

ICARDA

Status of On-farm Agrobiodiversity and Rural Livelihoods in Dry Areas

Prepared by

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Classification of sample farms by type of participation (% of farmers)

Type of participation	Jordan	Lebanon	Palestine	Syria
Agrobiodiversity-enhancement	15	30	60	33
Value-added, income-generating activities	7	9	0	10
Field days + training	17	5	1	7
Non of above (non participants)	61	56	39	50
Total sample size (N)	145	138	140	147



Farmers' knowledge of Agro-biodiversity (%)

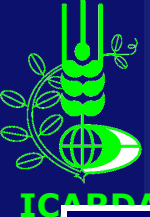
Knowledge & Source	Jordan	Lebanon	Palestine	Syria
Yes	63	67	80	86
More than one source		10	51	20
Agro-biodiversity project	50	56	24	53
Neighboring farmers	10	15	8	16
Media	8	0	1	3
NGO	10	18	0	2
Public institutes	3	0	1	3
Extension	17	0	2	2
Others	2	1	0	1

Hearing (knowing) vs. Participation (%)

Country	Know (hear)	Participation
Jordan	63	39
Lebanon	67	44
Palestine	80	61
Syria	86	50

Contribution of alternative sources to total HH income (%)

Income source	Jordan	Lebanon	Palestine	Syria
Crops (crops+ fruit trees)	16	28	27	34
Livestock products	15	6	6	5
Live animals	11	7	16	4
Off-farm (Agriculture)	3	3	3	1
Off-farm	4	34	26	6
Government	48	10	15	20
Remittances (outside country)	3	1	0	4
Others	0	12	10	26



Variety Dominance in Palestine

Species	Variety	Crop area (%)	Part. Area (%)	Non-Part (%)
Olive	Romee	67	59	41
	Nabaly	32	63	37
Wheat	White Debeya	44	73	27
	Anbar	25	53	47
	Heeteya	8	98	2
Barley	6 lines barley	89	63	37
Vetch	Baladi	100	80	20
Lentil	Baladi	98	71	29
Chickpea	Baladi	91	100	0
	Turkey	9	48	52



Variety Dominance in Lebanon

Species	Variety	Total Crop Area (%)	Total Farmers (%)
Apricot	Faransi	57	65
Almond	Baladi	49	61
Fig	Baladi	87	78
Grape	Aabidi	86	85
Apple	Golden	94	92
Wheat	Salamouni	83	90
Barley	Baladi	100	100
Lentil	Baladi	100	100
Chickpea	Baladi	100	100

Variety Dominance and Project Reach in Jordan

Species	Variety	Total crop area (%)	Part area (%)	Non-part area (%)
Olive	Baladi	36	68	32
	Romi	27	29	71
	Nabali	9	26	74
Barley	Baladi	46	3	97
	Safey	32	9	91
Wheat	Baladi	40		
	Local	14		
	Zogheebi	45		
Grape	Zeeni	75		
	Baladi	18		

Intensity of Local variety Use in Lebanon (% of area)

Species	Local variety	New variety	Mixed varieties
Apricot	11	70	19
Cherry	20	71	9
Almond	100	0	0
Grape	100	0	0
Apple	7	93	0
Olive	90	10	0
Wheat	90	10	0
Barley	100	0	0
Chickpea	100	0	0
Lentil	100	0	0

Variety Dominance for Wheat in Syria

Variety	Average Area (D)	Total Crop Area (%)	Total farmers (%)
Hourani	11	45	49
Sham	16	14	10
Abosadi	14	12	10
Baladi	9	4	5
Tunisia	2	1	8
Hriadia	3	2	6

Sources of Degradation (% of farmers)

Degradation Source	Syria	Jordan	Lebanon	Palestine
Erosion	18	29		54
New Species	13		24	41
Urbanization	12	30		56
Quarries	12			21
Overgrazing		46	12	92
Deforestation		23		
Reclamation			20	29



Impact of Degradation on Agro-biodiversity in Palestine (% farmers)

Source of Degradation	Existence of Degradation	Impact on Biodiversity		
		Low	Medium	High
Overgrazing	91	11	53	36
Reclamation	29	46	44	10
Erosion	54	31	64	5
New Species	42	33	54	12
Quarries	21	21	59	21
Urbanization	57	42	46	12



