



“Farm management issues in OA ”

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Tools

- 1. Farm balance sheet**
- 2. Farm income statement**
- 3. Various partial accounts**



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Who is interested in such issues?

- The producers, who want to know if OA is profitable...
- The advisors, who want to give correct advise
- The policy makers, who want to know which type of support (if any) is necessary
- The scientists, who have to elaborate new knowledge
- The consumers, who want to know why some organic foods are more expensive

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Farm balance sheet

New star farm, December 31, 200X

Assets	Value	Liabilities	Value
Current assets	2.000	Current liabilities	1.500
Intermediate assets	10.000	Intermediate liabilities	12.000
Fixed assets	130.000	Long term liabilities	50.000
		Total liabilities	63.500
		Net worth	78.500
Total assets	142.000	Total liab + net worth	142.000

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Farm Income Statement



New star farm, Fiscal Year xxxx

Assets	Value
Cash farm income:	14.400
- sales of products	10.000
- sales of services	1.000
- government subsidies	500
- other cash incomes (prizes, insurances, etc.)	400
- changes in capital assets	2.500
Cash farm expenses	9.000
- variable expenses	3.000
- fixed expenses	6.000
Net cash farm income (1-2)	5.400
Non cash adjustments	8.000
- depreciations	6.000
- inventory changes	2.000
Family consumption	4.000
Net farm income (3-4+5)	1.400

Questions, public and private ones

- How much is the net worth of this farm?
- How much money (??) did this farmer make in one year?
- Is this crop profitable?
- Should I grow carrots or sugar beets?
- Should I employ more farm hands or purchase a machine?
- Should I sell the raw product or should I process it into something else?
- Which interest rate can this farmer pay on farm operational credit?
- Which level of subsidy is needed by this farmer / crop?



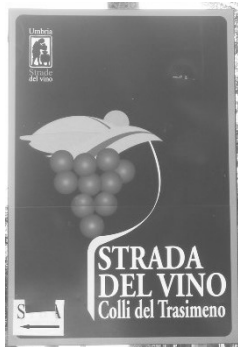
OECD classification of policies

1. **Market price support: policies affecting producer and/or consumer prices (levies, quotas, subsidies per kg, guaranteed prices, etc.); → to be eliminated**
2. **Direct payments: decoupled subsidies (with conditional ties);**
3. **Input cost reduction: subsidies on inputs, on wages and social security, water, credit, land, etc. → to be eliminated**



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OECD classification 2

4. **Provision of services: research, extension, training and education, pest monitoring, soil analysis, planning, quality and safety control, certification;**
5. **Other measures, such as regional marketing, rural development projects, etc..**



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Is organic agriculture profitable?

- **Within the EU (since 1992): no... it needs subsidies..**
- **All over the world and within EU, before 1992: yes, if...**

Compared to what?

- **Traditional agriculture?**
- **Conventional agriculture?**



Where?

- **Flatland, irrigated, input intensive production systems?**
- **Mountain, rainfed, low external inputs systems?**

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What can we compare?



- **Yields? What yields? Dry matter? Shelf life? Proteins? Qualities?**
- **Costs ? Open costs or hidden ones?**
- **Water consumption?**
- **Energy consumption?**
- **Labor demand?**
- **Environmental impact? Biodiversity, CO2 sequestration?**

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Soft Wheat (t ha⁻¹)

Years	Authors	Location	Org	Conv	Org/Conv %
2006-08	Paffarini 2009	Umbria	6,4	7,2°	-11,1
2008	Chiorri, Galioto	North - Centre	4,3	3,5	22,1
2007	Nigro, Scaltriti	Emilia Romagna	5,2	6,5	-20,0
2006	Carillo Scardera e Valli 2008	Italia	4,1	4,0	1,8
2004-05	Mazzoncini et al.	Toscana	2,4	5,5	-56,4
2001	Migliorati	Umbria	5,3	3,9	35,9
1999-2001	Perenzin et al.	Lombardia (hills)	5,1	5,4	-5,6
1997	Sanna	Italia	3,9	4,8	-18,8
1994-96	Zanoli, Fiorani e Gambelli	Marche	3,3	4,0	-17,5
1992	Mosso e Pagella	Piemonte	4,1	4,2	-2,4
1992	Cicia e D'ercole	Molise	3,2-3,5	3,5-4,0	
1992-94	Chiorri	Umbria	2,5-3,7	4,2-4,3	
1993	Ciani et al.	Umbria	4,3	6,3	-31,7
1989	Pollastri	Emilia Romagna	5,1	5,0	2,0

