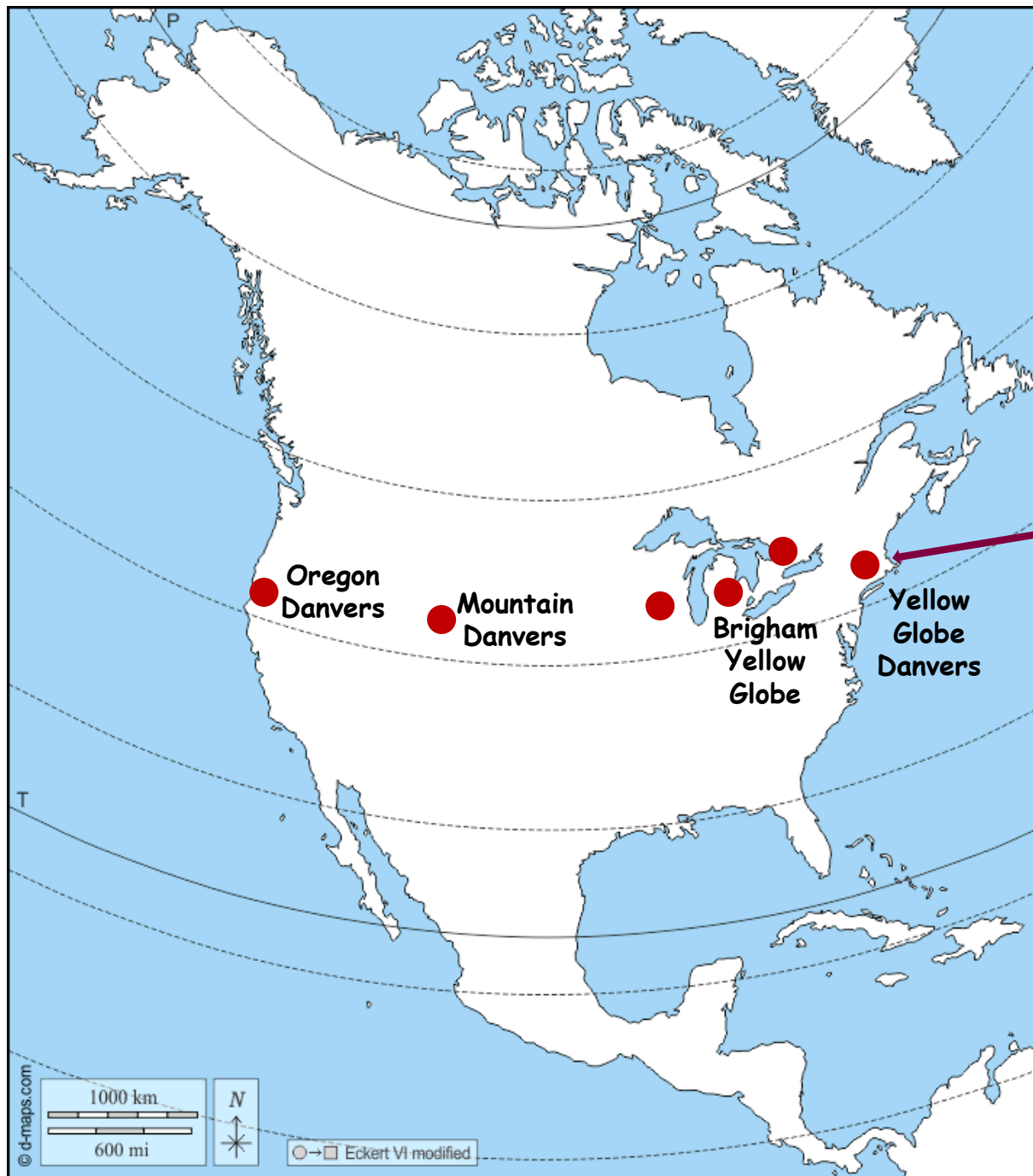
# Selection of Long- and Short-Day Onions



