

# Adoption of pesticide-free wheat production in Switzerland (dataset)

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**Version translated from German (see German or French versions for original surveys send out to producers)**

**Online Survey on the IP-Suisse Program « Wheat Production without Plant Protection Products”**

This survey is also available in French (Please select the option above)

Dear famers,

We are pleased that you are participating in this survey on the "IP-SUISSE Wheat Production without plant protection products (PPP)" program. The aim of the survey is to collect assessments, experiences and perceptions of the program in order to identify and address potential problems, risks and obstacles at an early stage.

It is particularly important for the validity of the survey that we collect the **opinions of all farmers** – both those **who participate or wish to participate** in the program, as well as of those who do not wish to participate at present and are **rather critical** of the program.

All answers are of course **strictly anonymized** and only evaluated in **aggregated form (per region or type of agricultural holding)**.

It will take **about 20 minutes** to answer the survey.

In addition, we will draw **20 Migros shopping vouchers worth CHF 50 in prize money** from all participants who have completed the survey.

We would like to thank you in advance for your participation!

With best regards,

Niklas Möhring (ETH Zürich)

The survey contains 34 questions.

### **I. Participation in the program “IP-Suisse Wheat Production without PPP”**

The first part of the survey is about participation aspiration and assessment of the program “IP-Suisse Wheat Production without PPP”.

The first part of the survey is about your willingness to participate and your assessment of IP-Suisse program “Wheat Production without PPP”.

The guidelines of IP-SUISSE Wheat without PPP are

IP-SUISSE grain guidelines

+ Abandonment of chemical synthetic herbicides from the harvest onwards

+ Use of untreated seeds

Please answer all questions - even if you are not planning to participate in the "IP-Suisse Program Wheat Production without PPP".

#### **[Q1] On the program “IP-Suisse Wheat Production without PPP” ...\***

Please choose from the following answers:

Please choose only one of the following answers:

- I **participate/did participate**.
- I did **not participate**.

#### **[Q1a] Please specify in which year you participated or you will participate: \***

**Answer this question only if the following conditions are met:**

Answer in [Q1] was “**I participate/did participate**” (On the program “IP-Suisse Wheat Production without PPP”...).

Please choose from the following answers:

Please choose only one of the following answers:

- I did participate in the season **2018/2019** and I will **also participate 2019/2020**.
- I did participate in the season **2018/2019** and I **will not participate in 2019/2020**.
- I will participate in the season **2019/2020**.

#### **[Q1b] Please specify your decision to not participate: \***

**Answer this question only if the following conditions are met:**

Answer in [Q1] was **“I did not participate”** (On the program “IP-Suisse Wheat Production without PPP”...).

Please choose from the following answers:

Please choose only one of the following answers:

- I want to participate in the **next season**.
- I **could imagine participating**.
- I will **certainly not participate**.
- I **don’t know the program**.

**[Q02] After your initial experience, how important were the following factors in your decision to continue participating in the program “IP-Suisse Wheat Production without PPP”:**\*

**Answer this question only if the following conditions are met:**

Answer in [Q1a] was “I did participate in the season **2018/2019** and I will **also participate 2019/2020**” (Please specify in which year you participated or you will participate:).

Please indicate the applicable answer for each point:

	Not Important				Very important
	1	2	3	4	5
Federal direct payments for no herbicide use					
Price premium IP-SUISSE					
Canton direct payments for no herbicide use					
My contribution to a more sustainable agriculture					

**[Q002] After your initial experience, how important were the following factors in your decision to continue participating in the program “IP-Suisse Wheat Production without PPP”:**\*

**Answer this question only if the following conditions are met:**

Answer in [Q1a] was “I did participate in the season **2018/2019** and I will **not participate 2019/2020** (Please specify in which year you participated or you will participate:).

Please indicate the applicable answer for each point:

	Not Important				Very important
	1	2	3	4	5
Federal direct payments for no herbicide use					
Price premium IP-SUISSE					
Canton direct payments for no herbicide use					
My contribution to a more sustainable agriculture					

**[Q2] How important were the following factors for your decision to participate/possibly participate/not participate in the program “IP-Suisse Wheat Production without PPP”:**\*

**Answer this question only if the following conditions are met:**

----- scenario 1 -----

Answer in [Q1a] was “I participate in the season **2019/2020**” (Please specify in which year you participated or you will participate:).