° = low input

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Corn (t ha⁻¹)

Years	Authors	Location	Org	Conv	Org/Conv %
2006-08	Paffarini 2009	Umbria	3,4	4,8°	-29,8
2006-2007	Chiorri and Galioto 2008	North Italy	4,3	rainfed	
2006-2007	Chiorri and Galioto 2008	North Italy	8,8	irrigated	
2004	Repetti 2005	Emilia Romagna	10,9	(range 8,01 - 12,93)	
2002-04	Bonomi 2006	Lombardia	10,2		
1999-2007	Piazza	Emilia Romagna	8,5		
2003	Repetti 2004	Lombardia	10,0	(range 8,38 - 11,58)	
2000-01	Chiorri and Pignataro	Umbria	5,3	5,7	-7,0
1996	Gregori	Friuli	11,6	11,6	0,0
1989	Pollastri	Emilia Romagna	4,6	8,3	-44,6

° = low input

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2006-08 Soft wheat on rainfed hills (€ha⁻¹)

Item	LEI	OA	OA/LEI %
- Yield (t/ha)	7,2	6,4	-11,1
- Price (€/t)	200	274	36,9
Total variable costs	1.340	1.239	-7,5
- Operations	1.074	914	-14,9
- Inputs	247	307	24,3
- Interest	19	18	-5,3
Total output	2.369	2.723	14,9
- Main product	1.447	1.757	21,4
- Byproduct	350	311	-11,1
- EU OA / LEI subsidies	185	267	44,3
- EU SFPS	388	388	0,0
Gross Margin	1.029	1.484	44,2

SFPS = Single Farm Payment Scheme

Source: Paffarini, 2009

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2006-08 Irrigated tomato for industry (€ha⁻¹)

Item	LEI	OA	OA/LEI %
- Yield (t/ha)	87,4	76,0	-13,0
- Price (€/t)	93	113	21,5
Total variable costs	6.052	7.477	23,5
- Operations	2.200	2.942	33,7
- Inputs	3.793	4.497	18,6
- Interest	60	38	-36,7
Total output	8.561	8.937	4,4
- Main product	8.061	8.357	3,7
- EU OA / LEI subsidies	500	580	16,0
- EU SFPS		<i>not yet implemented</i>	
Gross Margin	2.509	1.460	-41,8

SFPS = Single Farm Payment Scheme

Source: Paffarini, 2009

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Labor..

- Does OA demand more or less labor than conventional agriculture?
- Labor intensive – labor extensive farming systems (and food processing)
- Is labor an internal resource (family, group member) or an external input?
- Anyhow.. What about the value of the product?

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Labor demand in Danish farms (i. n.)



Category	Conv	Org
All farms	100	202
5 - 10 ha	100	163
11- 30 ha	100	286
> 30 ha	100	156
Open field veggies	100	115
Cereals and mixed	100	220
Dairy cattle and crops	100	203

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Labor demand in Umbria (1992-94)

Items	Region		Flatland		Hills		Mountain	
Farms (no.)	19	349	2	80	11	189	6	80
Area (ha)	22,8	21,4	45,9	15,5	15,9	19,3	27,7	28
Labor/ha (h)	119	197	51	268	133	216	141	158
FNI/h family labor (000 IT lira)	6	4	-2	5	4	3	10	3



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(Agriculture, food and health)



- What about the consequences on health of conventional agriculture and abundance of cheap food on health?
- Obesity, cardiovascular diseases, type 2 diabetes, unhappiness, etc..
- Private medical costs paid by the consumers
- Social costs paid by the State = the tax payers
- An holistic analysis of the food sector should take into consideration all aspects.

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As partial conclusions

- There is not ONE organic agriculture, but MANY organic farming systems
- The farm should be considered as a whole, with an holistic approach
- Diversification, both *horizontal* and *vertical* (as suggested by the EU rural development policy) is a key feature of organic agriculture
- Successful organic farmers manage complex farms, labor intensive, market oriented.

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As partial conclusions

- When all subsidies are considered, conventional farming is largely inefficient
- The economic and social consequences are more employment and higher added value at the farm and in rural areas



Santucci, M. et al. (2012)



Thanks for attention



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