



Schweizerische Eidgenossenschaft  
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Confederaziun svizra

Eidgenössisches Volkswirtschaftsdepartement EVD  
Bundesamt für Landwirtschaft BLW

*Integrated Pest Management –  
the way forward to Sustainable Agricultural Production*

***The Swiss agricultural policy –  
how a policy contributes to the  
sustainable use of pesticides***

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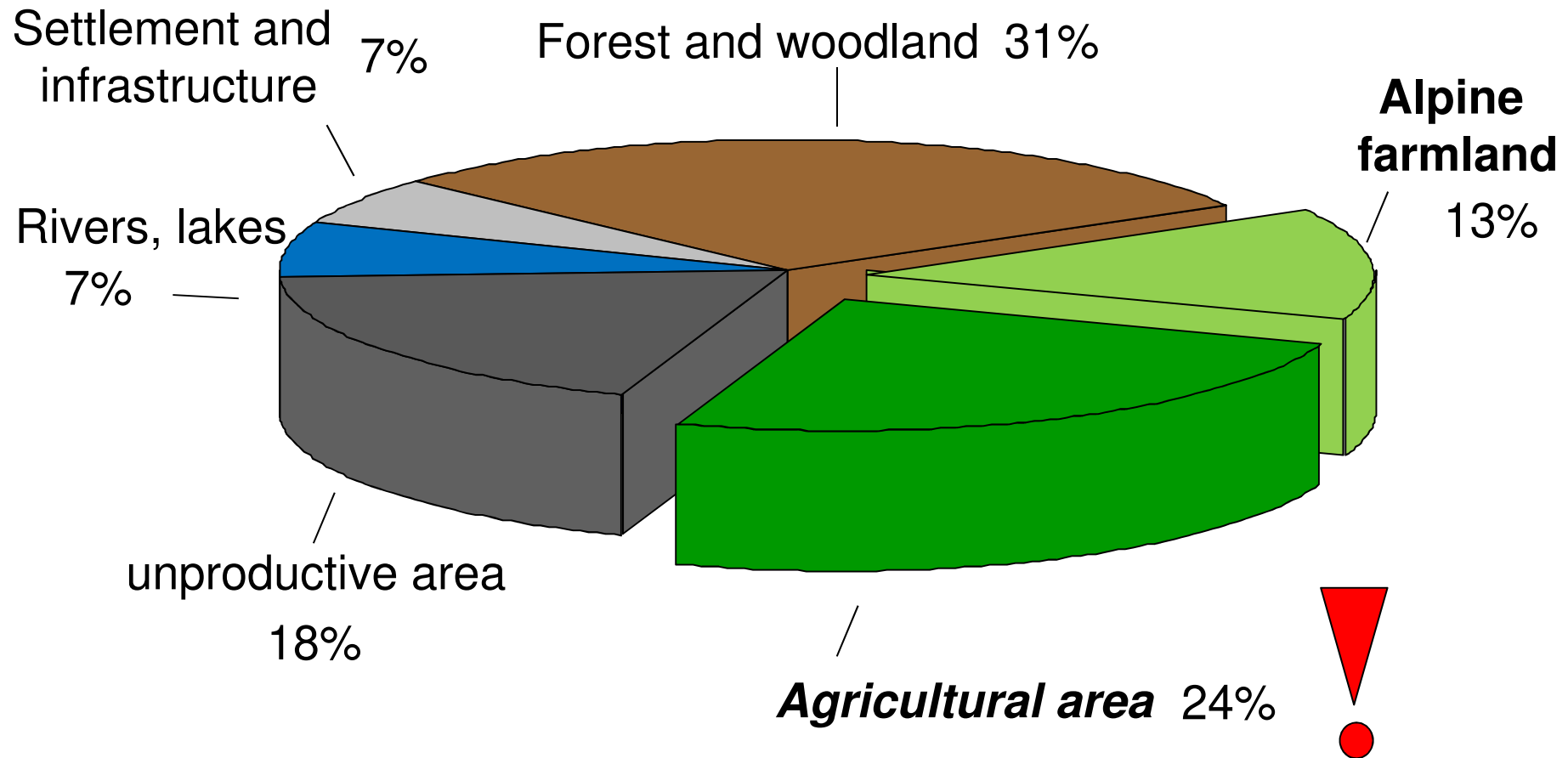
*Brussels 19<sup>th</sup> June 2012*



