Vincent Delay’s farm: diversification and maximum reduction of chemical inputs

The Farm

Vincent Delay starts farming in 2022 following a previous activity in agricultural machinery

Farm community with his father - two different activities but common crop rotation

Cultivated agricultural area: 77 ha

IPSuisse label and extensive production system since 2020 - Start of the pesticide reduction strategy 8 years ago

- One part: direct sowing in living frost sensitive cover crop – other part: soil preparation without ploughing and sowing
- Varietal mixture
- 2 passes of harrow at the end of winter with incorporation of the fertilizer and undersowing

- Heavy tine cultivator to destroy frozen cover crop then rotary harrow and single-seed drill
- Sulfonylurea-resistant variety
- Fertilization on the row at sowing
- 1 herbicide on the whole surface, later 1 herbicide band application combined with hoeing and row fertilization. Addition of biostimulants and minerals during the crop, including copper for foliar protection
- Flower strips along the plots

<table>
<thead>
<tr>
<th>TFI (19-21)</th>
<th>Yield</th>
<th>Price (CHF)</th>
<th>Premiums</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.4</td>
<td>7 T/ha</td>
<td>500 + 230 .-/ T</td>
<td>650 .-/ha</td>
</tr>
</tbody>
</table>

- Soil cultivation
- Early sowing (before August 15th) with precision seed-drill and localized fertilization, herbicide band application
- Early hoeing (mid-sept) = fast coverage undersowing
- Cutting the rape before winter to avoid elongation (13cm high)
- Biostimulants in autumn and winter

<table>
<thead>
<tr>
<th>TFI (19-21)</th>
<th>Yield</th>
<th>Price (CHF)</th>
<th>Premiums</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.4</td>
<td>4 T/ha</td>
<td>810 + 220 .-/T</td>
<td>650 .-/ha</td>
</tr>
</tbody>
</table>

- 9 crops = diversified system including temporary grassland
- Reduced tillage, periodic ploughing, occasional direct sowing
- Access to several sophisticated mechanical weeding and cover destruction machines
- Use of plant health biostimulants and biocontrol products
- Cover crops always sown directly after harvest except after rapeseed (tillage)

Average farm TFI (all crops)

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.42</td>
<td>0.77</td>
<td>1.1</td>
<td></td>
</tr>
</tbody>
</table>