

Europe (\pm North America)

Population decrease (\pm)

Excessive food supply Overweight

Prosperity (\pm) Trade dominance

“Agricultural paradise”

Overproduction

Plant gene technology ??

Other continents (~)

Population increase (~80 Mio/year)

~1 Billion poor people starve or die

Poverty \uparrow Trade dependence

Water \downarrow Deserts \uparrow

Agricultural productivity \downarrow

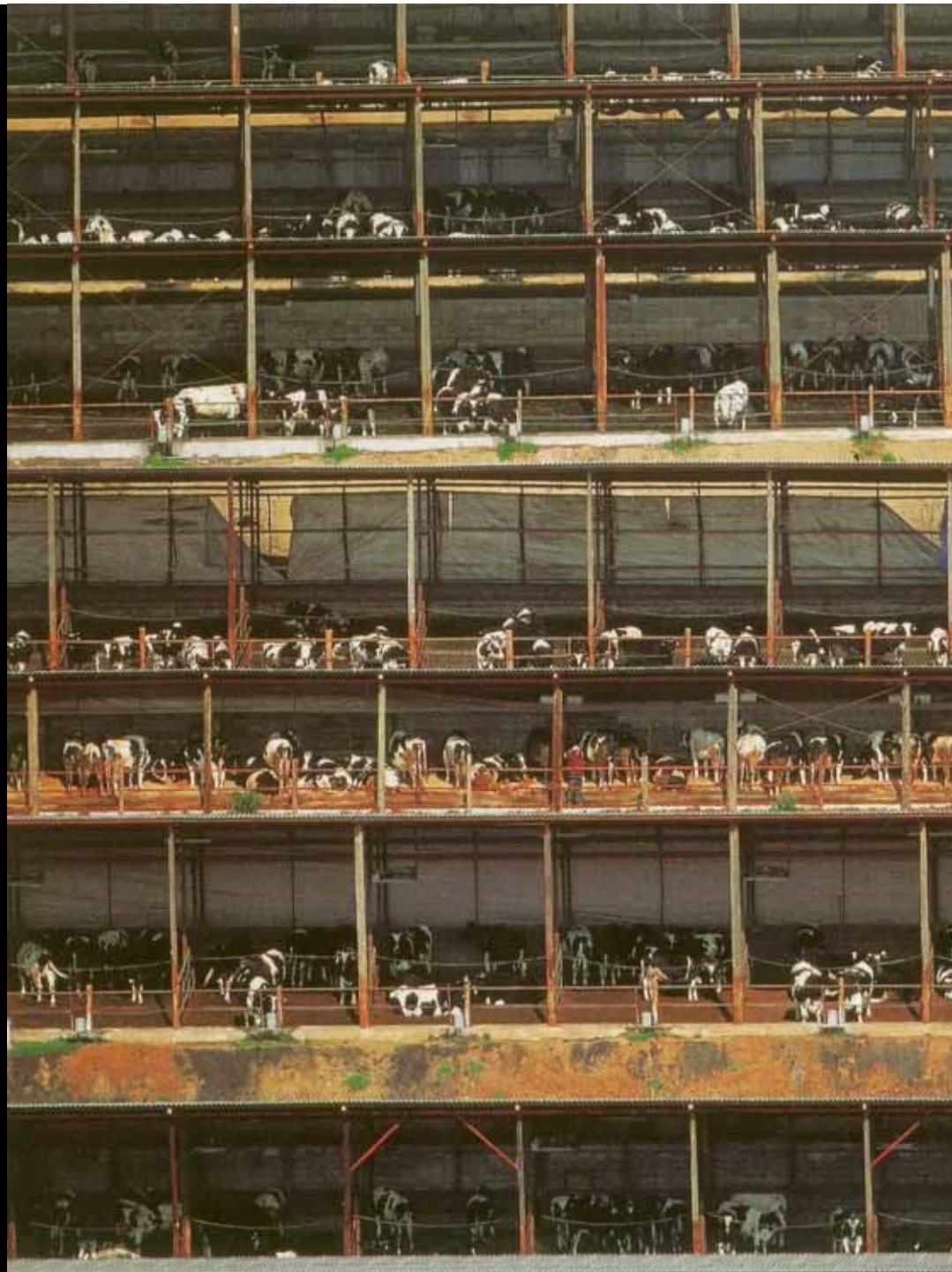
Plant gene technology $\uparrow\uparrow$



