Changes in Area of Local Varieties, 2000-2004

Species	Syria	Palestine	Lebanon
Wheat	-40	15	-41
Barley	-35	-75	-16
Chickpea	44	75	-21
Lentil		-36	-49
Apple	14		66
Grape	-23	-17	-10
Olive	3	25	145
Cherry	21		0
Apricot		179	0

Abandoning Local Varieties in Lebanon (% of farmers)

Species	Farmers (%)	Reasons for Abandoning
Wheat	19	<ul style="list-style-type: none"> • High production cost • Shift to high value crops (fruit trees) • Labor unavailability & high labor wage
Barley	14	
Chickpea	14	
Lentil	3	
Apricot	0	
Grape	0	
Vicia	2	

Sources of Seeds for Targeted Species in Palestine

Species	Self-prod	Market	Exchange
Barley	69	29	2
Wheat	55	31	14
Lentil	71	9	20
Chickpea	36	64	0

Household Assets

Assets	Jordan	Lebanon	Syria	Palestine
Natural				
Arable Land	104	56	40	53
Irrigated area	10	4	0.4	0.2
Human				
Farmers age	51	51	51	55
Illiterate (%)	17	21	10	15
Financial				
Savings (%)	6	9	6	29
Access to credit (%)	28	43	62	25
Annual income (\$)	6896	7120	2919	8905
Off-farm income (%)	65	48	45	51
Social Capital				
Having cooperatives (%)	52	64	95	62
Coop. Membership (%)	26	20	65	13
Physical				
Owned House (%)	91	96	94	94
Owned Tractors (%)	3	19	14	24
Owned Car/Pickup (%)	42	55	15	30
Flock Size (head)	66	32	7	25



Calculating Wealth Index

- Wealth ranking is calculated using farm survey data
- Key variables represent human, natural, financial, physical, and social capitals
- This leads to the development of wealth index
- Wealth index are created using principle component analysis.
- This combines several variables into a single derived variable, wealth index.
- Sorting Households into wealth categories and comparing the main differences.



Wealth quartiles by target area (% of households)

		Wealth quartiles			
		Lowest 25%	25 - 50%	50 - 75%	Highest 25%
Syria	sweida	17.3%	25.3%	17.3%	40.0%
	haffa	31.9%	26.4%	33.3%	8.3%
Palestine	Khalil	32.9%	10.0%	24.3%	32.9%
	Jenin	17.1%	38.6%	27.1%	17.1%
Lebanon	Aarsal	20.5%	32.9%	28.8%	17.8%
	Baalbeck	29.2%	16.9%	20.0%	33.8%
Jordan	Ajloun	41.3%	29.3%	16.0%	13.3%
	Mwaqar	8.6%	20.0%	32.9%	38.6%