----- or scenario 2 -----

Answer in [Q1] was “**I did not participate**” (On the program “IP-Suisse Wheat Production without PPP”...).

Please indicate the applicable answer for each point:

	Not Important				Very important
	1	2	3	4	5
Federal direct payments for no herbicide use					

Price premium IP-SUISSE					
Canton direct payments for no herbicide use					
My contribution to a more sustainable agriculture					

**[Q03] After your initial experience, how important are the following potential difficulties for the conversion to “IP-Suisse Wheat Production without PPP”? \***

**Answer this question only if the following conditions are met:**

Answer in [Q1a] was “I did participate in the season **2018/2019** and I will also **participate 2019/2020** (Please specify in which year you participated or you will participate:).

Please indicate the applicable answer for each point:

	Not Important					Not Important
	1	2	3	4	5	
Weed pressure in wheat too high for conversion						
Weed pressure in successive cropping too high for conversion						
Problematic parcels (with “superweeds” as Carduus, Rumex and Alopecurus myosuroides)						
Higher workload/ lack of work time						
My Soil is not compatible with mechanical weeding						
Missing experience/ extension service on Wheat Production Without PPP in the IP-Program						
Frequent swapping of fields						
Lower yield quantities						
Higher yield risk						
Higher quality risk						

**[Q003] How important were the following potential difficulties for your decision to not participate next season in the program “IP-Suisse Wheat Production without PPP”?: \***

**Answer this question only if the following conditions are met:**

Answer in [Q1a] was “I did participate in the season **2018/2019** and I will **not participate 2019/2020** (Please specify in which year you participated or you will participate:).

Please indicate the applicable answer for each point:

	Not Important					Not Important
	1	2	3	4	5	
Weed pressure in wheat too high for conversion						
Weed pressure in successive cropping too high for conversion						
Problematic parcels (with “superweeds” as Carduus, Rumex and Alopecurus myosuroides)						
Higher workload/ lack of work time						
My Soil is not compatible with mechanical weeding						
Missing experience/ extension service on Wheat Production Without PPP in the IP-Program						
Frequent swapping of fields						
Lower yield quantities						
Higher yield risk						
Higher quality risk						

**[Q3] How important were the following potential difficulties for your decision to participate/possibly participate/not participate in the program “IP-Suisse Wheat Production without PPP”?: \***

**Answer this question only if the following conditions are met:**

----- scenario 1 -----

Answer in [Q1a] was “I participate in the season **2019/2020**” (Please specify in which year you participated or you will participate:).

----- or scenario 2 -----

Answer in [Q1] was “**I did not participate**” (On the program “IP-Suisse Wheat Production without PPP”...).

Please indicate the applicable answer for each point:

	Not Important					Not Important
	1	2	3	4	5	
Weed pressure in wheat too high for conversion						
Weed pressure in successive cropping too high for conversion						
Problematic parcels (with “superweeds” as Carduus, Rumex and Alopecurus myosuroides)						
Higher workload/ lack of work time						
My Soil is not compatible with mechanical weeding						
Missing experience/ extension service on Wheat Production Without PPP in the IP-Program						
Frequent swapping of fields						
Lower yield quantities						
Higher yield risk						
Higher quality risk						

**[Q4] For the wheat production 2019/2020 I participate in the following federal direct payment schemes for resource efficiency:\***

Please select one or multiple points from the list.

Please select all applicable answers:

- **Renouncement of herbicides on all wheat plots**
- **Renouncement of herbicides on a part of the wheat plots**
- Soil conservation payment: **direct sowing** of wheat
- Soil conservation payment: **mulch sowing** of wheat
- **Additional payments for renouncement of herbicides** (only as additional payment to soil conservation payments)
- I do not participate in any federal direct payment schemes



**[Q4a] Please enter the % of wheat production area for which you have renounced herbicide use (1-100):\***

**Answer this question only if the following conditions are met:**

Answers 1 - 5 in [Q4] (For the wheat production 2019/2020 I participate in the following federal direct payment schemes for resource efficiency).

