Schweizerische Eidgenossenschaft
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Swiss strategy for a sustainable plant protection

EuroBlight Workshop
10th May 2022

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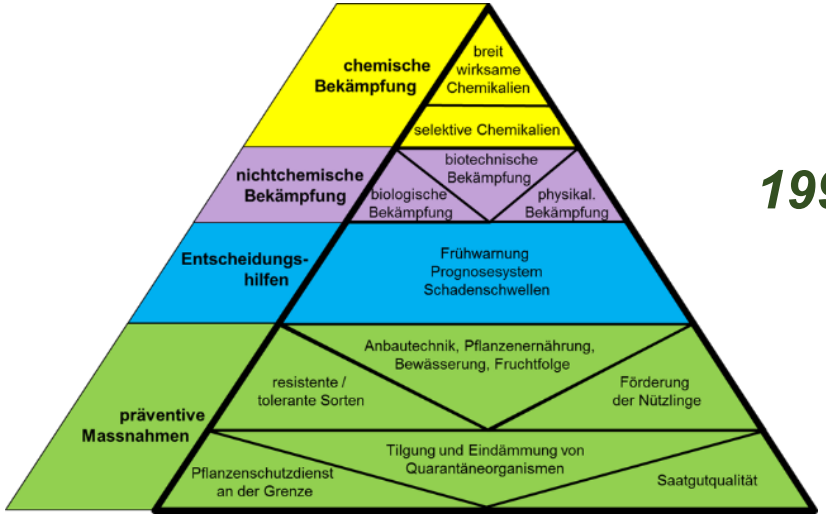
Federal Office for Agriculture
Sustainable Plant Protection

Development of the strategy for a sustainable plant protection in a political context

1970-90

➔ Development of the integrated pest management (IPM)



1999

Agricultural policy 2002

➔ proof of ecological performance: conditionality to get incentive payments

Development of the strategy for a sustainable plant protection in a political context

2005

New ordinance for the autorisation of PPP

➔ Harmonisation with the EU

➔ check of old substances

2014

Report «Postulat Moser»

➔ Description of 49 existing measures to reduce the risk

2017

Action plan PPP

➔ Targets on risk reduction

➔ 51 new measures

Development of the strategy for a sustainable plant protection in a political context

2017-18 **Popular initiatives (ban of PPP)**

↓

2020 **Agricultural policy 22+**

➔ Incl. Packet of measures as alternative to the initiatives

↓

2021 **Suspension of the discussion**

↓

2021 **Initiative of the Parliament 19.475**

➔ Legal tragets for the reduction of risk

➔ Reinforcement of water protection

Die Bundesversammlung — Das Schweizer Parlament

Bundesgesetz über die Verminderung der Risiken durch den Einsatz von Pestiziden

National action plan PPP: Targets

Approved by the Swiss Federal Council in September 2017

Reduction of PPP use

- *Reduce the **use of PPP with special risk potential**[2] by 30% by 2027 (reference 2012-2015)*
- *Reduce **emissions** by 25% by 2027*

[2] Candidates for substitution + persistent PPP ($DT_{soil\ 50}$ > 6 months)

Protection of Human



- ***Improve information** for professional operators*
- ***Restrict access** for non professional users*
- *Perform **cumulative exposure assessment** for multiple residues*

Protection of Environment



- *Reduce exceedings of EQS (WFD) in **watercourses** by 50% by 2027*
- *Reduce the **risk potential for aquatic organisms** by 50% by 2027*
- *Improve **drinking water quality** by reducing PPP degradation products in groundwater*
- *Reduce emissions in **natural habitats** by 75% by 2023*
- *Reduce the use of **persistent PPP** (DT_{50} > 6 months) by 50% by 2027*