## 1. Some facts and figures

# Territory Switzerland

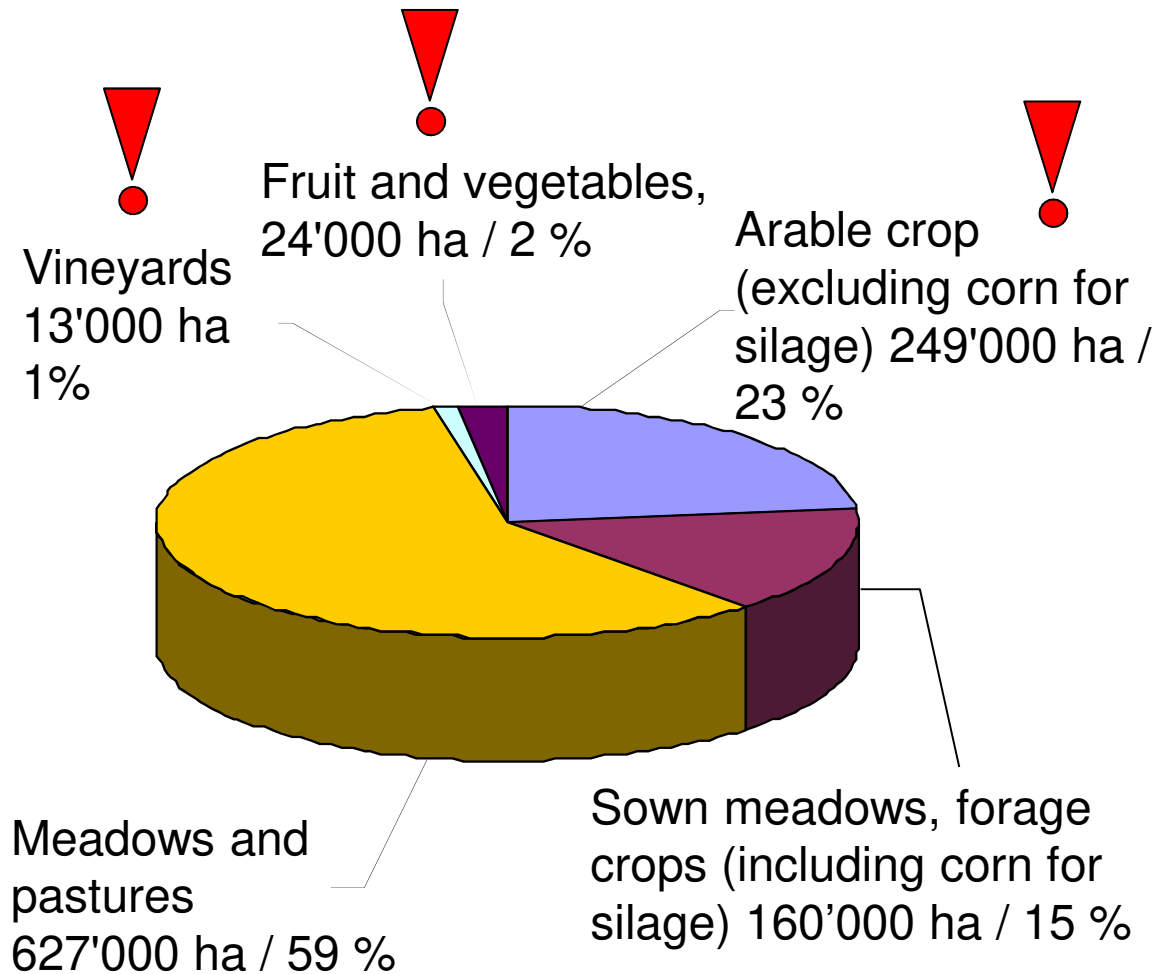
Total area: 41'300 km<sup>2</sup>





## 1. Some facts an figures

# Agricultural area one million hectares





## 2. Brief historical review

### Postwar periode up to 1993

highly state-controlled, guaranteed prices,  
support linked to the production

- Neither quantity nor prices were in line with the market
- Negativ environmental impact



### 1993 – a far-reaching reform

Start with direct payment for *all* the farmers  
(not only in mountain areas)

- Decoupling of price and income policy,
- Price reductions
- Incentives for specific ecological services (e.g. biodiversity, organic farming)





## 2. Brief historical review

# 1996 – New article in the Federal Constitution



### ***Art. 104***

<sup>1</sup>The Confederation shall ensure that agriculture makes a major contribution through sustainable production geared to market demands to

- a. ensuring food supplies for the population;
- b. maintaining the natural resources and preserving the countryside;
- c. maintaining a decentralised settlement pattern in rural areas.

