Alternatives for tobacco in Europe: outlook and impacts

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Outline

- Impact of tobacco cultivation on SDG
- Outlook for tobacco
- Is there life beyond tobacco?
- Research contributions and methodological perspectives
- Literature review: a (qualitative) multicriteria evaluation
- Implications and final remarks
The big challenge: the central role of the SD

- For sustainable development to be achieved, it is crucial to harmonize three core elements: economic growth, social inclusion and environmental protection. These elements are interconnected and all are crucial for the well-being of individuals and societies.
The impact of tobacco cultivation

- Social, economic and environmental

- Energy for curing, Pesticides, Water, Fertilizers
- High investments, Fair income level
- Labour intensive crop, smoke diseases
Tobacco cultivation and the UN SDG
Outlook for tobacco in EU

- Bad image for negative impact on health (negative externalities)
- End of coupled public support
- Decrease of production and cultivated areas
- Declining consumption of tobacco products in 5-10 yrs
- Strong pressure on stakeholders
Outlook for tobacco growers: is there life after the end of CAP support?

- Increasing focus on efficiency and profitability
- High costs for workers and energy
- High demand for innovation (product, process, organization)
- Quality of production is a key asset for EU tobacco growers
- Need for a better coordination in order to increase revenue
Why do farmers still rely on tobacco?

The farmers rely on tobacco cultivation because of the following factors (Kienle et al, 2015):

1) Stable and reliable contractual relationships for deliveries gives security in tobacco sale
2) Risk minimization due to presence of strong and influent tobacco industry
3) Tobacco provides a high money cash once a year
4) It is assumed that the GI from the tobacco crop is higher than for any other crop
What future beyond tobacco?

- Risk of trade-off between economic benefit and social externalities
- The job argument has always a strong influence on policy makers.
- Risk of abandonment of agricultural activities and depopulation of rural areas
A (possible) role for research institutions

- Challenges: identify reliable alternatives to tobacco in a SD framework

- Need for an evidence-based approach VS a policy-based approach

- Risk of unbalanced relationship between what research suggests and what policymakers/stakeholders promote: need for combining quantitative evidences and negotiation ability
Methodological perspective

- **A multi-criteria approach** in order to evaluate the possible impacts of different tobacco diversification/integration alternatives on income, employment and environment (Kienle et al., 2015).

- **Strong need for updated data and statistics** on:
  - Production plan of the study area (distribution of agricultural crops in the study region)
  - Technical and economic coefficients (yield of crops, prices, variable costs, labor hours per hectare)
  - Characteristics of the selected agricultural area (in terms of socio-economic characteristics, like structure and number of farm holdings, family size, family labor)
  - Environmental issues (e.g., applied fertilizer per hectare per crop grown, type and amount of pesticides per hectare per crop grown)

Kienle et al. (2015), Alternative to tobacco cultivation – towards an evidence based approach, Land use policies 45, 199-203.
Methodological perspective

- Analyses should be based on **type of farms according to size**, since it is the most hampering aspect for tobacco diversification.

- Moreover analyses based on size allow a direct link with different countries:
  - Small (Greece, Bulgaria, Southern Italy)
  - Medium (Poland, Spain, Hungary)
  - Large (France, Germany, Northern Italy)
The importance of being a feasible alternative

What must be taken into account?

1) Real market opportunities at a specific geographical level
2) Presence of reliable infrastructures for transportation, processing and so on
3) Quality of institutions (enforcement of rules)
4) Labour intensity
5) Opportunities for family workers employments
6) Amount of investments requested (machinery, energy)
7) Need for financial resources
8) Expected cash flow
9) Expected farm incomes and/or family farm income
10) Environmental issues (additional costs, public acceptability)
A qualitative evaluation – small farms

Table 1A – Specific requirements of sustainable alternatives for tobacco according to farm size

<table>
<thead>
<tr>
<th>Size/Dimension</th>
<th>Economic</th>
<th>Social</th>
<th>Institutional</th>
<th>Environment</th>
</tr>
</thead>
</table>
| Small (Greece, Bulgaria, Southern Italy) | ▪ Moderate investment
▪ High value added
▪ Market potential at local level | ▪ Labour intensive production
▪ Employment of family workforce | ▪ Enforcement of contracts with local buyer
▪ Public support for SMEs | ▪ Short supply chains
▪ Local markets |

Table 2A – Examples of sustainable alternatives according to requirements of table 1