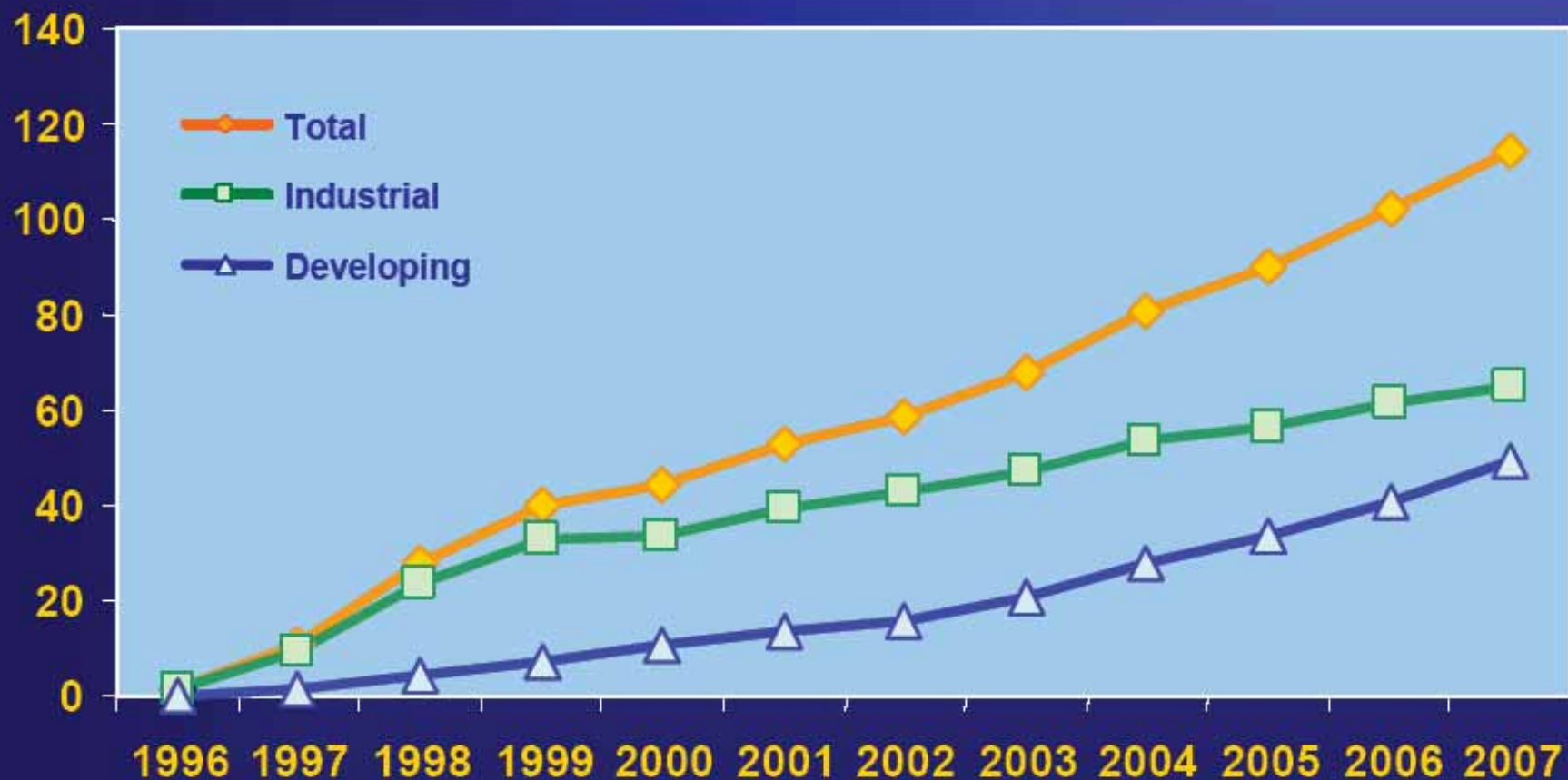
Important breeding goals

(Breeding = targeted genetic modification, whether by selection, crossing or gene technology)

- (Yield, yield, yield = quantity)
- Nutritional quality
- Insect and disease resistance
- Increased tolerance of drought, flooding, salt, herbicides, heavy metal ions, etc.