***Article was accepted in a plebiscite by a large majority of the electorate.***



## 2. Brief historical review

# Proof of ecological performance (PEP) in the Federal Constitution

### **Art. 104**

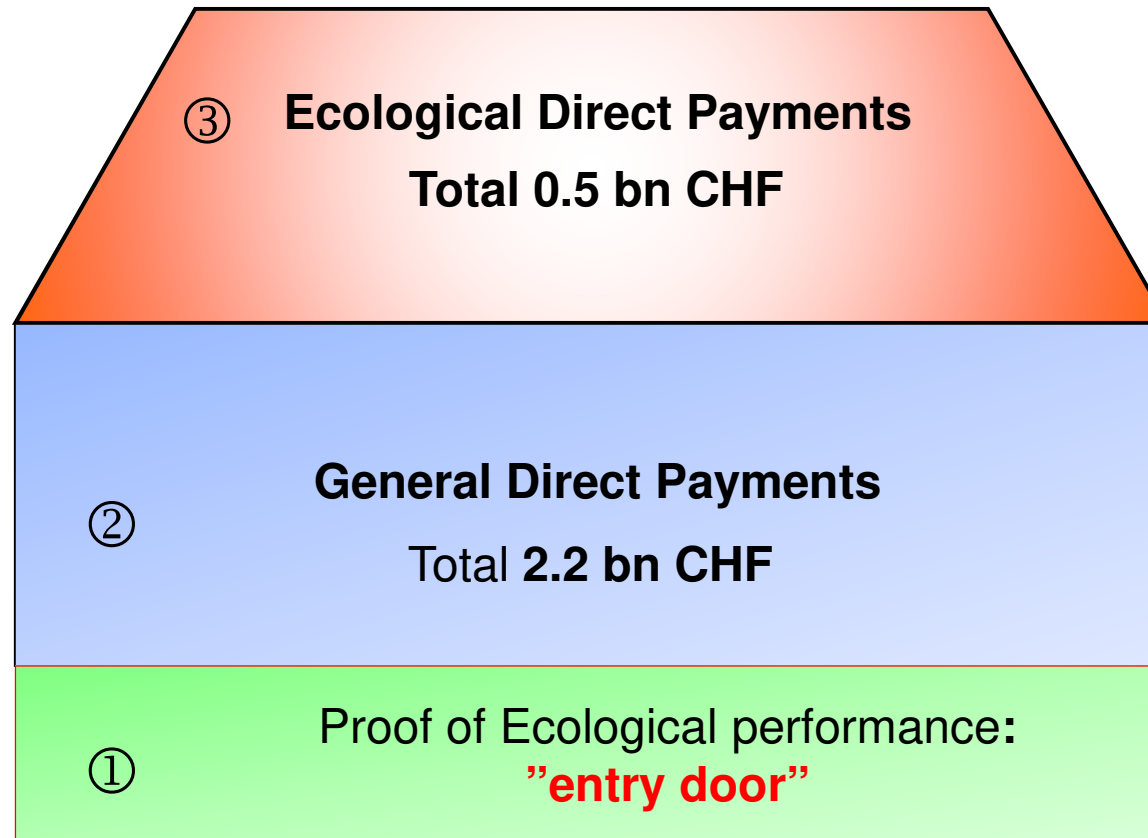
<sup>3</sup> The *Confederation* shall devise measures in such a way as to ensure that the agricultural sector is able to fulfil its multifunctional tasks. It shall be given in particular the following powers and tasks:

- a. It shall supplement farmers' incomes through direct payments aimed at ensuring an appropriate remuneration for the services provided, on condition that **proof of ecological performance (PEP)** is provided.
- b. It shall promote methods of production that are close to nature, environmentally acceptable and animal-friendly through economic incentives.



## 2. Brief historical review

# Overview: Policies and instruments





### 3. Proof for ecological performance (PEP)

## Proof of ecological performance (PEP)

Regulated within the ***Agriculture Act*** (Art. 70)

The **elements** of Proof for ecological performance (PEP) cover agro-ecological pre-conditions such as:

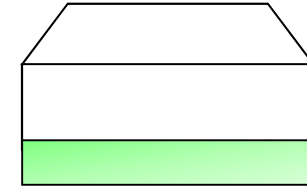
- *an appropriate share in ecological compensation areas (min 7% of agricultural land),*
- *compulsory crop rotation,*
- *a well-adjusted fertiliser balance,*
- *measures for soil protection,*
- *restricted use of plant protection products,*
- animal welfare standards.





### 3. Proof for ecological performance (PEP)

## Ecological compensation areas



An appropriate share in ecological compensation areas (min 7% of agricultural land).

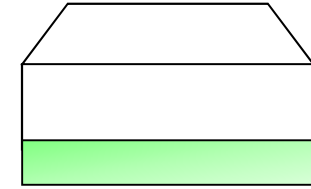
2 Examples in arable land:

- **Crop preservation strips**  
Extensively managed strips, no N-fertilizer and no weed control. 3 to 12 m wide.
- **Fallow**  
Perennial strips of land, seeded with native wild flowers. No fertilizer, weeds control only by single plan application. Cutting (harvesting) in wintertime only.



