

An elderly man with white hair and a mustache is the central figure. He wears a white turban with a black and grey geometric pattern and a dark, pinstriped jacket. He is smiling slightly and looking towards the camera. He holds a bundle of harvested grain, possibly wheat or barley, in his right hand. The background is a vast field of tall, golden-brown grass under a bright sky. In the distance, two other people are visible, one standing and one sitting. The overall scene suggests a rural, agricultural setting.

Biodiversity and livelihoods: From single varieties to “mega-populations”

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A livelihood has been defined to be “sustainable” when it can “cope with, and recover from, stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining its ecological base”

“Diversification of production is a way to increase resilience of farming systems to shocks in an environment of increasing uncertainties. Efficient adaptation will require access (both physical and legal through appropriate intellectual property rules) to genetic resources, both of existing crops, livestock and their wild relatives, as well as varieties that may be used in the future.”

Food Security and Climate Change, HLPE



- Participatory Plant Breeding: Trials from Research Station to Farmers' Fields



- Decisions shared between breeder and farmers

Why Participatory Plant Breeding?

Often the research agenda is decided by scientists without consultation with users

Agricultural research seldom uses an integrated approach (complex ecological, social, and economic interactions)

A large number of technologies generated by agricultural research are not used by farmers

Mixture of 15 lines of bread wheat from
PPB trials in Kermanshah



Sardari wheat: A landrace outperforming “improved varieties” in Iran's drylands



Sardari: susceptible to yellow rust and lodging



Mixture of 15 lines of wheat have shown good resistance to rust and lodging



Evolutionary populations

“Mega populations”

gene banks evolving in farmers' fields





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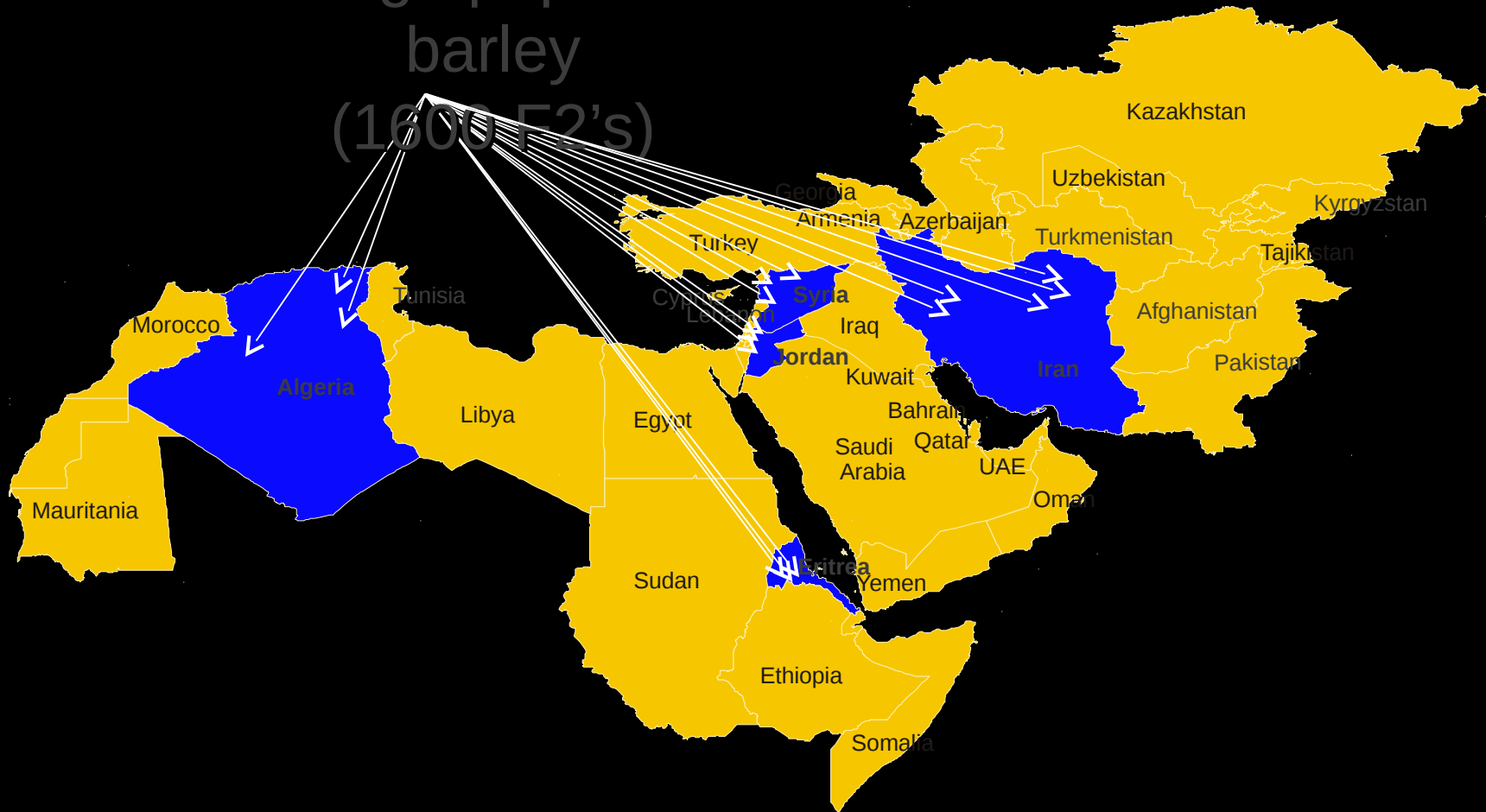


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Evolutionary Plant Breeding

One mega population of
barley
(1600 F₂'s)



What does this all mean for policy and legislation?

“The expansion of IP rights can constitute an obstacle to the adoption of policies that encourage the maintenance of agrobiodiversity and reliance on farmers’ varieties.”

Seed policies and the right to food: enhancing agrobiodiversity and encouraging innovation,
Report of the Special Rapporteur on the Right to Food, 2009

Corporate Concentration in the seed sector

- 6 multinational seed companies (Syngenta, Bayer, BASF, Dow, Monsanto and DuPont) control 59.8% of commercial seeds and 76.1 % of agrochemicals.
- The same 6 companies account for at least 76 % of all private sector R&D in these two sectors.
- Monsanto, the world's largest seed company and fourth largest pesticide company, now controls more than one-quarter (27%) of the commercial seed market.

ETC Group (March 2013)

A photograph of a vast field of golden wheat under a clear sky. In the background, a group of people is gathered, and a few individuals are scattered further back in the field. The foreground is dominated by a close-up of a wheat stalk, showing its detailed structure and golden-brown color.

Distinct?!

Uniform?!

Stable?!

“In order to circumvent these limitations [IPRs and in particular UPOV 1991], developing countries where the function of traditional, farmers’ seed systems is most important both for the prevention of genetic erosion and for the livelihoods of farming communities should design sui generis forms of protection of plant varieties which allow these systems to flourish, even if this means adopting non-UPOV compliant legislation; and if they do join UPOV, they should use all the flexibilities available to them.”

Seed and Plant Policy Document of the Islamic Republic of Iran

Article 9

Paragraph 7: Farmers who produce farm-saved seed and plants have the right to store, use, exchange, and distribute their own plant materials.

Paragraph 8: Farmers using farm-saved seed and plants are permitted to use protected varieties.

Available at: <http://spcri.org/en/Pages/SeedandPlantPolicy.aspx>

Who decides?



Thank you