Global Area of Biotech Crops, 1996 to 2007: Industrial and Developing Countries (Million Hectares)



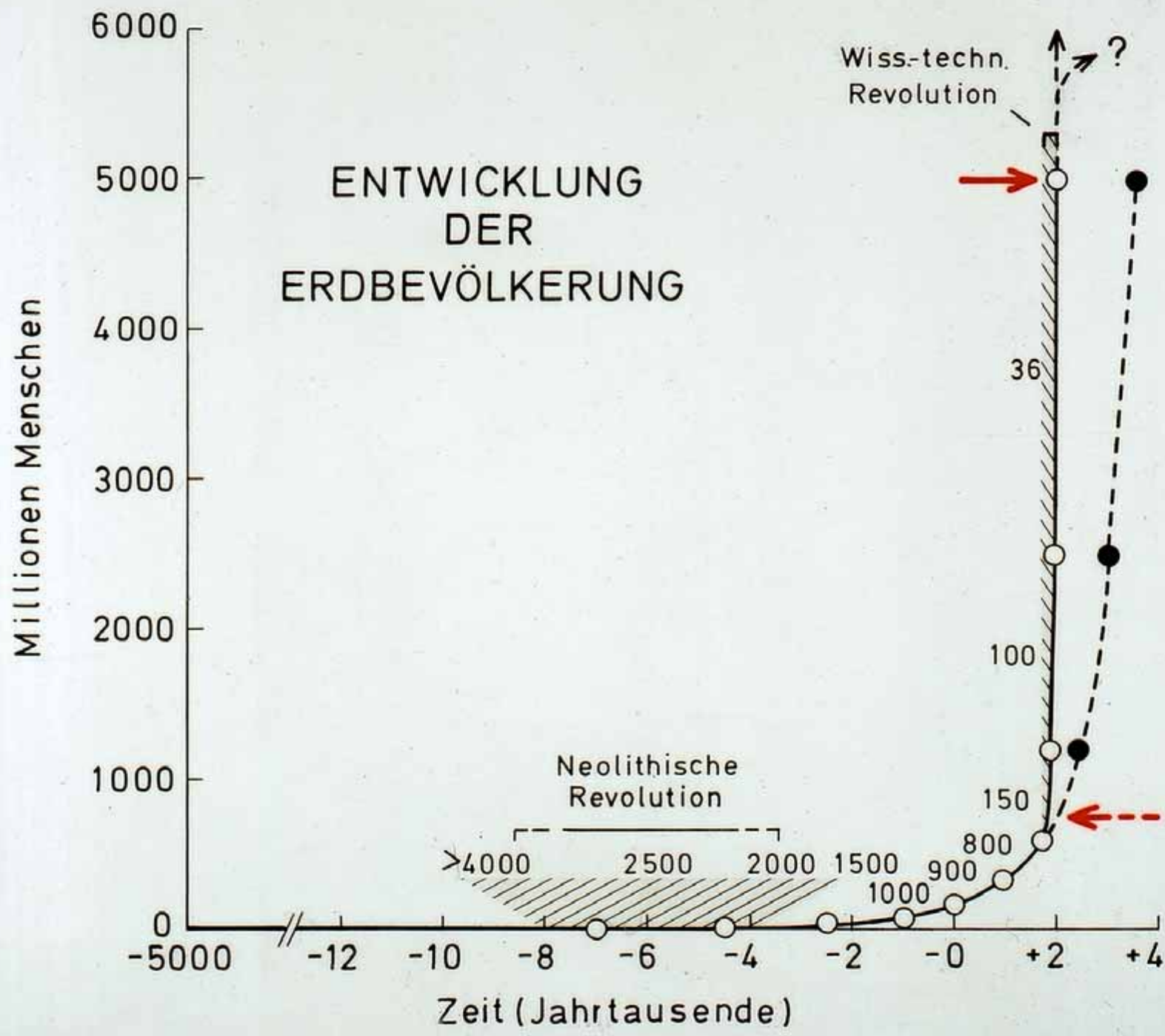
Source: Clive James, 2008



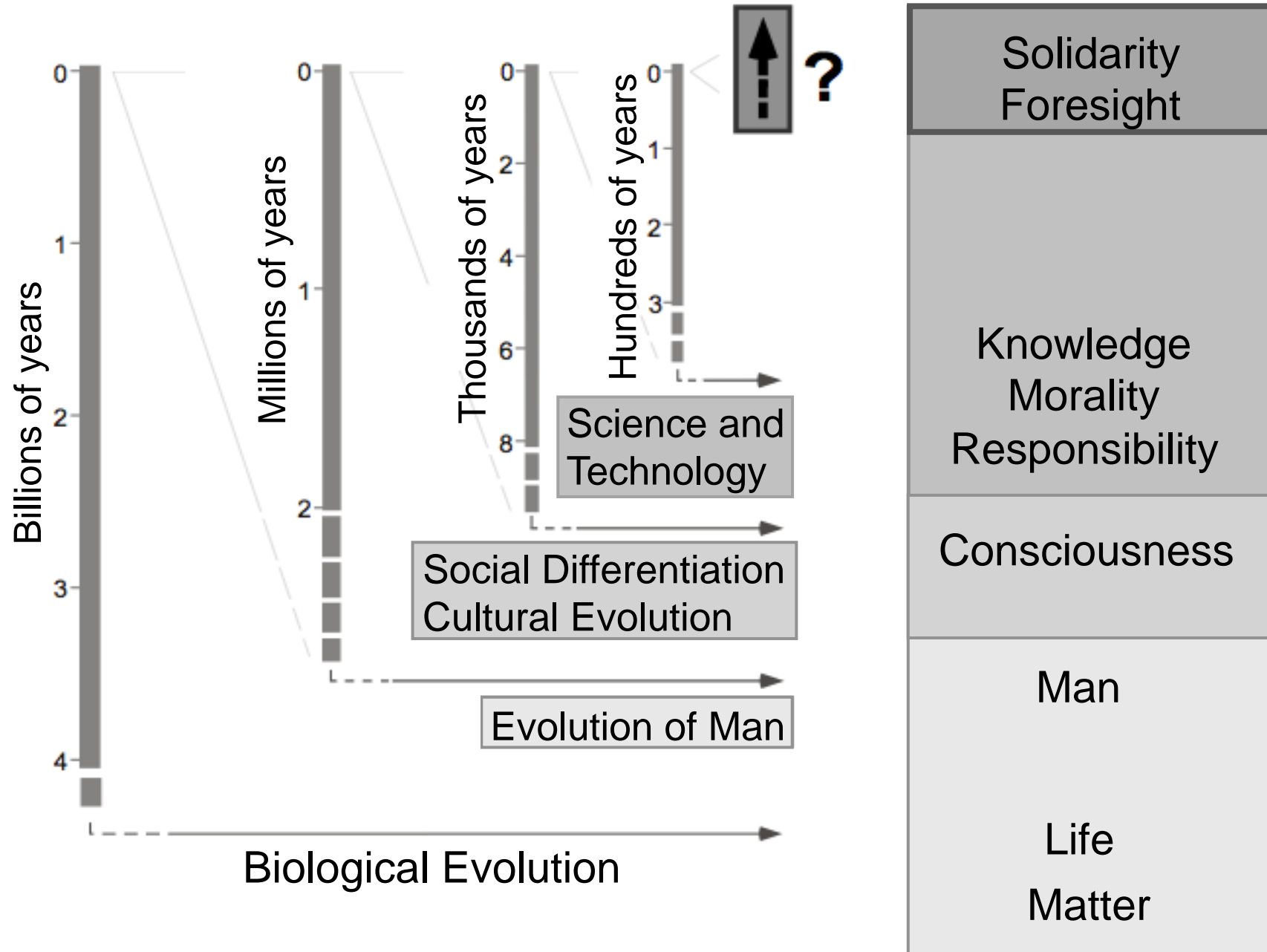








STEPS IN EVOLUTION



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Urgent measures

- *Preservation of a viable biosphere and avoidance of climate change: Sustainable agriculture, considerate exploitation and recycling of natural resources + Prevention of further population growth:*
- Public education: non-ideological, fact-based information
- Liberalization of global markets, ~ no protective measures
- Developing countries:
Improvement of farming conditions, infrastructure, education, health care,
status of women, income security, access to small-scale credit
- International help (long-term benefit of donors as well as receivers!)
- Consumption of plant food instead of mass conversion to animal products
- Breeding efforts: increased nutritional quality; insect and disease resistance; tolerance of drought, flooding, salt, herbicides; etc.