### 3. Proof for ecological performance (PEP)

## Compulsory crop rotation



Maximum acceptable share of the main crops *per farm* is limited in the annual crop rotation

- Cereals (without Corn) 66%
- Wheat 50%
- Corn 40% (if no till: 50%)
- Sugar beets 25%
- Potatoes 25%
- Rapes, soya 25%

Advantage: Avoids crop rotation related diseases or pests (i.e. *Rhizoctonia cerealis* (eyespot) or *Diabrotica spp.*).

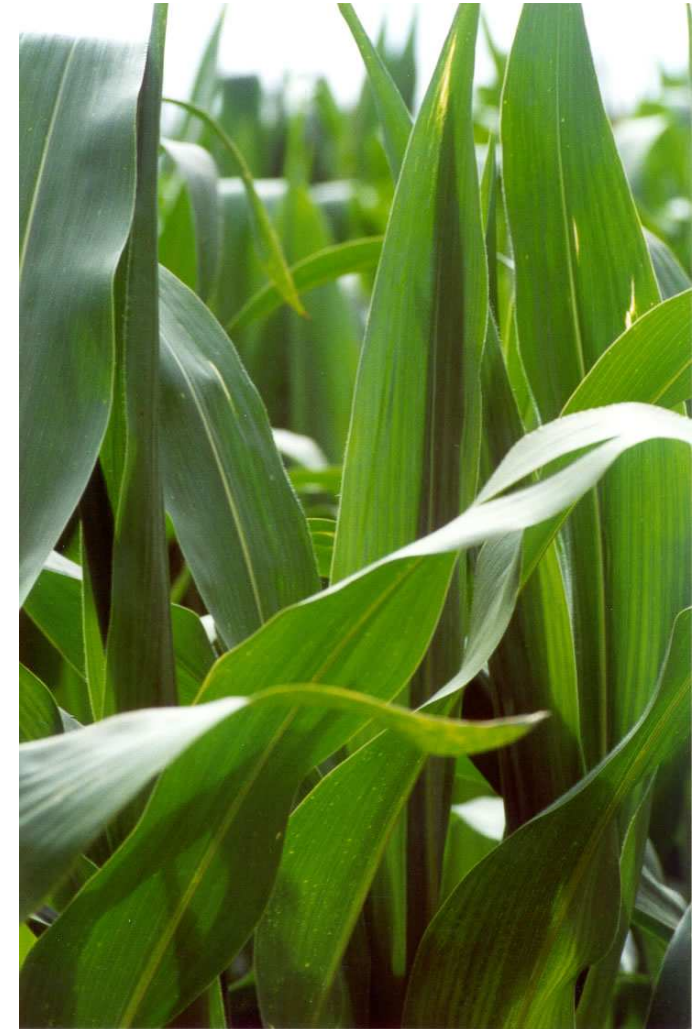
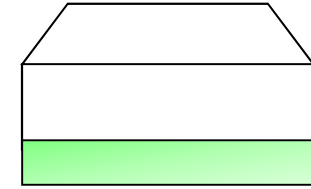


### 3. Proof for ecological performance (PEP)

## Selected and targeted application of plant protection products

### Treatment only if necessary:

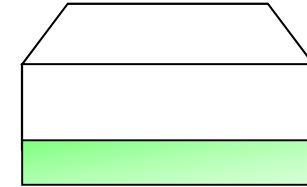
- warning systems for pests and plant diseases and intervention thresholds for pests have to be respected.
- restriction of use of insecticides with negative impact on beneficial insects in cereal and potato cultures