Distribution of Participant Farmers by Wealth Group

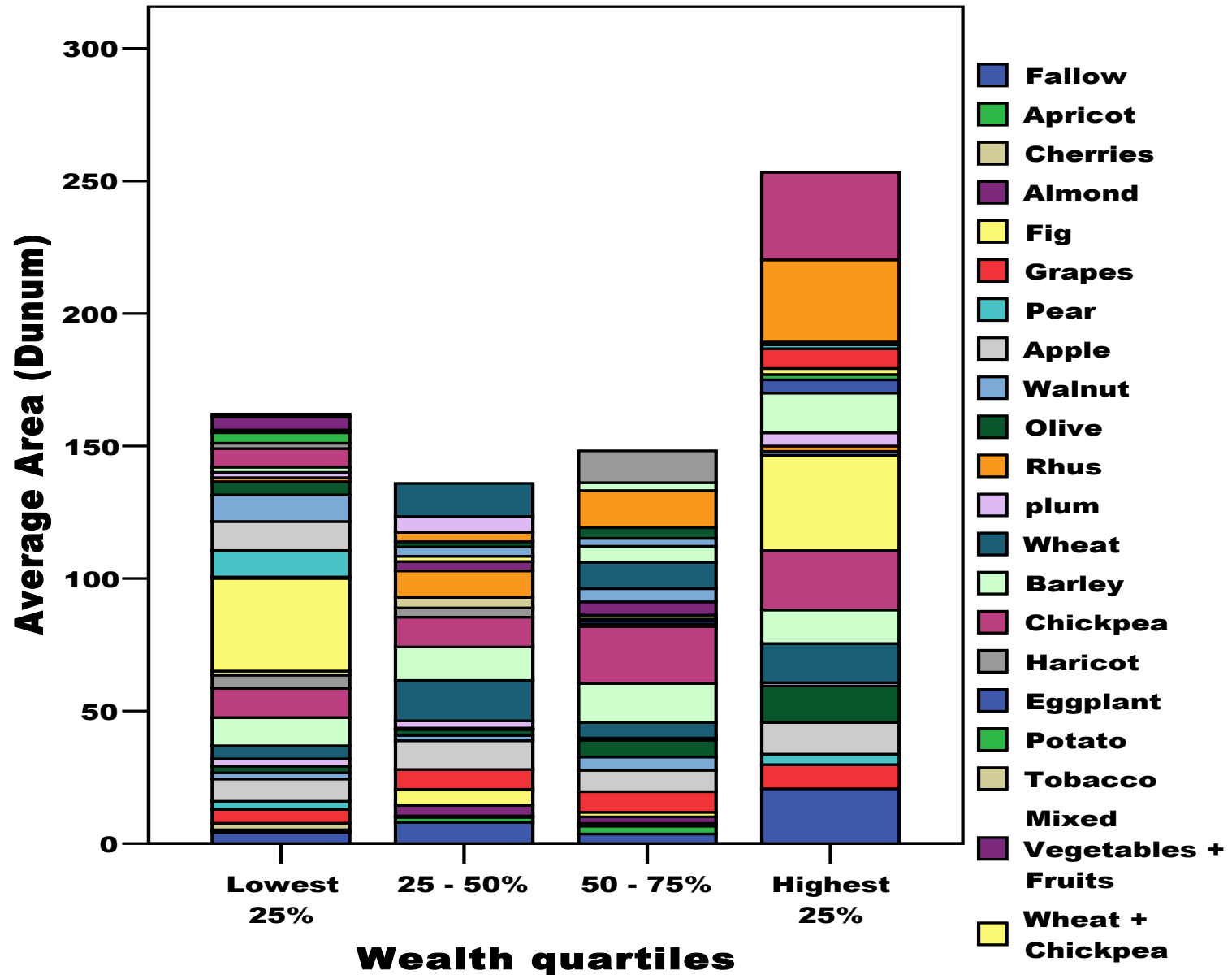
Wealth Group	Jordan	Lebanon	Palestine	Syria
Lowest 25%	44	25	21	24
25-50%	27	28	26	20
50-75%	11	22	22	27
Highest 25%	18	25	31	28

Importance of Targeted Species by Wealth Group in Syria (% of area)

