

# ARTF RESULTS



**Modern Orchard Techniques Flourish in an Ancient Afghan Valley**

Afghanistan  
Reconstruction  
Trust Fund



## The National Horticulture and Livestock program

- *Supported by a \$50 million grant from the Afghanistan Reconstruction Fund, The National Horticulture and Livestock Program (NHLP) aims to promote adoption of improved production practices by target farmers, with gradual rollout of farmer-centric agricultural services systems and investment support. The project will run from 2012 to 2018.*
- *The transformation in established and new orchards is a result of NHLP, which is implemented by the Ministry of Agriculture, Irrigation and Livestock.*
- *High-density planting in new orchards is showing that it is more profitable to grow fruit than opium poppies, leading to changes in land use.*
- *Fruit farmers whose families have tended orchards for decades in are now using new techniques and tools to increase their yield and income.*
- *Since 2012, 2,020 ha of new orchards and vineyards have been established, benefiting 4,554 people*
- *Tree productivity has increased an average 110% for four major, marketable, perennial tree/vine crops (almond, apricot, grape and pomegranate)*



In Mula Sultan village, there is already a long tradition of orchard cultivation, not opium production. But the problem here has been low fruit yields caused primarily by pests like the Carob moth, which destroy pomegranate, almond, and date plants.

Picking apart a young green pomegranate about the size of a walnut, farmer Ahmad Shah, 55, flicks a finger at a squirming moth larvae already feeding on his fruit.

“This is what we are all fighting,” says Shah, whose family has tended orchards on eight jeribs in the valley for at least 150 years. The moth launches its attack by laying eggs on young fruit. Larvae burrow inside, feed and finally spoil the pomegranates.

## New Techniques increase production

Before NHLP workers set up ‘farmer field schools’ in the valley to teach techniques to fight the moth, only 20 percent of the fruit set would succeed in reaching the market. Yield has now increased to about 80 percent, says Shah.

This transformation came about after another villager, Sayed Ahmed, 61, was chosen as ‘lead farmer’ to help teach the field schools. In one class, with the help of Sayed Ghulam Mohammad, a pest management and disease control officer, Ahmed demonstrated the incredible benefit of tying specially-designed brown paper bags over young fruit before moths could lay their eggs. “When we put the pomegranate in the bag, it gets big and healthy. We can lock it inside and the moth can’t get in,” explains Ahmed.

“Yes, farmers didn’t know how to identify, control, or manage these pests and diseases,” adds Mohammad. “But now they can learn together and ask my help, too.”

Shah recalls when he first tried the bags, “many of my friends were laughing at me, but then they realized what good quality fruit I produced, and it was okay.”

## Organic Methods Replace Pesticides

Farmers in the valley recall a time, about a decade ago, when Korean officials refused a massive shipment of Afghan pomegranates because the fruit had been sprayed with poisonous pesticides.

“Now the program has taught us organic methods for pest control and we have completely stopped using such chemicals,” says farmer Abdullah Samadi, 50.

Another recent innovation involves pruning. Many farmers didn’t realize properly trimmed branches meant more energy devoted to ripening fruit elsewhere, says Samadi. It also helped control diseases, and more sunlight on trees meant better quality fruit. “This project is working educationally, technically, and practically for us.”

Farmers have also been exposed and offered access to a range of quality equipment, including pruning shears, sprayers, harvest baskets, and protective clothing in addition to the moth bags. While gear is initially provided for free of charge for group demonstration purposes, further project support to individual farmers requires them to pay about half of the cost of the equipment offered.

Jabri admits this is not popular, but program officials believe that farmers who make an investment are more likely to value it. “Our economy is weak to pay for all these things,” shrugs Samadi. “And we can’t find many of these items in our markets anyway.”

Jabri points out that cheaper equipment often break after a few uses. “It doesn’t matter,” adds Samadi. “We are all doing better now, so maybe soon we can afford everything.”

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**Abdullah Samadi**  
Farmer, Mula Sultan village

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