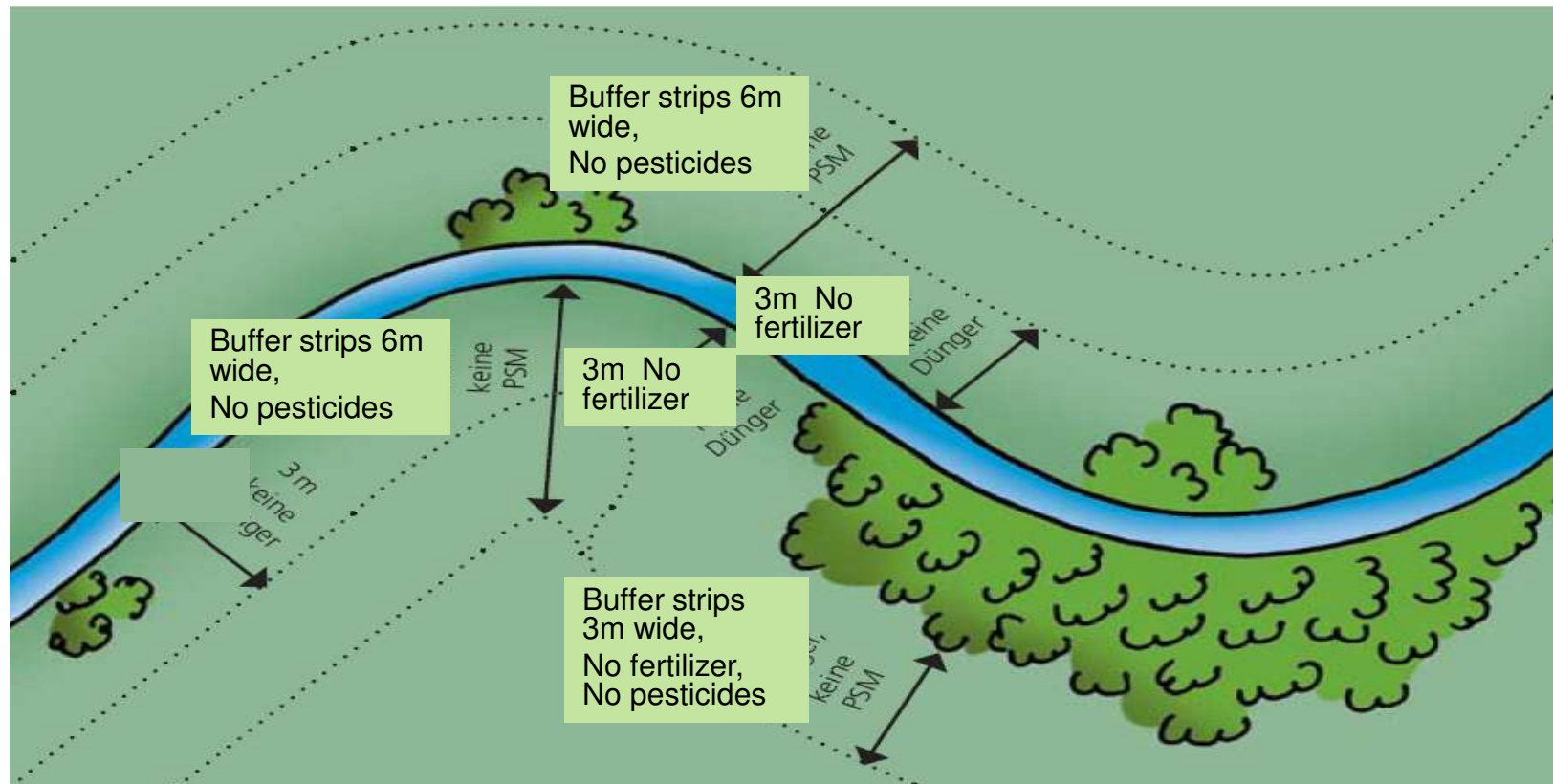


### 3. Proof for ecological performance (PEP)

## Measures to protect surface water



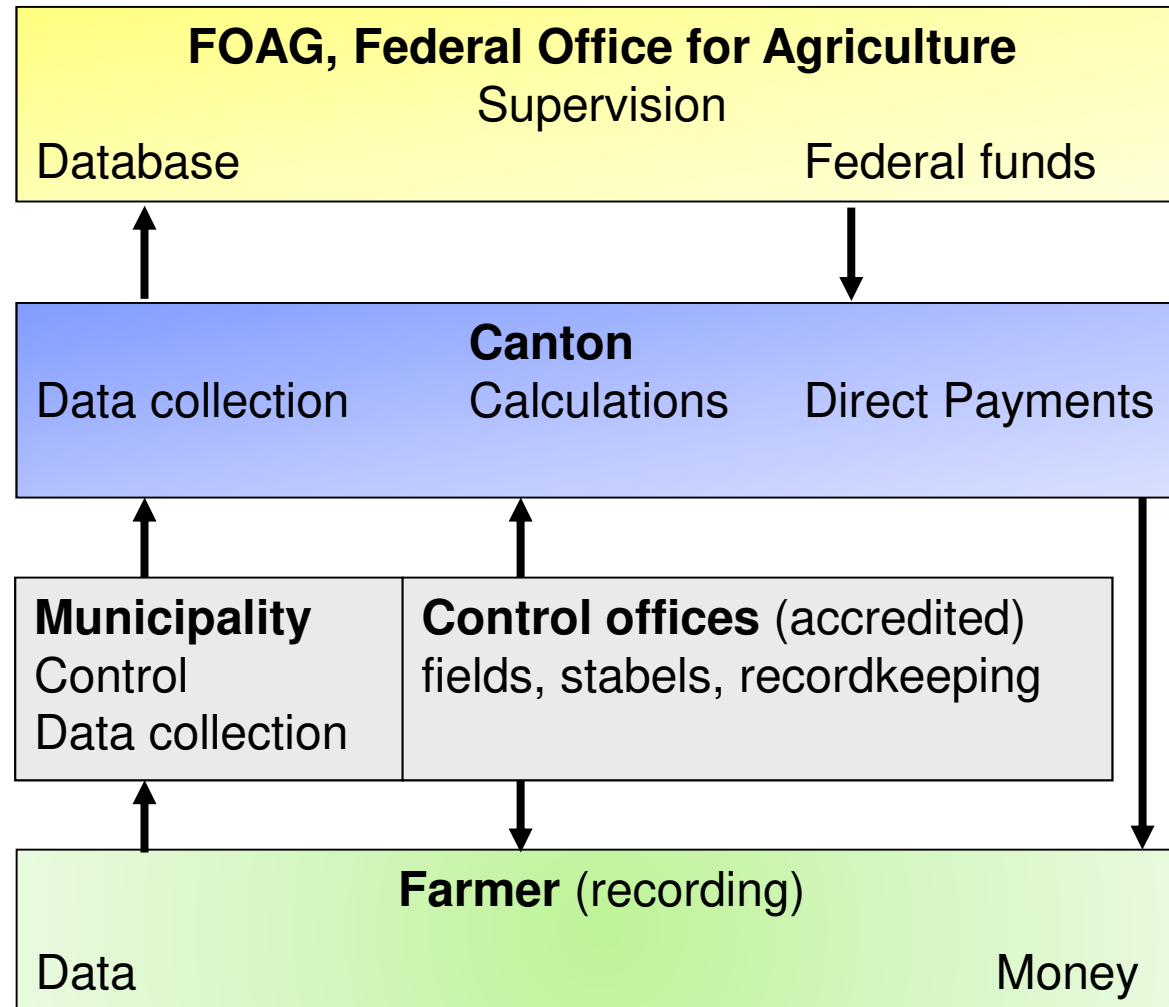
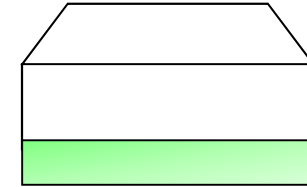
- regulation for inspection of sprayer (every 4 years),
- rinsing sprayers on the fields,
- untreated buffer strips along surface waters