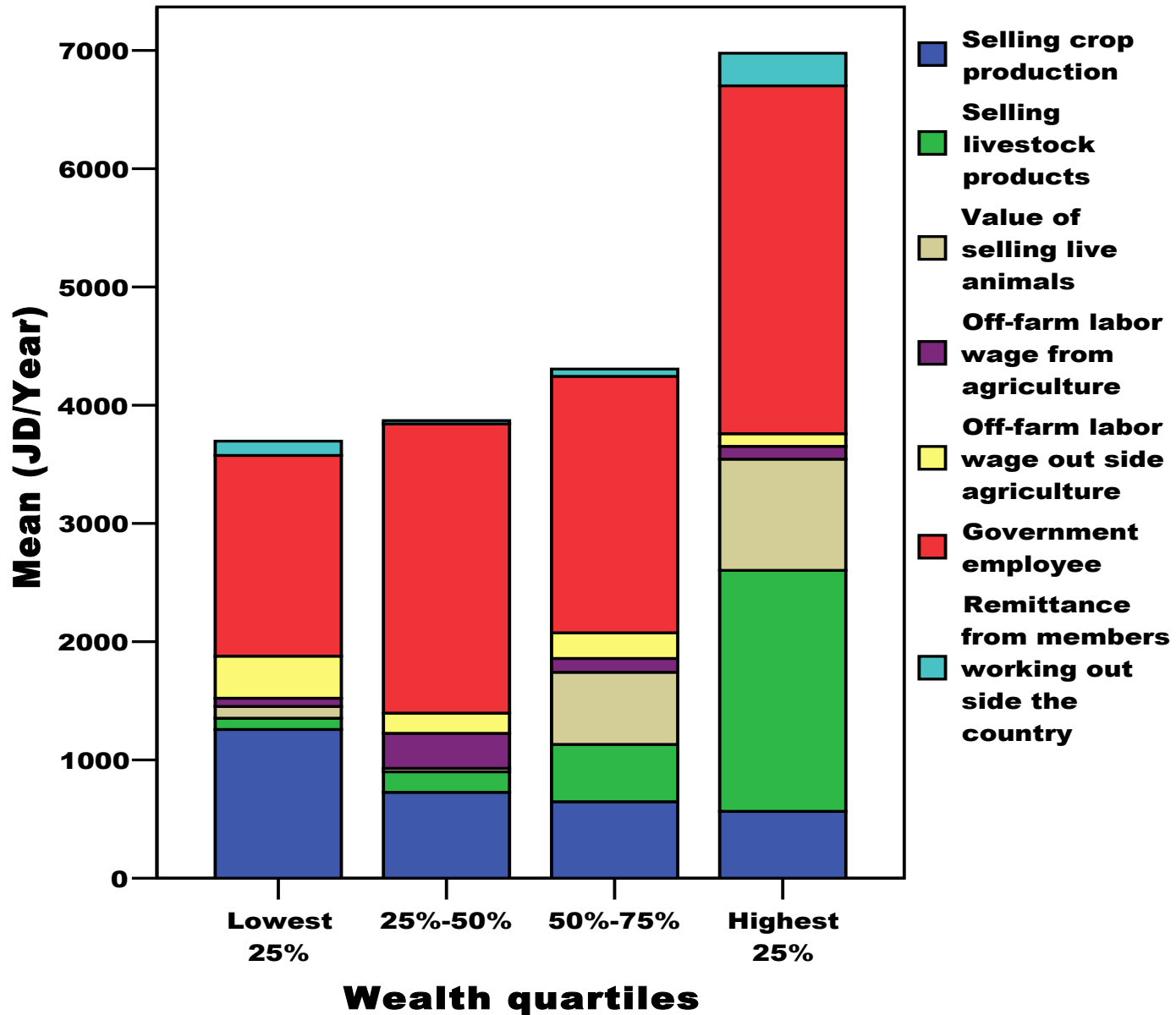
Species	Lowest 25 %	25-50 %	50-75 %	Highest 25 %	All Groups
Grapes	16	17	9	22	17
Apple	12	11	8	25	15
Olive	8	11	10	8	9
Wheat	15	19	27	16	19
Barley	7	6	8	2	5
Chickpea	7	13	14	15	13