In this section only numbers can be entered.

Your answer must be between 1 and 100.

Please enter your answer here:

- 

**[Q5] I participate in a cantonal program for the reduction of PPP in wheat production:\***

Please choose from the following answers:

Please choose only one of the following answers:

- Yes
- No

**[Q5a] Since how many years you are participating in the following cantonal direct payments schemes for the reduction of PPP?\***

**Answer this question only if the following conditions are met:**

Answer in [Q5] was "Yes" (I participate in a cantonal program for the reduction of PPP in wheat production).

Please indicate your answers here:

- Canton of Valais: total renunciation of herbicides
- Canton of Bern: total renunciation of herbicides
- Canton of Bern: partial renunciation of herbicides
- Canton of Solothurn: undersown crop/intersowing
- Canton of Aargau: renunciation of PPP use
- Canton of AG, TG, ZH: optimization PPP (PFLOPF)

**[Q6] Do you already have experience with wheat production without herbicides?\***

Please choose from the following answers:

Please choose only one of the following answers:

- **Yes**, I have already tried out herbicide-free production **on my entire wheat surface** before the IP-SUISSE program.

- **Yes**, I have already tried out herbicide-free production **on parts of my wheat surface** before the IP-SUISSE program.
- **No**, but I have **friends/neighbors with experience**.
- **No**, but my **agricultural consultant/ extension service** expert has experience.
- **No**, and I also **do not know anybody**, who has such **experience**.

**[Q7] In the production of wheat in the in the program “IP-Suisse Wheat Production without PPP” I would prefer to use the following weed control strategy:\***

Please choose from the following answers:

Please choose only one of the following answers:

- Preceding crop maize/cereals + ploughing + harrowing
- Preceding crop no maize/cereals + ploughing + harrowing
- Preceding crop no maize/cereals + mulch sowing with cultivator/harrow/mill + harrowing
- Preceding crop no maize/cereals + ploughing + sowing in wide rows + hoeing
- Preceding crop no maize/cereals + direct sowing + harrowing

*Please answer even if you not plan to participate.*

**[Q8] In the production of wheat in the in the program “IP-Suisse Wheat Production without PPP” I would implement the following additional measure(s) (compared to Extenso Wheat Production):\***

Please select one ore multiple points from the list.

Please select all applicable answers:

- Adjustment of **crop rotation**
- Adjustment of **variety choice/seeding dates**
- More intensive **stubble working** (measures in-between crops)
- More pronounced use of **undergrowth (undersown cultures) or mixed cultures**
- Adjustment in use of **catch crops/intermediate crops** (or adjustment of used catch crop seed mixtures)
- Investment in **technology for weeding** (sensors, steering systems etc.)
- **Increasing herbicide use in other crops** of the crop rotation
- **No additional measures**

*Please answer even if you not plan to participate.*

**[Q9] Machinery (e.g. cultivator, harrow (curry comb)) required for mechanical weed control...\***

Please choose from the following answers:

Please choose only one of the following answers:

- ... is (will soon be) **available to me**.

- ... is **not available to me** but it would be **generally possible** to borrow/acquire the necessary machinery.
- .... **I cannot acquire or it is hard for me to acquire** the necessary machinery (availability of machinery would be a problem for me).

*Please answer even if you not plan to participate.*

**[Q9a] Please specify your answer: Machinery is available to me or an acquisition would be possible via ...\***

**Answer this question only if the following conditions are met:**

Answer in [Q9] was "... is (will soon be) **available to me.**" or "... is **not available to me** but it would be **generally possible** to borrow/acquire the necessary machinery." (Machinery (e.g. cultivator, harrow (curry comb)) required for mechanical weed control...\*)

Please choose from the following answers:

Please choose only one of the following answers:

- ... **borrow** from a neighbor or colleague.
- ... through a **machinery ring**.
- ... **joint purchase** of the machinery **with others**.
- ... **purchase** of the machinery (**alone**).
- ... **regional contractor** for the machinery.

