Impact of family farming practices in the environment

Telmo Costa, Guadalupe Ribeiro Pinheiro, Luisa Silva, José Barata, Ana A. R. M. Aguiar, Helena Esteves Correia, Raquel Guiné, Cristina Parente e Cristina Amaro da Costa

Project “BRIDGES BETWEEN FAMILY FARMING AND ORGANIC AGRICULTURE”

Biodiversity, soil preservation, pesticides, perceptions on organic farming
The universe of family farming...

<table>
<thead>
<tr>
<th>Family Farms</th>
<th>Food</th>
<th>Dependent on family farming</th>
</tr>
</thead>
<tbody>
<tr>
<td>88%</td>
<td>70%</td>
<td>40%</td>
</tr>
</tbody>
</table>

570 million farms in the World

<table>
<thead>
<tr>
<th>Family Farms</th>
<th>Total arable land area</th>
<th>Agricultural Labours</th>
</tr>
</thead>
<tbody>
<tr>
<td>93%</td>
<td>50%</td>
<td>80%</td>
</tr>
</tbody>
</table>

280 thousand farms in Portugal
Family Farming

Reduced care regarding:
- Environment
- Farmers
- Health
- Consumers

However...

Society relates family farming to more **environmentally friendly** and **health conscious** farming practices.

In other words, there is no association towards organic agriculture.
Family farming practices and their impact on the environment

Questions

Biodiversity
Farming practices
Pesticides and contaminants

Farmers of the North and Center regions of Portugal
Methodology

Checklist type Questionnaire

163 Farmers of the North and Center of Portugal

Technical itineraries of the regions cultures

Focus Groups

Aug. 2017 Nov. 2018

Farms, Markets, Co-Op’s, Trainings, Seminars, Street, Phone
Crop diversity

Only 1/3 of farmers tolerate weeds!
Crop management

79% of farmers practice crop rotations.

63% save seeds or use traditional varieties.

But only 25% practice intercropping.

But only 35% have nurseries in their farms.
Waste disposal

- Recycle: 42%
- Recycle + ValorFito: 12%
- Garbage: 16%
- Garbage + ValorFito: 8%
- Burning: 7%
- N/A: 15%
Pest Management

1 in 10 Farmers have felt sick after C.P.C.

Only 54% of Farmers use full protection for C.P.C.
# Pest Management

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>When and how?</td>
<td>Half use IPM other half doesn't</td>
</tr>
<tr>
<td>Who do ask for advice?</td>
<td>Store – 46%; Own experience – 27%</td>
</tr>
<tr>
<td>Where do you buy?</td>
<td>Store - 92%</td>
</tr>
<tr>
<td>How do you dosage?</td>
<td>Label - 50%</td>
</tr>
</tbody>
</table>
For you pesticides are...

- Indispensable even if toxic: 20%
- Completely safe: 10%
- Harmful but can be used: 50%
- Very harmful and should be avoided: 20%

Pest Management Perception
90% claim to know what Organic Agriculture is

But 78% of those think it’s just about not applying pesticides

24% claim to have practiced Organic Agriculture at some level

But 54% think it’s not economically and/or technically viable

32% lack information and/or incentive but aren’t opposed to it

36% do it out of concern but 54% do it because they don’t feel the need
**Conclusions**

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crop Rotation</td>
<td>Pest Management</td>
</tr>
<tr>
<td>Animal Production</td>
<td>Intercropping</td>
</tr>
<tr>
<td>Crop diversity</td>
<td>Composting</td>
</tr>
<tr>
<td>Seed Saving/ Traditional</td>
<td>Soil analysis and correction</td>
</tr>
<tr>
<td>Varieties</td>
<td>Regional differences</td>
</tr>
<tr>
<td>Protection Equipment</td>
<td>Farmers Perceptions</td>
</tr>
<tr>
<td></td>
<td>Weed management</td>
</tr>
</tbody>
</table>
Conclusions

- Family Farmers are key players to achieve sustainability goals.
- Educational programs have to be more accessible and widespread for greater efficacy.
- Greater care should be taken in regards to waste management.
- There is greater need for incentives and support towards the adoption of more sustainable farming practices.

- ...There is a lot of room for improvement!
Thank You