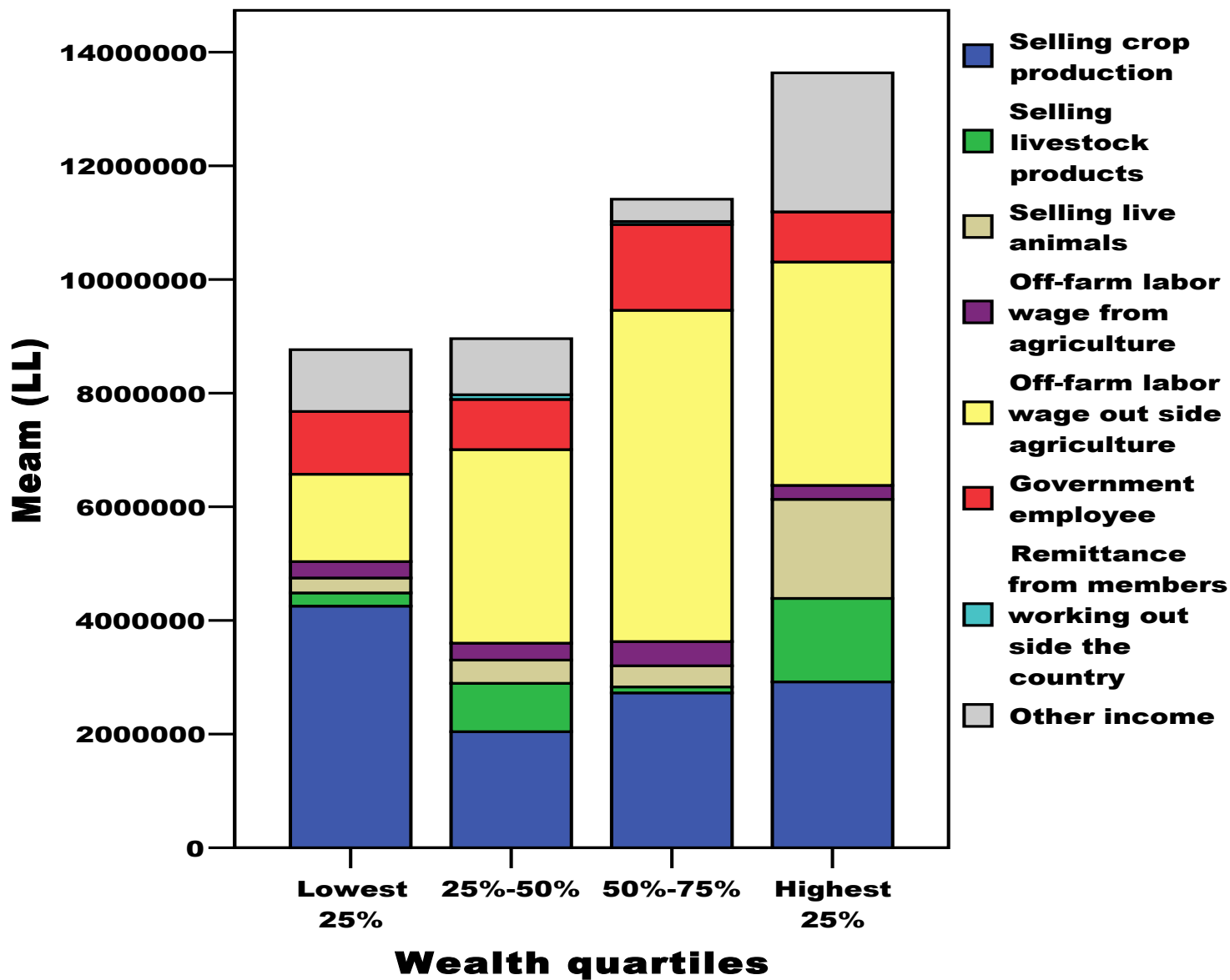
Land use in Syria



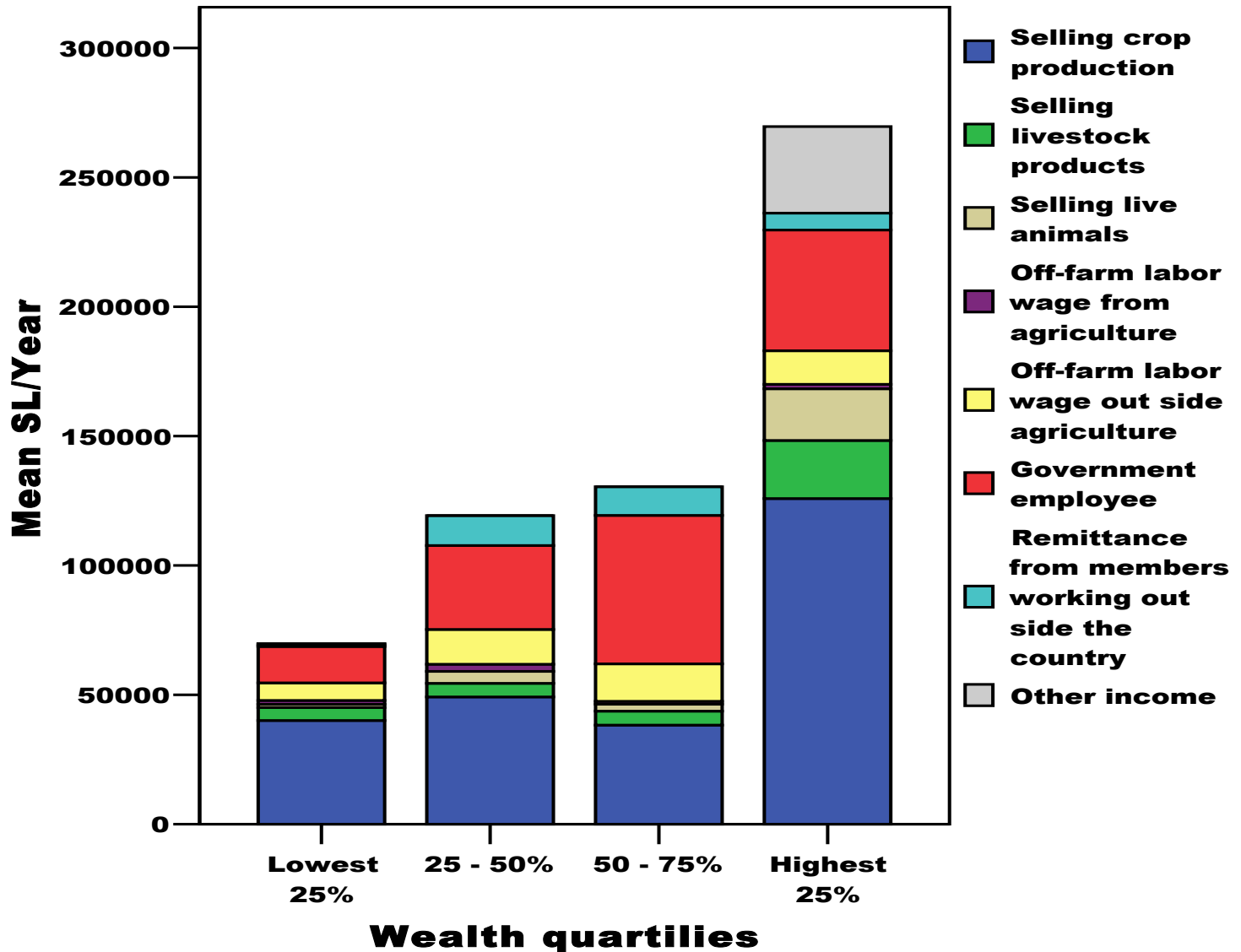
Income Sources, Jordan



Income Sources, Lebanon

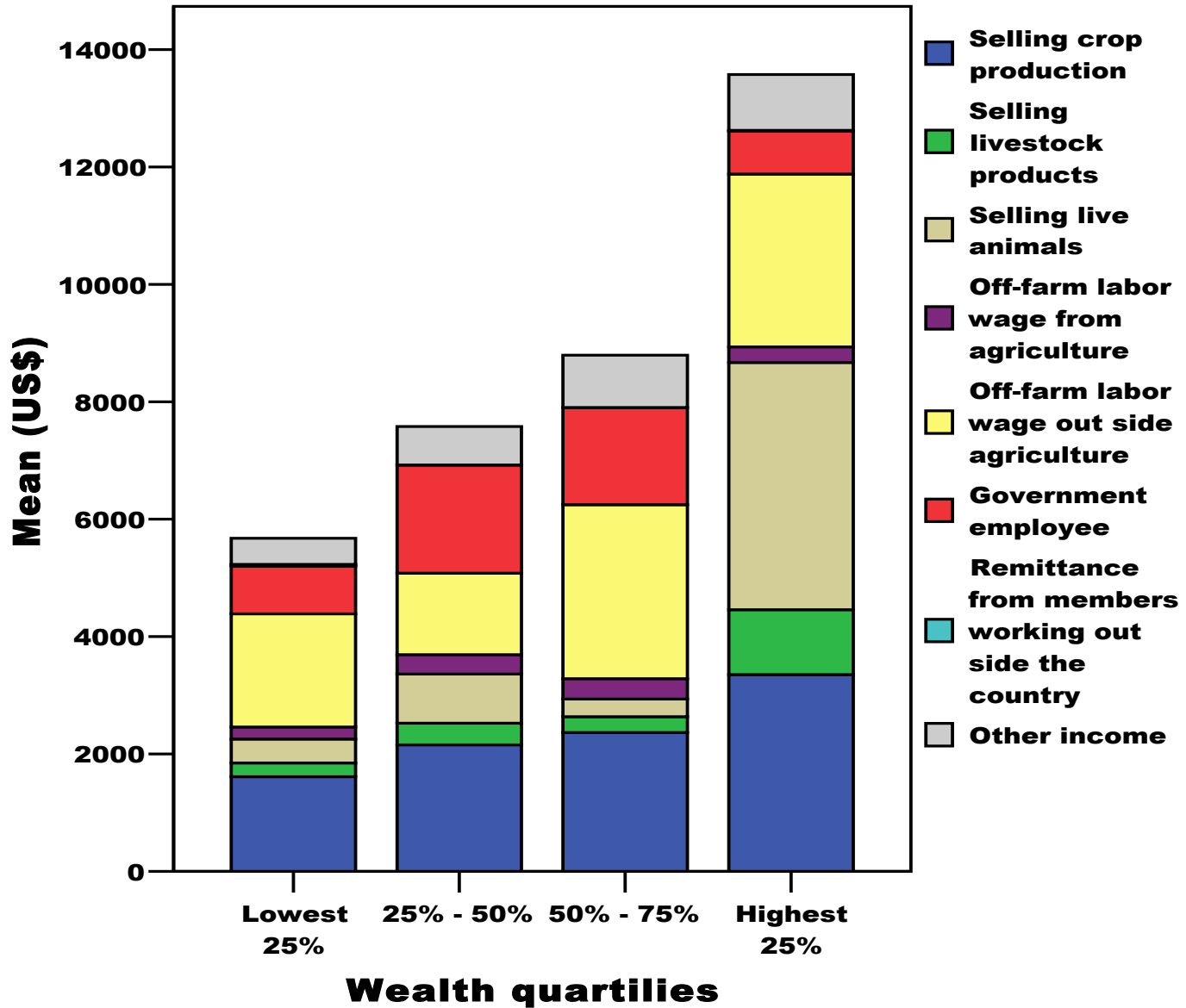


Income Sources, Syria





Income Sources, Palestine





Main Sources of HH Income by Wealth Group

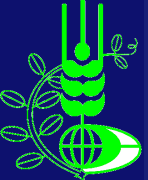
Wealth Group	Jordan	Lebanon	Syria	Palestine
Lowest 25%	<ul style="list-style-type: none"> •Gov't •Crops •Off-farm labor 	<ul style="list-style-type: none"> •Crops •Off-farm labor •Gov't 	<ul style="list-style-type: none"> •Crops •Gov't •Off-farm labor 	<ul style="list-style-type: none"> •Off-farm labor •Crops •Gov't