# Major Onion Populations Grown in USA



# Spring-Sown, Long-Day Storage Onions

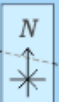


# Spring-Sown, Long-Day Storage Onions

Sapporo-Ki

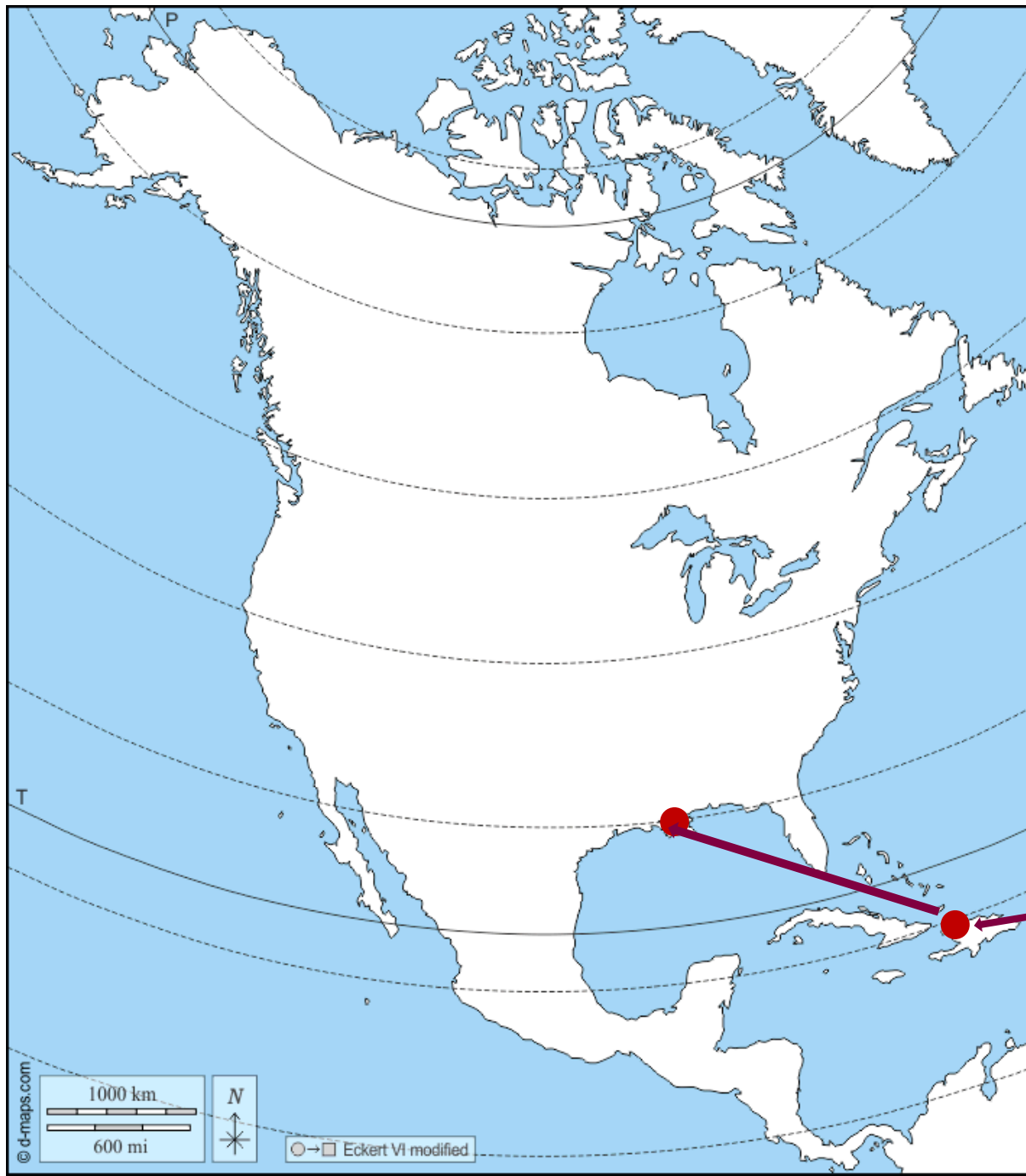


© d-maps.com



○→□ Eckert VI modified

# Fall-Seeded, Short-Day Onions

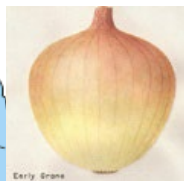
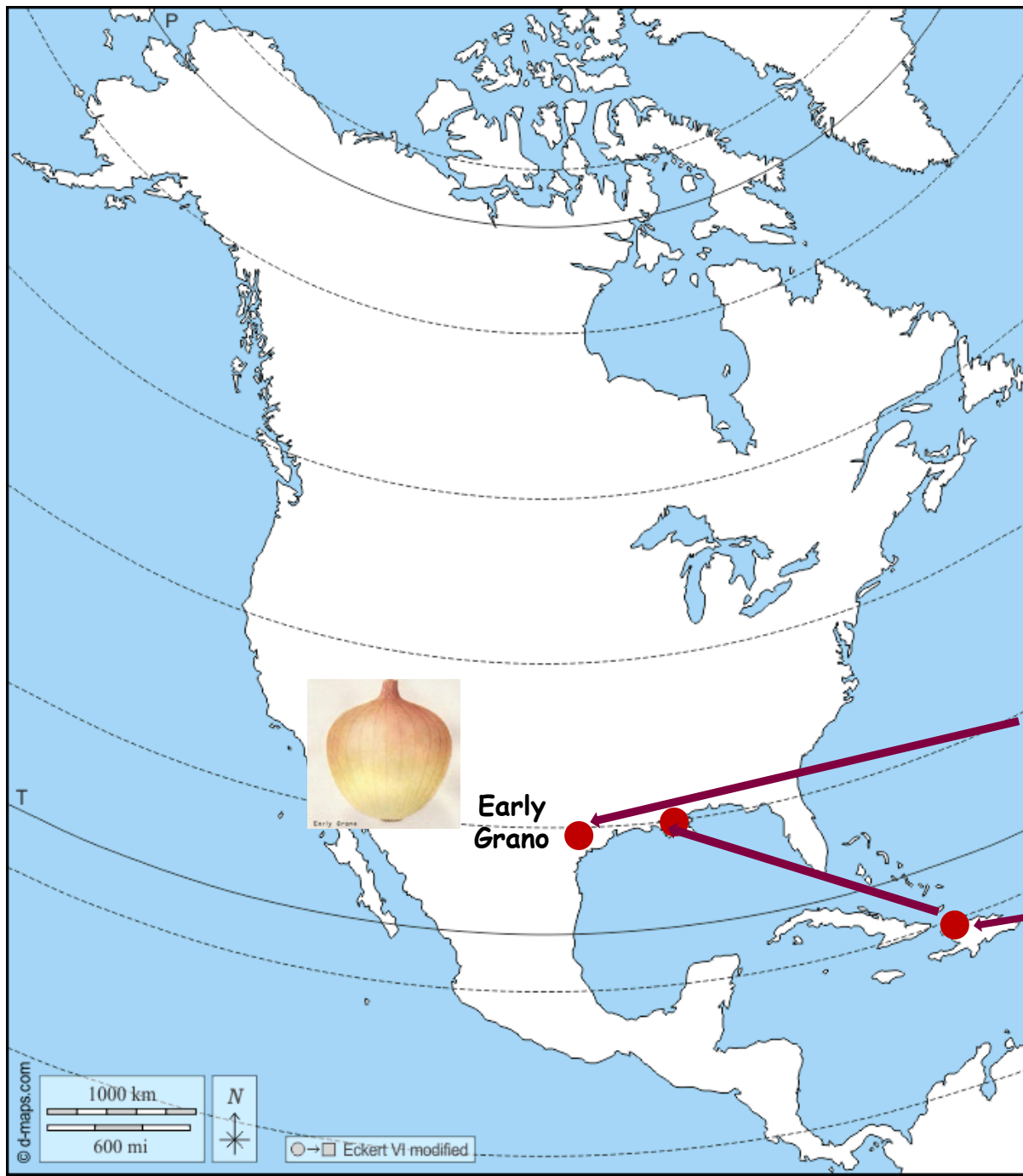