### 3. Proof for ecological performance (PEP)

## Implementation and control

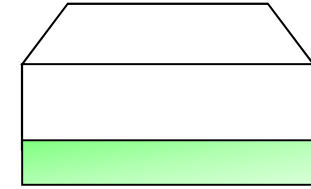


- Check on the farm*
- at least every 4<sup>th</sup> year
  - risk based
  - ...



### 3. Proof for ecological performance (PEP)

## Control activities: 2010



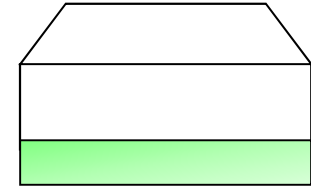
- 52'000 farms received direct payments (= 92% of all Swiss farms)
- 21'000 farms (41%) were inspected by canton or accredited organisations on the PEP
- 2'400 farms (4.6%) did not comply with the requirements of PEP
- Total cutting of direct payments:  
2.7 Mio. SFr.





### 3. Proof for ecological performance (PEP)

## Implementation: Costs and competences



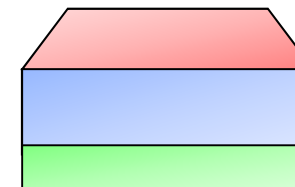
- Case studies in two cantons (ZH, GR):  
The costs of implementation and control comprises 2-3% of the total amount of direct payments.
- Challenges:  
Coordination of inspections,  
Inspectors: an excellent expert knowledge is needed



### 3. Proof for ecological performance (PEP)



## Importance of direct payments



Share of direct payments in  
Farm Gross Profits according to regions 2010

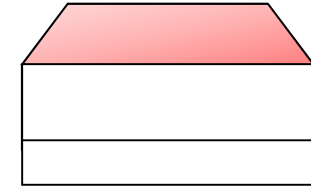
	Total	plain	hillside	mountain
<b>Number of farms</b>	3'202	1'358	998	846
<b>Average farm size (in ha)</b>	21.06	22.17	19.71	20.55
	<i>Fr.</i>	<i>Fr.</i>	<i>Fr.</i>	<i>Fr.</i>
<b>General Direct payments</b>	45'346	39'541	45'237	55'342
<b>Ecological direct payments</b>	9'014	10'018	9'338	6'972
<b>Total Direct payments</b>	54'360	49'559	54'575	62'314
<b>Gross profit</b>	250'181	304'343	234'042	174'501
<b>Proportion of gross profit in direct payments (in %)</b>	21.7	16.3	23.3	35.7

ART / Research station





## 4. Program / Examples



# Successful incentives (1/3)

Programs (with financial aid = direct payments), in which farmers can voluntarily participate, have proven to be successful

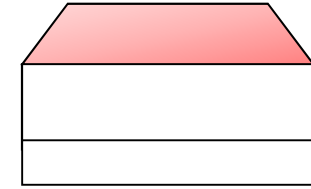
### Low-input Cereals and Oilseed Rape Production:

- Promoting the cultivation of grain and rape without plant growth regulators, fungicides and insecticides. Only herbicide can be applied.
- Restriction applies to all wheat, feed grain or rape fields of the entire farm.
- Combination with label possible.

