

Building resilient Mediterranean dryland rural communities

North African and West Asian countries have experienced devastating droughts in the past decade, with temperatures rising 2-8°C above the 20th century average. National crop production subsequently dropped 30-40% below average. 'Climate-smart' varieties bred with genetic tolerance to these stresses⁽¹⁾ represent sustainable technological solutions. However, packing a variety with genetic advantages is often not enough to ensure farmers' adoption, since subjective and objective preferences guide the decision process⁽²⁾. Hence, ICARDA has developed

a participatory socioeconomic weighted (PVS) strategy to define a precise list of traits to be incorporated in an ideal variety⁽²⁾. This list of traits could then be tailored to address the needs of an agroecology or, more effectively, a set of communities with similar needs. Yet two approaches are required to be able to effectively deliver tailored varieties to individual communities: (i) participatory variety selection⁽³⁾ (PVS) to promote a sense of ownership regarding the selected varieties; (ii) paired with community-based seed enterprises⁽⁴⁾ to favor capillary seed production and adoption. Pilot farmers engaged in this system produced 20-40% more in side-by-side comparisons between new and current varieties*. **This socially weighted approach significantly enhanced the productivity and climate adaptation of the farming communities, but only marginally improved their income. For this, rural**

female cooperatives were engaged in the participatory process to select only varieties suitable for producing traditional Mediterranean foods. These short rural food value-chains led to a 10-fold increase in the selling price of the harvested grains on food markets. Overall, this agroecological approach boosted farm productivity and adaptation using better varieties and generated higher income through the empowerment of rural women. These achievements ensure that local farmers will continue to grow crops as source of income, rather than shift towards a resource-degrading farming system more focused on livestock grazing.

* DIIVA-PR Project, Dissemination of interspecific ICARDA varieties and elites through participatory research: <https://mel.cgiar.org/projects/741>



◀ *Engagement of rural female cooperatives in very short food value chains.* © M. Major

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