**Red and White  
Creoles from Italy**



Red Creole

# Short-Day Fall-Seeded Onions



Early Grano

Early  
Grano

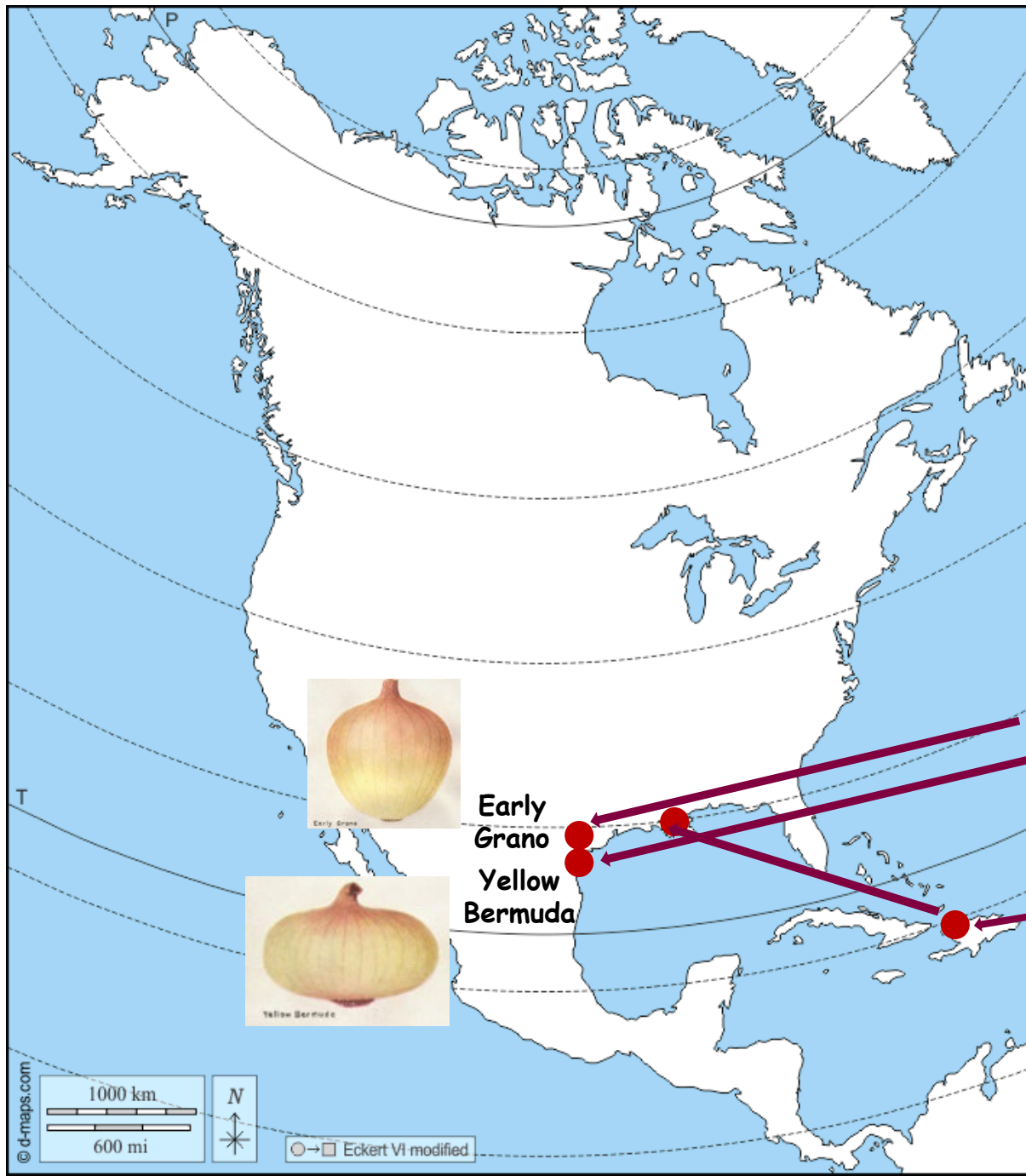
Balbosa from Spain

Red and White  
Creoles from Italy



Red Creole

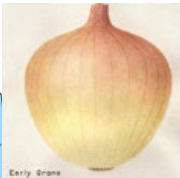
# Short-Day Fall-Seeded Onions



Balbosa from Spain

Italy via  
Canary Islands

Red and White  
Creoles from Italy



Early Grano

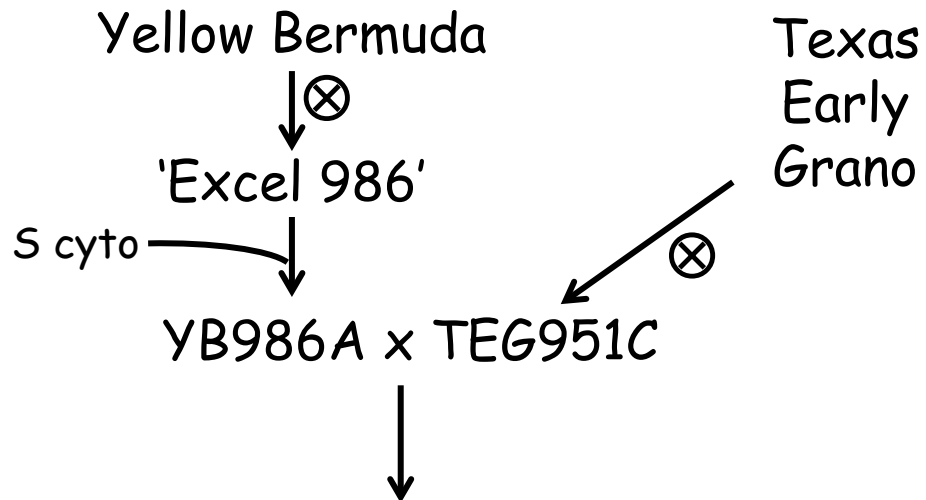