*Low-input Cereals Production: 70'000 ha, 45%*  
*Low-input Rape Production: 3'000 ha, 10%*



## 4. Program / Examples



### ***Successful incentives (2/3)***

Programs (with financial aid = direct payments), in which farmers can voluntarily participate, have proven to be successful

#### **Organic Agriculture:**

The use of synthetic-chemically manufactured pesticides for the entire farm are prohibited.

*10% of CH-farms,  
mainly in mountain region with  
roughage consuming livestock.*





## 4. Program / Examples



### Successful incentives (3/3)

Programs (with financial aid = direct payments), in which farmers can voluntarily participate, have proven to be successful

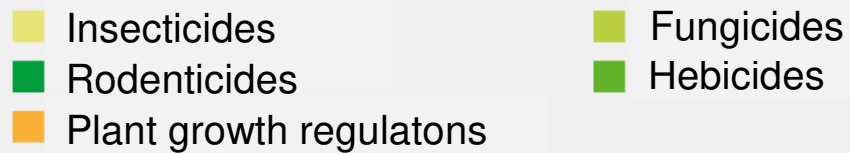
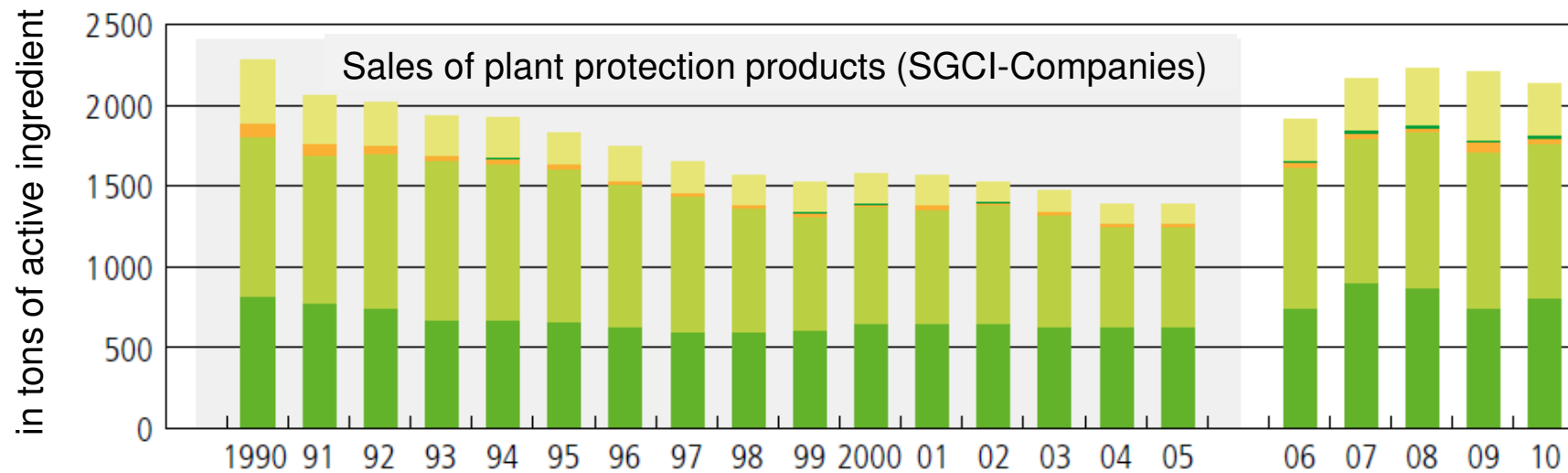
#### Special projects in sensitive areas:

- Government supports projects to reduce nitrates and pesticides in ground water;
- The nitrate and pesticides content can be reduced to acceptable levels in sensitive areas through a targeted adjustment in agricultural practices;
- The cost burden incumbent on farmers through the imposition of special measures that are arranged contractually, is assumed by the government and other institutions.