**[Q10] How economically risky do you assess the investment on new machinery for the "IP-Suisse Wheat Production without PPP"??\***

Please indicate the applicable answer for each point:

<b>Not risky</b>				<b>Very risky</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

*Please answer even if you not plan to participate.*

**[Q10b] How strongly do the following factors contribute to your assessment of investment risks for new machinery (previous question)?\***

Please indicate the applicable answer for each point:

	<b>Not important</b>				<b>Very important</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
I fear that direct payment					

programs will change again (soon)					
I fear that the IP-SUISSE program will not be continued					
I fear high yield loss in wheat production without PPP					
I fear a high weed pressure in the other cultures of the crop rotation					
I fear that the machinery will not be used sufficiently (investment is not profitable)					

**[Q11] I mainly obtain my information on weed control from...\***

Please choose from the following answers:

Please choose only one of the following answers:

- ... education and further education/qualification.
- ... cantonal extension service for weed control.
- ... extension service experts from the agro-chemical industry.
- ... agricultural retailer (e.g. Landi).
- ... agricultural media (newspapers/magazines/books/internet).
- ... discussions with neighbors and colleagues.

**[Qu12] Based on my initial experience, I would expect with the conversion to “IP-Suisse Wheat Production without PPP” that in the long term ...\***

**Question phrased like this only if the following conditions are met:**

Answer in [Q1a] was "I did participate in the season **2018/2019** and I will **participate 2019/2020**" or "I did participate in the season **2018/2019** and I will **not participate 2019/2020**" (Please specify in which year you participated or you will participate:).

Please choose from the following answers:

Please choose only one of the following answers:

- ... my average wheat yield (dt/ha) **will not change**.
- ... my average wheat yield (dt/ha) will **decrease by 0-5%**.
- ... my average wheat yield (dt/ha) will **decrease by 5-10%**.
- ... my average wheat yield (dt/ha) will **decrease by 10-15%**.
- ... my average wheat yield (dt/ha) will **decrease by more than 15%**.

**[Q12] If I converted to "IP-Suisse Wheat Production without PPP", I would expect that in the long term...\***

**Question phrased like this only if the following conditions are met:**

---- Scenario 1 ----

Answer in [Q1a] was "I will participate in the season **2019/2020**" (Please specify in which year you participated or you will participate:)

---- Scenario 2 ----

Answer in [Q1] was "I did **not participate**" (On the program "IP-Suisse Wheat Production without PPP"...).

Please choose from the following answers:

Please choose only one of the following answers:

- ... my average wheat yield (dt/ha) **will not change**.
- ... my average wheat yield (dt/ha) will **decrease by 0-5%**.
- ... my average wheat yield (dt/ha) will **decrease by 5-10%**.
- ... my average wheat yield (dt/ha) will **decrease by 10-15%**.
- ... my average wheat yield (dt/ha) will **decrease by more than 15%**.

***Please answer even if you not plan to participate.***

**[Q13a] Do you expect an increase in "bad years"(with a complete crop failure/very low yield) when participating in the IP-SUISSE program?\***

Please choose from the following answers:

Please choose only one of the following answers:

- Yes
- No

*Please answer even if you not plan to participate.*

**[Q13b] Please specify your answer: Due to the conversion, I expect...\***

**Question phrased like this only if the following conditions are met:**

Answer in [Q13a] was "Yes" (Do you expect an increase in "bad years"(with a complete crop failure/very low yield) when participating in the IP-SUISSE program?)

Please choose from the following answers:

Please choose only one of the following answers:

- ... on average an additional "bad year" (with complete crop failure/ very low yield) **every 20 years** when participating in the program.
- ... on average an additional "bad year" (with complete crop failure/ very low yield) **every 10 years** when participating in the program.
- ... on average an additional "bad year" (with complete crop failure/ very low yield) **every 5 years** when participating in the program.

*Please answer even if you not plan to participate.*

## **II. Personal characteristics of the farmer and farm characteristics**

In order to take into account differences between the farms in our results, we would also like to ask you about your personal characteristics and the characteristics of your farm in the following part of the survey. All answers are of course **strictly anonymized** and only evaluated in **aggregated form**.