Yellow Bermuda



Red Creole

# Vidalia = "Granex-Type" Onion



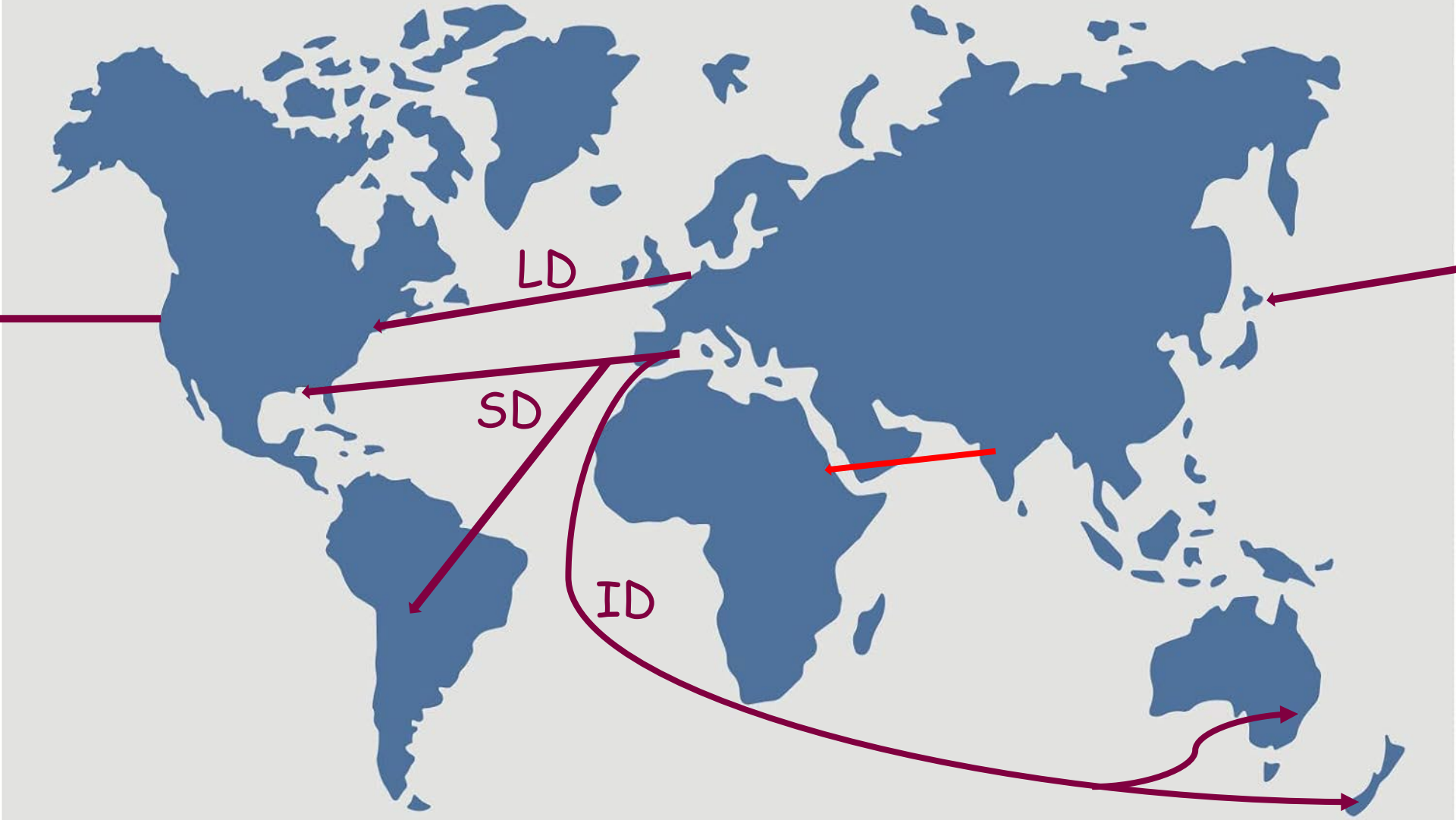
'Granex'

# 'Sweet Spanish' Onions



Valencia from Spain

# Onions Moved with European Migrations



# Summary

- Onion domesticated early and may have moved with Proto-Indo-Europeans
- European and South Asian Germplasms
- Introduced into Americas, Australia, NZ, South Africa, etc. by European migration
- Introduced into Eastern Asia from North America