

# Adapting to Social-ecological Risks to the Conservation of a Muskmelon Landrace in India

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**Table S1.** Measurement of the socio-economic profile of the muskmelon growers.

Variable	Definition	Value/description	Score
Age	Chronological age (y) as on date of interview	<50	1
		51 to 60	2
		>61	3
Experience	Years of engagement with muskmelon cultivation	10-25	1
		26-40	2
		>41	3
Education	Formal schooling/education received by a farmer	No formal schooling	1
		Up to Primary school	2
		Up to High School (10 <sup>th</sup> )	3
		Up to Intermediate (12 <sup>th</sup> )	4
		Up to Graduation	5
		Up to Post-graduation	6
Annual income (INR)	Income from agriculture/other sources	Only agriculture	1
		Two sources (e.g., agriculture and dairy)	2
		≥Three (e.g., agriculture, dairy and salaried employment)	3
Total landholding	Size of agricultural landholding (in ha)	<1.0 ha	1
		1.0–2.0 ha	2
		>2.0 ha	3
Area under muskmelon	Area put under muskmelon crop (in ha)	<0.40 ha	1
		0.40–0.80 ha	2
		>0.80 ha	3
Extension contact	Contacts with research/extension functionaries and developmental agencies	Only one agency	1
		Two agencies	2

**Table S2.** Frequency distribution of stressors and enablers vis-à-vis conservation of muskmelon landrace ‘Jaunpuri Netted’.

Level	Stressors							Enablers				
	BB	ER	DI	MC	RIA	PIS	CH	SP	SCD	EM	PFT	LS
Low	1.7	23.3	41.7	38.3	45.0	55.0	35.0	35.0	11.7	5.0	11.7	5.0
Moderate	95.0	73.3	50.0	38.3	50.0	41.7	48.3	36.7	45.0	38.3	26.7	56.7
High	3.3	3.3	8.3	23.3	5.0	3.3	16.7	28.3	43.3	56.7	61.7	38.3

Abbreviations: BB—incidence of blue bulls, ER—erratic rainfall, DI—declining interest in farming including muskmelon cultivation, MC—market constraints, PIS—poor institutional support, CH—cultural heritage, SP—social prestige, SCD—short crop duration, EM—ease-in-management, PFT—pleasant fruit taste, LS—livelihood support.

**Table S3.** Contribution of variables (%), Eigen values, variance (%) and cumulative variance (%) explained by the first five Principal Components/Dimensions (Dim.1 to Dim.5) for stressors and enablers perceived by the muskmelon farmers. Pointed out values are shown in bold.

Variables	Dim.1	Dim.2	Dim.3	Dim.4	Dim.5
Blue bulls	0.16	14.23	<b>15.80</b>	9.81	8.68
Erratic rainfall	<b>15.51</b>	7.27	2.60	0.89	6.39
Declining interest	2.17	7.93	11.90	8.75	0.63
Market constraints	<b>15.98</b>	8.29	0.06	8.01	0.13
Reduction in area	2.93	1.04	<b>24.12</b>	0.41	<b>30.09</b>
Poor institutional support	<b>17.86</b>	1.34	3.61	0.06	13.20
Cultural heritage	6.53	<b>20.34</b>	0.15	4.59	2.28
Social prestige	<b>18.72</b>	11.34	0.08	5.36	0.58
Short crop duration	2.09	7.62	1.58	<b>40.14</b>	0.01
Ease-in-management	11.31	5.61	4.04	<b>17.44</b>	13.95
Pleasant fruit taste	5.96	8.22	8.53	3.30	1.89
Livelihood support	0.79	6.77	<b>27.55</b>	1.24	<b>22.17</b>
Eigen value	2.55	2.07	1.59	1.13	1.08
Variance (%)	21.21	17.25	13.23	9.38	9.04
Cumulative variance (%)	21.21	38.46	51.69	61.07	70.11

**Table S4.** Temporal reduction in muskmelon crop area over 1992-2017.

Year	Area (sq. km)	Decrease (%)
1992	5.91	---
1997	5.81	1.69
2002	3.48	41.12
2007	3.40	42.47
2013	3.38	42.81
2017	2.66	54.99