**[Q14] Please indicate the labour force for agricultural production on your farm (in standardized labour units e.g. 1, 2 or 2.5):\***

In this section only numbers can be entered.

Your answer must be between 0 and 50.

Please enter your answer here:

- 

**[Q15] Which part (%) of your wheat production area is leased (0-100)?.\***

In this section only numbers can be entered.

Your answer must be between 0 and 100.

Please enter your answer here:

- 

**[Q16] Which part of the family income (%) comes roughly from the following production branch of your farm (0-100 per branch)?\***

Please enter your answer(s) here:

- Arable farming (including direct payments)
- Animal husbandry (incl. direct payments)
- Off-farm income
- Other income sources

**[Q17] What is the highest education you completed? \***

Please select one or multiple points from the list.

Please select all applicable answers:

- Agricultural practitioner EBA
- Farmer EFZ
- Agricultural management school/ "Meister" degree
- Agricultural business school
- Higher technical school (agricultural technician)
- University of applied science (BSc/MSc)
- University/ ETH

**[Q18] Please indicate your year of birth (e.g. 1963)? \***

In this section only numbers can be entered.

Your answer must be between 1919 and 2001.

Please enter your answer here:

- 

**[Q19] Has your farm succession been already arranged? \***

Please choose from the following answers:

Please choose only one of the following answers:

- Yes
- No
- Not yet relevant

### III. Preferences and Perceptions

In the following section we want to assess your **risk attitude** regarding economic decisions on your farm as well as your **goals and assessments of the biggest problems** in your production. This is of importance in order to understand your assessment of the program “IP-Suisse Wheat Production without PPP” and to adapt the program accordingly. These questions are about your very personal **perceptions and preferences** – there are no false or rights, respectively bad or good answers. **All answers are of course strictly anonymized and only evaluated in aggregated form (as mentioned above).**

**[Q20] Do you avoid taking risks or are you willing to take risks in the following areas? \***

Please indicate the applicable answer for each point:

	Not willing to take risks										High willingness to take risks
	0	1	2	3	4	5	6	7	8	9	10
Plant protection											
Agricultural production											
Marketing											
Decisions on my farm (in general)											

*Please indicate your preferences on a scale from 0 ("not willing to take risks") to 10 ("very high willingness to take risks"). With the intermediate values you can indicate a tendency in one or the other direction.*

**[Q21] Please indicate how well the following statements apply to you and your agricultural holding: \***

Please indicate the applicable answer for each point:

	Does not apply				Does apply perfectly
	1	2	3	4	5
The “IP-Suisse Wheat Production without PPP” program will have positive effects on the environment.					
The “IP-Suisse Wheat Production without PPP” program will					



<b>have positive effects on the health of farmers and consumers.</b>					
<b>The use of pesticides causes health risks for me and my family.</b>					
<b>I strive to use as few pesticides as possible.</b>					
<b>My pesticide use level depends on the wheat price and the price of pesticides.</b>					
<b>It is important to me to achieve high yields (dt/ha).</b>					
<b>A high biodiversity on my agricultural land is important to me.</b>					
<b>"Clean" fields (few weeds visible) are important to me.</b>					
<b>It is important to me to achieve high income from production (incl. direct payments).</b>					
<b>I am open for agricultural innovations and I am often the first who implements them in the region.</b>					
<b>For important agricultural decisions I often consult my neighbors/colleagues.</b>					
<b>If I discover a problem in wheat production, I usually find a solution.</b>					
<b>Success in wheat production mainly depends on the abilities of the farmer.</b>					
<b>I can solve most problems in plant</b>					

<b>protection if I make an effort.</b>					
<b>Success in wheat production can only be influenced to a small extent by farmers.</b>					

**[Q22] If you want to make a comment, you can send it to us here:**

Please enter you answer here:

- 

Many thanks for your participation!

Your answers and personal data will only be used only anonymously and treated with strict confidentiality.

After the end of the survey we will draw prizes from all participants who completed the survey and contact the winners per E-mail.