25-50%	<ul style="list-style-type: none"> •Gov't •Crops •Off-farm labor 	<ul style="list-style-type: none"> •Off-farm labor •Crops •Gov't 	<ul style="list-style-type: none"> •Crops •Gov't •Off-farm labor 	<ul style="list-style-type: none"> •Crops •Gov't •Off-farm labor
50-75%	<ul style="list-style-type: none"> •Gov't •Crops •Live animals •Livestock products 	<ul style="list-style-type: none"> •Off-farm labor •Crops •Gov't 	<ul style="list-style-type: none"> •Crops •Gov't •Off-farm labor 	<ul style="list-style-type: none"> •Off-farm labor •Crops •Gov't
Highest 25%	<ul style="list-style-type: none"> •Gov't •Livestock products •Live animals •Crops 	<ul style="list-style-type: none"> •Off-farm labor •Crops •Others •Live animals 	<ul style="list-style-type: none"> •Crops •Gov't •Others •Livestock products •Live animals 	<ul style="list-style-type: none"> •Live animals •Off-farm labor •Crops •Livestock products

Value added of seed treatment (\$/d)

Item	Palestine	Syria
Treated	64	21.6
Non-treated	59	14.2
Net difference (Add Value)	5	6.4

Farmers Opinion on Benefits from the Agro-biodiversity Project in Palestine

Benefits	Farmers realizing Benefits (%)	Benefit Distribution		
		Participants	Field Days	Non-Part.
Seed Treatment	30	92	0	8
Awareness & Extension	19	73	4	23
Medicinal Plants	4	83	0	17
Range Shrubs	5	86	14	0
Nothing	31	0	0	100



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Farmers Opinions on the Performance of the Agro-biodiversity Project (% of farmers)

Performance	Palestine	Syria
V. Good	11	9
Good	35	36
Average	23	26
Poor	9	9
V. Poor	3	2
Do not know	19	19

Thank you