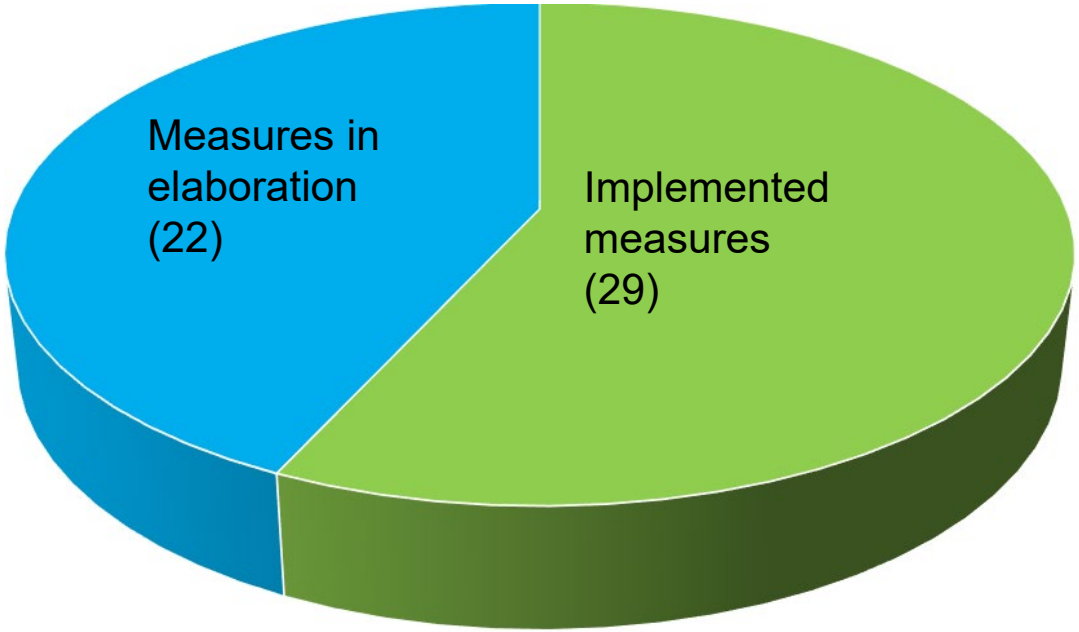
Protection of Crops

- ***Sufficient protection** strategies for all relevant crops*

Swiss national action plan PPP: Measures

Approved by the Federal Council in September 2017

51 Measures (status 2021)



⇨ More information in the annual report on the homepage of the action plan (available in German, French and Italian)

Introduced measures

Reduction of use and emissions

- New contributions for reduced herbicide use
  -> mechanical weed control

- New contributions for PPP-reduction in orchards, grapes and sugar beets

- Several new regional projects to reduce risks of PPP
- Contributions for spray equipment with low drift

- Restricted list for non professional users

- Proposal for contributions for robust grape and fruit varieties

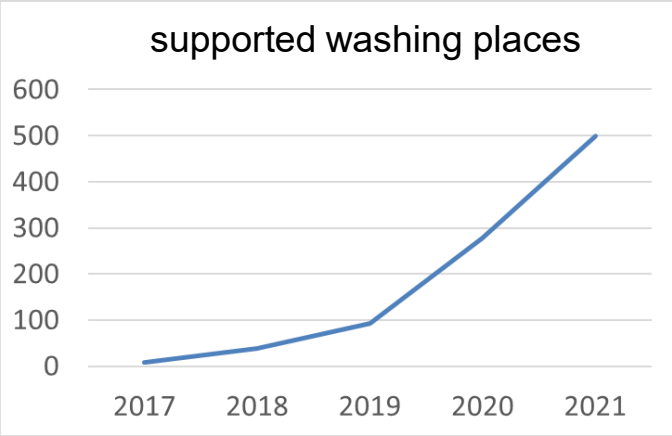
Introduced measures

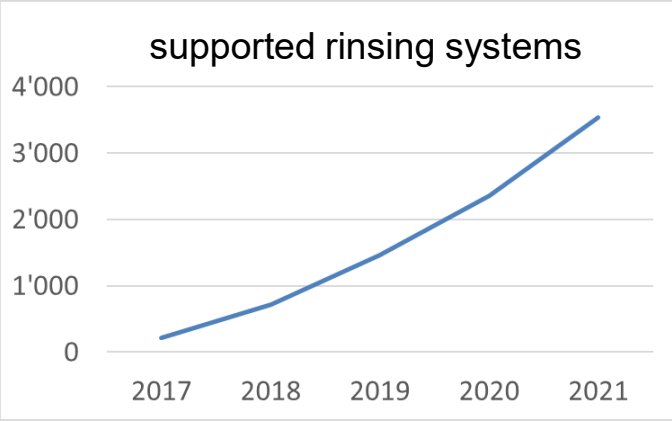
Protection of water

- Stricter application rules to reduce run-off. E.g. buffer stripes 6-20m, direct seeding, greening in orchards and vineyards,…. (directives)