<table>
<thead>
<tr>
<th>Size</th>
<th>Examples of alternatives</th>
</tr>
</thead>
</table>
| Small (Greece, Bulgaria, Southern Italy)  | 1) For some regions traditional livestock farming of some **special meat races** may be a good solutions. They could maintain income and temporal employment losts could be replaced by new jobs in on-farm processing activities (e.g. cheese making, meat process).  
2) The vast majority of small tobacco farmers may choose an alternative which gives high income per agriculture area. Some alternatives available may have medium/high investment costs, such as **green house production** with **hydroponics or aquaculture**. However they are quite away from the experience of tobacco farmers and could represent only an individual solution.  
3) **Organic field vegetable production** will maintain or even improve farm income, temporal employment may be maintained and, moreover, it can create new jobs in on-farm activities (manipulating, packing or processing). |
A qualitative evaluation – medium farms

Table 1B – Specific requirements of sustainable alternatives for tobacco according to farm size

<table>
<thead>
<tr>
<th>Size/Dimension</th>
<th>Economic</th>
<th>Social</th>
<th>Institutional</th>
<th>Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium (Poland, Spain, Hungary)</td>
<td>- Medium/high investment</td>
<td>- Creating new jobs in on-farm activities</td>
<td>- Public aids for SMEs</td>
<td>- Logistics efficiency</td>
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<td></td>
<td>- Moderate cash flow and GI level</td>
<td>- If the case, family workforce employed in off-farm activities</td>
<td>- Support of POs/IOs</td>
<td>- Organic method</td>
</tr>
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<td></td>
<td>- Market potential at regional/national level</td>
<td></td>
<td>- Enforcement of collective arrangements</td>
<td>- Certifications (CF, WF, animal welfare)</td>
</tr>
</tbody>
</table>

Table 2B – Examples of sustainable alternatives according to requirements of table 1

<table>
<thead>
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</table>
| Medium (Poland, Spain, Hungary)| - **Granivorous livestock** farming entails high investment costs but they may give high farm incomes. However, the high number of farms which may choose this diversification alternative can result in market imbalance.  
- **Rural tourism** could be a very individual solution as it is in most of the concerned regions already exploited |
A qualitative evaluation – large farms

Table 1C – Specific requirements of sustainable alternatives for tobacco according to farm size

<table>
<thead>
<tr>
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<th>Environment</th>
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</thead>
</table>
| Large (France, Germany, Northern Italy) | ▪ Level of investment is not a constraint  
▪ Exploit economies of scale  
▪ Low GI/ha  
▪ Market potential at world level | ▪ Workforce employed in off-farm activities | ▪ Support of POs/IOs  
▪ Enforcement of collective arrangements | ▪ Organic method  
▪ Certifications (CF, WF, animal welfare) |

Table 2 C– Examples of sustainable alternatives according to requirements of table 1

<table>
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| Large (France, Germany, Northern Italy) | ▪ They may implement all possible diversification alternatives.. They may avoid income losses thanks to high investments, with positive effects also on employment.  
▪ **Energy crops** entail high investments, allow exploiting economies of scale and reducing fixed costs and lastly provide medium-high GI/ha. It causes a complete loss of employments due to introduction of mechanized crops.  
▪ **Arable crops** represent the «extrema ratio». They entail moderate investments, allow exploiting economies of scale and reducing fixed costs and lastly provide low GI/ha for larger farms. On the other hand temporal employment is completely lost and need to be allocated in off-farm activites.  
▪ **Permanent tree crops** could represent only an additional activity since they could entail loss in income and temporal employment lost |
Implications and final remarks

- Uncertain outlook: it is crucial to carefully evaluate feasible and sustainable alternatives to tobacco in EU with a evidence-based approach.

- Central role of mesoinstitutions (POs and IOs) in order to govern and foster a strategy of «sustainable integration» to tobacco, aimed to combine tobacco with other productions. Indeed they could/should:
  1) **Promote studies and research** to provide updated info for farmers
  2) Establish stable relationships with relevant stakeholders of alternative productions
  3) **Support farmers in evaluating alternative options**
  4) Ensure a continuous interplay with policymakers (advocacy action) to incentivize the integration strategy
Implications and final remarks

- A strategy of sustainable integration of tobacco cultivation
- Promote the shift from a specialization model to an integration model for tobacco
- These «integrative crops» should act as a «market safety net» in order to ensure:
  - High profitability
  - Stable market perspective
  - No negative impact on the environment
  - A high level of employment
Thanks for the attention!

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