



## Flowers to combat desertification and protect biological diversity in Turkey

For a long time, cotton dominated agricultural production in the Harran Plateau of Turkey, despite this crops accompanying environmental problems. Cotton requires frequent irrigation, but the village is in a semi-arid region where water is scarce. Consequently, the intense irrigation needed to produce cotton also brought about increased soil salinity and loss of nutrients, which led to a downward spiral of decreasing cotton productivity.

The Turkish Foundation for Combating Soil Erosion and experts from Harran University devised a plan of action in which saffron production would become the key tool for combating erosion. The other objective was to restore and protect the saffron gene to this ancestral location.

After several soil tests, the Çütlük area belonging to Kuruyer village in the Plateau was chosen for the project. Its initiators had to convince the villagers to give up cotton in favor of the locally germinating saffron. Saffron had been cultivated here until it was displaced by the large cotton monocultures.

Saffron production requires about 10% of the water needed to produce cotton. The plant germinates naturally around the village, therefore it requires minimum tending to produce a good crop. And being one of the most expensive spices of the world, farmers who switched to saffron could count on doubling their income. A small local enterprise was established to link the saffron producers to its consumers, which brought significant benefits to the community. New education and employment opportunities arose. Women played a major role in all these developments and thus improved their social status.

The reintroduction of saffron marked a shift to sustainable agriculture because the saffron plant is indigenous to the Asian region, and is thus acclimatized to the specific conditions of this area. Consequently, its cultivation exerts minimal human interference on the ecosystem. Today, soil erosion is not a major problem in the area and the level of salinity has returned to an acceptable level.

The project has gained national and international acclaim as an example for other areas where imported monocultures have displaced local plants and induced environmental problems.



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