- Contributions for the construction of washing places
- 13 new control points e.g. washing place

- Contributions for automatic rinsing systems
- *Prohibition of products with higher risk and measures against run-off and drift => see coming slides*





Incentive payments
Existing PPP-measures

Incentive payments

Cultivated landscape
Maintain open landscape

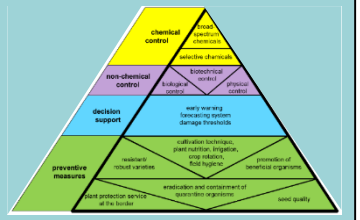
Food security
Upkeep of production capacity

Biodiversity
Promotion of species and habitat diversity

Landscape quality
Promotion of diverse landscapes

Production system
environmental and animal friendly

Conditionality: Proof of ecological performance (based on IPM-principles)



- Crop rotation
- Use of PPP less harmful for beneficial insects (e.g. Potato beetle: Azadirachtin, Spinosad, BT)
- Yearly 200 leaf samples are tested on PPP-residues
- Ecological compensation areas: 7% (3.5% for special crops)
- Distance of 6m to surface water

Requirements for all users
Authorisation of PPP, prohibition in sensitive areas, quarantine organisms, authorisation of aerial spraying,…

Incentive payments
Existing PPP-measures

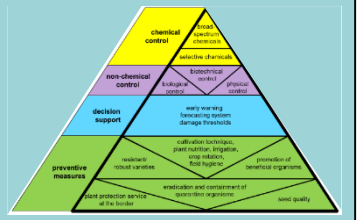
Incentive payments

Contributions for production systems

- Organic farming
- Extenso: no fungicides, insecticides and growth regulators in arable crops

Conditionality: Proof of ecological performance (based on IPM-principles)

- Crop rotation
- Use of PPP less harmful for beneficial insects (e.g. Potato beetle: Azadirachtin, Spinosad, BT)
- Yearly 100 leaf samples are tested on PPP-residues
- Ecological compensation areas: 7% (3.5% for special crops)
- Distance of 6m to surface water

