

Supplemental material for

“Agricultural biodiversity in the Tajik Pamirs: A bridge between market development and food sovereignty,” by Alessandra Giuliani, Frederik van Oudenhoven, and Shoista Mubaliev; published in *Mountain Research and Development* (MRD) vol 31 no 1 (February 2011).

Table S1: Varieties of apple, apricot, and mulberry, with characteristics, reasons for cultivation, perceived reasons for their market potential, and relative quantities used for selling and household consumption

Fruit (f)	Variety* (f)	Processing	Reason for cultivation	Perceived reason for market potential	Uses/ characteristics	Income****		Household****			
						Market	Barter	Food	Medicine	Culture/ religion	Fodder
Mulberry (87)	Bedona (14)	dried, fresh, <i>pikht</i>	food	very sweet (dried) fruits, rich in vitamins	used to treat kidney diseases (KD), anemia (A), vitamin A deficiency (VitA), low blood pressure (LBP)	••	•	••••	•		••
	Rovani (14)	dried, <i>pikht</i> , other***	food; income	high demand for dried fruits	moderately sweet; used especially for A, LBP	•••	•	•••	•		••
	Rushtut (14)	<i>pikht</i> , dried	food; income	yield, demand, easy to dry and process	used for seedlings, animal feed; VitA	•••	•	••••	•		•
	Asli (12)	<i>pikht</i> , dried, other***	food	easy to process; long storage	used to make a courser <i>pikht</i> , KD, A, VitA, LBP	•	•••	•••	•		••
	Shatut ** (8)	fresh, other***	medicine	jam, juice, medicinal purposes	sour-sweet juicy fruits, cannot be dried; used to treat tonsillitis, hypertension, headache, KD			••••	••		
	Tabunik (8)	fodder	food, fodder	no demand				••	•		•••••
	Muzaffari ** (7)	<i>pikht</i> , dried, other***	food; income	high demand; sweet sugary fruits	A, LBP, KD	•••	•	•••	•		••
	Malbeb (6)	dried, <i>pikht</i>	food	for dried fruits	KD, A, VitA, LBP	no information		••••	•		••
	Khatut (4)	fresh, dried, <i>pikht</i> , other***	food	multiple uses, easy to process, good quality	quite rare, more common in Afghan Shugnan	•••	•	•••	•		•
Apple (72)	Golden delicious (15)	fresh	income; food	high demand	taste could be improved	•••	••	••	•	•	•
	Krepson (12)	fresh, other***	income; yield; food	high demand; stores well	taste could be improved	•••	••	•••	•		•
	Goldspur (10)	fresh, dried, other***	income; food	high demand	taste and appearance could be improved	•••	•	•••	•		•
	Semirenko (7)	fresh	income	high demand; stores well		no information		•••	•	•	
	Chomun (6)	fresh	income; yield; food	cold resistance; stores and transports well	taste and appearance could be improved	••••	•	••	•		•
	Sebrakht (5)	fresh, dried	HH needs; insurance	very sweet and tasty; high demand	cooks and dries well	no information		•••	•	•	
	Takhpak (4)	fresh	yield; store; tradition	stores and transports well	only used fresh	insufficient information					
	Gulamadi (2)	fresh	HH needs; income	reasonable demand		••	•	•••	•		•
	Huboni (2)	fresh	income; food	high demand		no information		•••	•		
	Kilomun (2)	fresh	Yield	reasonable demand		no information		•••	•		
	Kulchamun (2)	fresh		stores well		••••	•	•••	•		
	Shulmun (2)	fresh, dried, juice	HH needs; food		wild variety; poor storage	••	•	••••	•	•	
	Tobistona (1)	fresh	for summer time	early ripening		••••	•	••	•		
	Jonathan (1)	fresh	income	high demand		•••••	•	••			•
Hudruiyak (1)	fresh, jam	income; food	high demand		•••••	•	••			•	

Apricot (69)	Makhmouri (20)	fresh, dried, other****	income; food	high demand, dries well (high % sugar)	pits used to make medicinal oil for pregnant women (high in K)	•••••	•	••			•
	Safedak (17)	fresh, other****	household needs	early ripening; good fresh	used only fresh (the dried fruit becomes acidic)	no information		•••			•
	Tezpazak (9)	fresh, other****	HH needs; food	high demand	used to treat gastro-intestinal and heart diseases	•••	•	••	•		••
	Tsavznulak (8)	fresh, dried	income; food	high demand; good dried		••	•	•••	•	•	•
	Shalakh (6)	processed, fresh	income; food	high demand	juicy, large fruits; taste and appearance could be improved	••	•	••••	•		••
	Gura Balkhi (2)	fresh, dried, other****	HH needs	very high sugar content	pits used to make medicinal oil	••	•	•••••			••
	Hagaknosh (1)	fresh	HH needs	to obtain and distribute seeds		•••••	•	••			•
	Kharbuzanosh (1)	fresh, other****	to make jam	high demand		•••	•	••	•		••
	Lavkajak (1)	fresh, dried, other****	HH needs; income	juicy, sugary		••••	•	••	•		•
	Kibriei (1)	fresh, dried, other****	food; income	high demand	high in vitamin A; used to treat heart disease; large fruits	no information		•••••		••	••
	Savzak (1)	fresh, other****	HH needs	good taste		insufficient information					
	Toirak (1)	dried	income	high demand		"					
Daragi (1)	fresh, dried, other****	food; income	high demand	fruits dry on the tree; white pulp	"						

Introduced varieties = red

f = frequency of the replies.

* Farmers were asked to list the 3 varieties of 1 crop they would most like to work with in market-related activities. This list therefore does not represent the full diversity present on farms. No farmer cultivated fewer than 3 varieties of the crop they selected.

** Though some people consider these varieties as introduced, the varieties have been cultivated in the Pamirs for over 100 years. The variety Muzafari, for example, was brought to the Pamirs by a farmer who worked as a gardener in the famed garden of the then (1860 - 1885) Emir of Bukhara, Muzaffar ad-Din. He stole a cutting from the tree by hiding it in his glass of milk. Still today, some farmers leave cuttings in a glass of milk before grafting them¹.

Other**** = processed in jams and juices.

**** The number of dots in the cells gives an approximation of relative quantities.