

SUPPLEMENTARY MATERIAL

Drought impacts and adaptation strategies in family-based sericulture systems: Evidence from southern Brazil

Climatic Change

Table S1. Statement examples of the analytical categories identified in interviews with family sericulture farmers regarding drought impacts and adaptive strategies in the sericultural production system.

Category	Examples of interviewee statements
Sericulture as an integrated family farming system	“In this case, when the family works together for the benefit of the whole family, everyone is involved for the family’s well-being, working collectively.” (Farmer 12).
	“Nowadays, those with small farms have to rely on this type of activity [...] on a small plot of land, it is possible to make a living.” (Farmer 44).
	“Our land here is small and quite uneven [...] and with silkworm farming you have monthly income, like a guarantee for the family.” (Farmer 27).
	“Considering the size of the land required to generate income, if it were for maize, soybean, or other crops, much more land would be needed.” (Farmer 77).
Impacts of drought on the sericultural production system	“We work together to generate higher income [...] it is about being together to secure the family’s livelihood.” (Farmer 21).
	“With this recent drought, we actually lost all the small plots we planted. For the silkworms, production decreased significantly because the mulberry did not develop.” (Farmer 64).
	“The drought worsened here because it went a long time without rain [...] which prevented mulberry growth.” (Farmer 33).
	“We had already experienced drought the year before [...] now the mulberry plants were almost all dead, completely yellow.” (Farmer 60).
Adaptive strategies at the production system level	“There were many problems [...] the last silkworm batches from last year were the worst; the cocoons had almost no weight.” (Farmer 61).
	“During the dry period, we had to fetch water from the well even for drinking [...] it was completely dry, something that had never happened before.” (Farmer 57).
	“We had to leave [...] we worked clearing land for large farmers.” (Farmer 23).
	“Because of the drought, I went [...] to work for 90 days at a small market.” (Farmer 49).
	“My husband already works outside [...] the children also left, because there were no silkworms due to the drought.” (Farmer 8).
	“We dug that well ourselves using hoes.” (Farmer 3).
	“We use that water for everything; we installed gutters when the shed was built because the drought was already severe.” (Farmer 8).

Table S2. Socioeconomic characteristics of sericulture farmers interviewed in the study.

Characteristic	Category	Percentage (%)
Gender	Female	57.5
	Male	42.5
Age group	18–29	13.75
	30–39	22.5
	40–49	32.5
	50–59	27.5
	60–69	3.75
Education level	Illiterate	2.5
	Incomplete primary education (I)	20
	Complete primary education (I)	32.5
	Incomplete primary education (II)	10
	Complete primary education (II)	8.75
	Incomplete secondary education	3.75
	Currently attending secondary education	1.25
	Complete secondary education	17.5
	Technical degree completed	1.25
	Higher education completed	2.5
Household size	1–2	32.5
	3–4	57.5
	5–7	10
Land tenure	Owned	87.5
	Rented	12.5
Farm size (hectares)	<5	73.75
	6–10	22.5
	11–20	1.25
	31–40	1.25
	41–50	1.25
Residence in the municipality (years)	1–4	3.75
	5–10	2.5
	11–15	2.5
	16–20	5
	>20	86.25
Experience in sericulture (years)	<1	3.75
	1–4	15
	5–10	32.5
	11–15	20
	16–20	17.5
	>20	11.25
Monthly household gross income (minimum wages)	<1	27.5
	1–3	48.75
	3–6	20
	6–9	3.75
Contribution of sericulture to household income	70–100%	65
	50–69%	20
	25–49%	11.25
	1–24%	3.75
Participation in local association	Yes	96.25
	No	3.75

Table S3. Productive diversification among sericulture farmers interviewed in the study.

Type	Quantity	Percentage (%)
Cassava	72	90
Poultry	71	88.75
Vegetables	71	88.75
Fruits	61	76.25
Beans	53	66.25
Swine	51	63.75
Potatoes	50	62.5
Maize	48	60
Cattle	36	45
Sugarcane	31	38.75
Fish	13	16.25
Peanuts	2	2.5
Rice	1	1.25
Honey	1	1.25
Goats	1	1.25