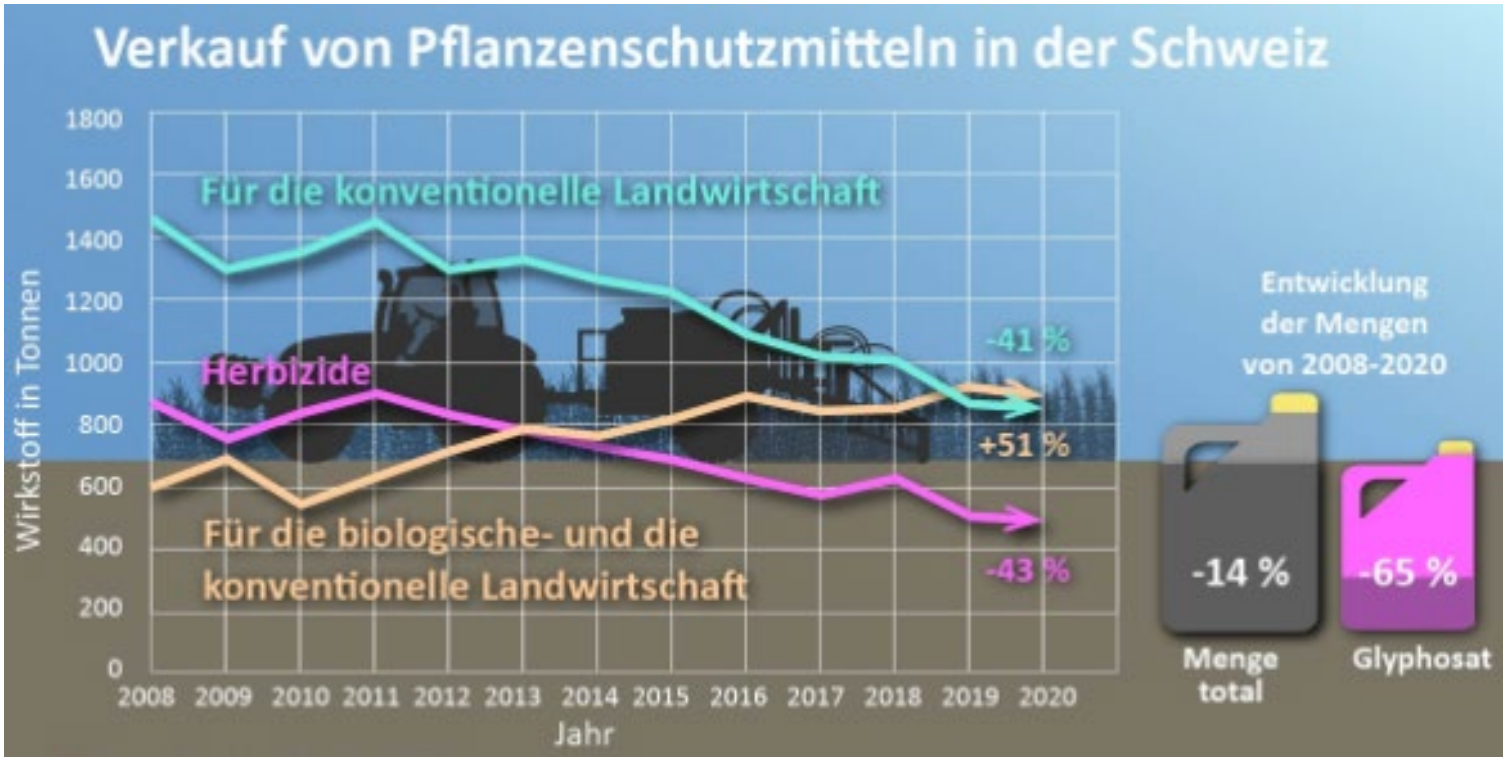


Requirements for all users

Authorisation of PPP, prohibition in sensitive areas, quarantine organisms, authorisation of aerial spraying,…

Development of PPP use

PPP sales in Switzerland 2008-2020



2 trends:

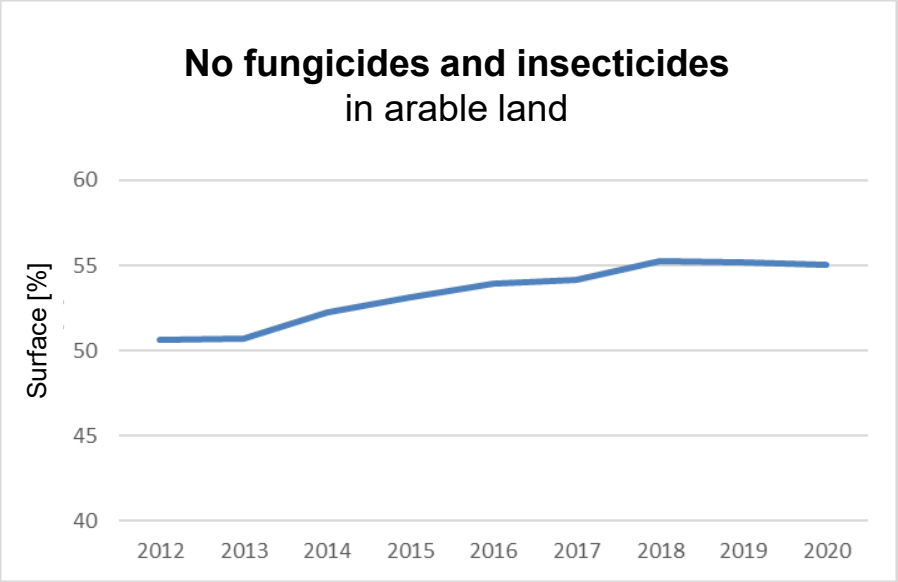
- Reduction of herbicides
- Substitution of conventional PPP in favour of PPP used also in organic farming

PPP sales in Switzerland

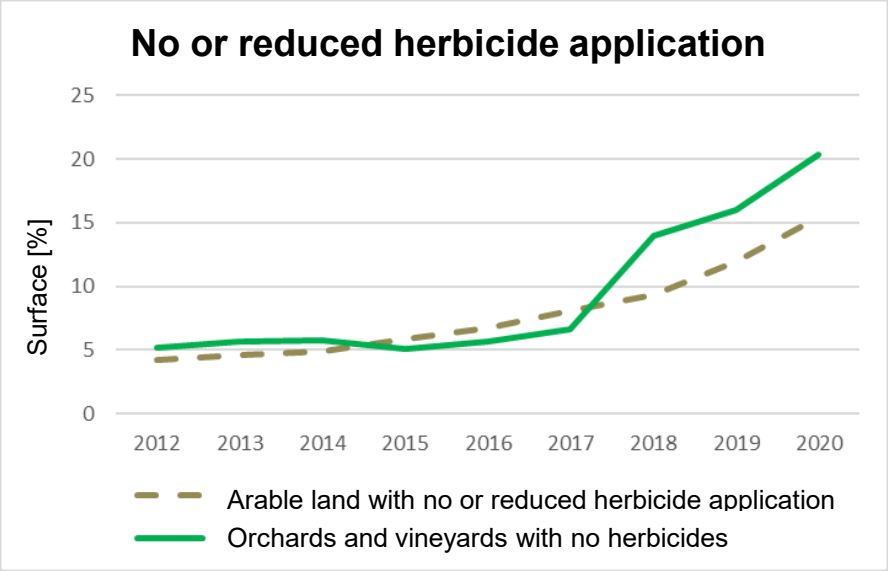
Development of PPP use

Participation in production systems 2012-2020

Participation in production systems with **no fungicides and insecticides in arable land**



Participation in production systems with no reduced use of **herbicides**



Agricultural Policy

2 Federal popular initiatives in 2021

«Initiative Drinking Water»

No direct payments to farms that use pesticides or prophylactic antibiotics or keep more livestock than they can feed using self-produced animal feed.

“For a Switzerland without synthetic pesticides”

Prohibition of synthetic pesticides and import of food products containing or produced with synthetic pesticides. The implementation period is ten years.

Rejected by the Swiss population in June 2021:

•High voter participation of 60%

•Rejected with 60% of the votes

Initiative of Parliament 19.475

Plant protection products

Legal reduction target for the risks of PPP

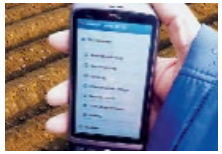
- Reduce the risk of PPP for metabolites in groundwater, surface water and natural habitats by 50% by 2027 (reference 2012-2015)

Reinforcement of water protection

- Groundwater: Prohibition of PPP use in water catchment areas if concentrations of active agents or metabolites are >0.1 ug/l.
- Surface water: Check of PPP-authorisation if ecotoxicological thresholds are exceeded repeatedly and widespread.

Expansion of data collection

- Mandatory recording of PPP use for all professional users



Further legal reduction targets

- Reduce losses of nitrogen and phosphorus by 20% by 2030 (reference 2012-2014)
- Reduce the risk of biocides (target to be defined) + record sale and use

Adopted by the Swiss Parliament in March 2021

Initiative of Parliament 19.475

Plant protection products

Additional measures of the Federal Council to reduce the risk of PPP -> packet of ordinances Pa.Iv. 19.475 starting in January 2023

Conditionality: Proof of ecological performance

- **Prohibition of PPP** with higher risk for:
  - surface water
  - metabolites in groundwater
- Reduce **drift and run-off** to surface water and roads with a canalisation system:
  e.g. injection nozzles, 6m buffer stripe
  (possible measures in directives)

Contribution for production systems

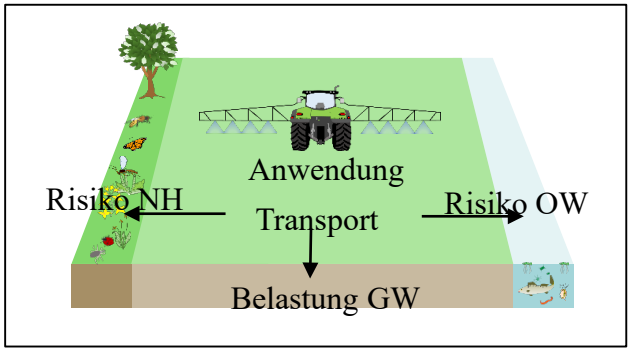
Additional measures, e.g.:

- renunciation on insecticides or herbicides in potatoes

Conditionality: Prohibition of PPP with higher risks

Determination of the substances with higher risks
(based on Agroscope 2020)

The risk score is derived for 1 standard treatment (without risk mitigation)



Surface water

Wirkstoff	Risiko-Score
1. Deltamethrin	66711
2. Cypermethrin	53731
3. zeta-Cypermethrin	36168
4. alpha-Cypermethrin	22973
5. *Chlorpyrifos*	16829
6. lambda-Cyhalothrin	9962
7. *Bifenthrin*	4049
8. *Chlorpyrifos-methyl*	2485
9. *Thiram (TMTD)*	213
10. Fenpyroximate	176
11. Abamectin	130
12. Etofenprox	122

+Nicosulfuron (exceedings in monitoring)

Metabolites in groundwater

Wirkstoff	Risiko-Score
1. S-Metolachlor	199.9
2. *Chlorothalonil*	129.5
3. Dimethachlor	128.5
4. Metazachlor	116.4
5. *Chloridazon*	72.7
6. Terbuthylazine	49.2
7. Pethoxamid	48.3
8. *Thiram (TMTD)*	31.2
9. Haloxyfop-R-Methylester	25.2
10. Dimethenamid-P	24.0

Prohibition starting in 2023.
Use is only possible, when there are no other products with a lower risk

PPP-Risk indicators

Legal target:

- Reduce the risk of PPP by 50% by 2027 (reference 2012-2015) for
  - Surface water
  - Natural habitats
  - Metabolites in groundwater

⇨ 3 indicators

⇨ PPP-sales as database for the use (only reference for 2012-2015)

PPP-risk indicators

Risk indikator = **risk score** x **Treated surface** x **Exposition factor**

Same as used for restriction of use

PPP-sales / average application rate

Reduction of the exposition: measures + implementation in practice

Wirkstoff	Risiko-Score
1. S-Metolachlor	199.9
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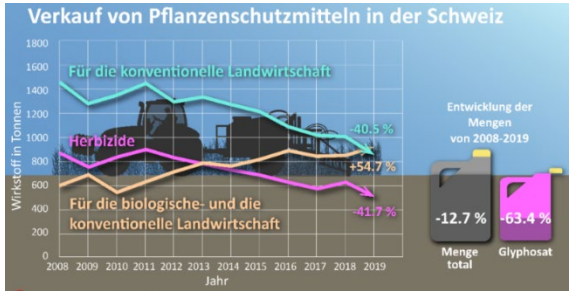
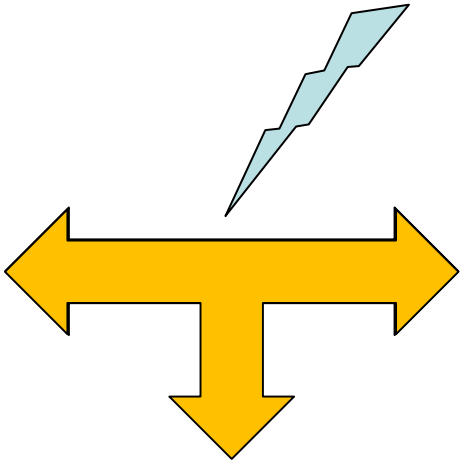


Developed by agroscope: New Plant Protection Product Risk Indicators for Switzerland

Big Challenge

Crops need
to be **protected**

Reduction of risk and use of ppp



Demands on **quality**
and quantity
of consumers are high

Research:
new plant protection methods are needed

➡ Agroscope set priority in the
development of a sustainable and low risk plant protection

➡ Switzerland is member of the
EU minor uses coordination facility (MUCF)


Thank you for your attention!