## 5. Preliminary conclusion



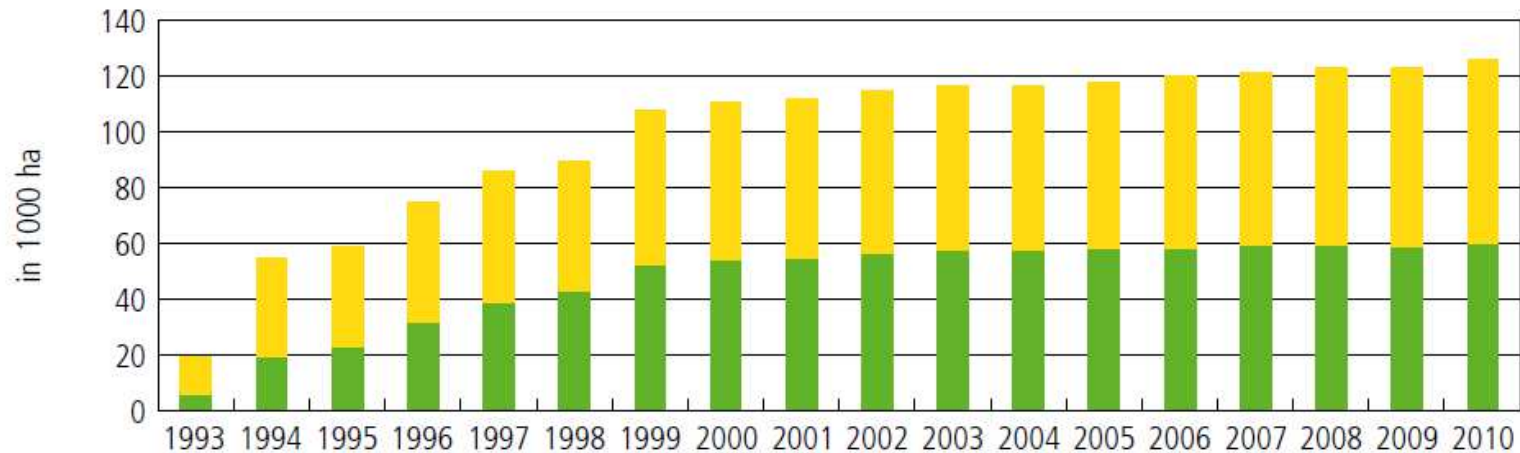
# Reduction of plant protection products





## 5. Preliminary conclusion

# Development of ecological compensation areas



- Mountain region
- Valley region

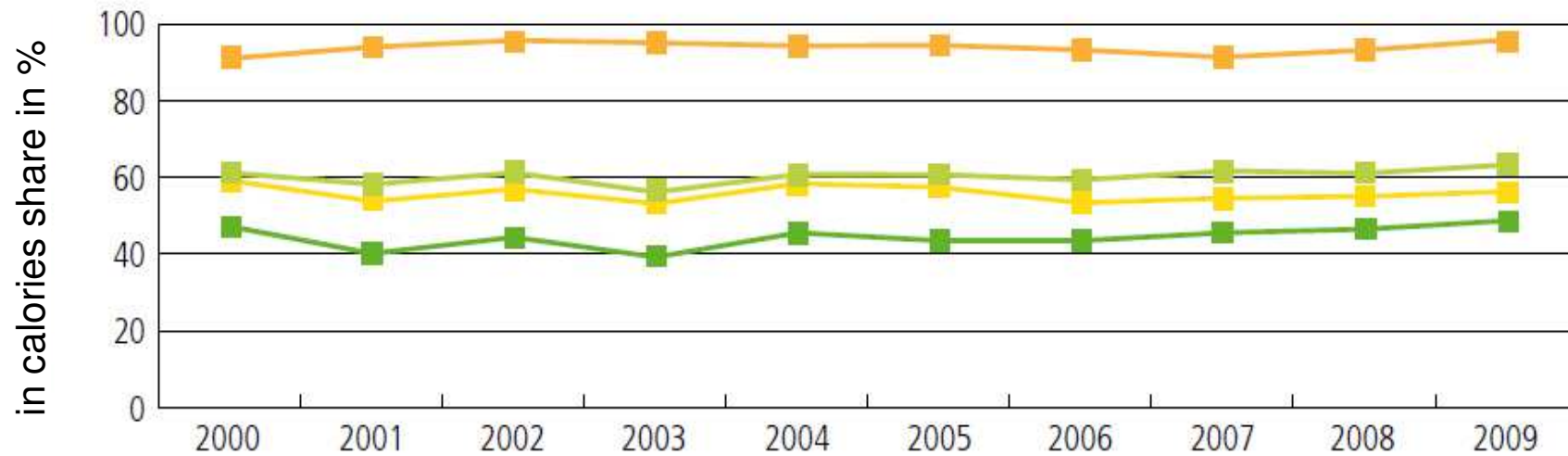
Quelle: BLW

Almost pesticide-free zones  
only targeted herbicides treatments against harmful species admitted

## 5. Preliminary conclusion



# Development of self-sufficiency



Quelle: SBV

Farmers produce 60% of Switzerland's food consumption, although the population has grown by 10% since 2001.



## 5. Preliminary conclusion

# Clean water



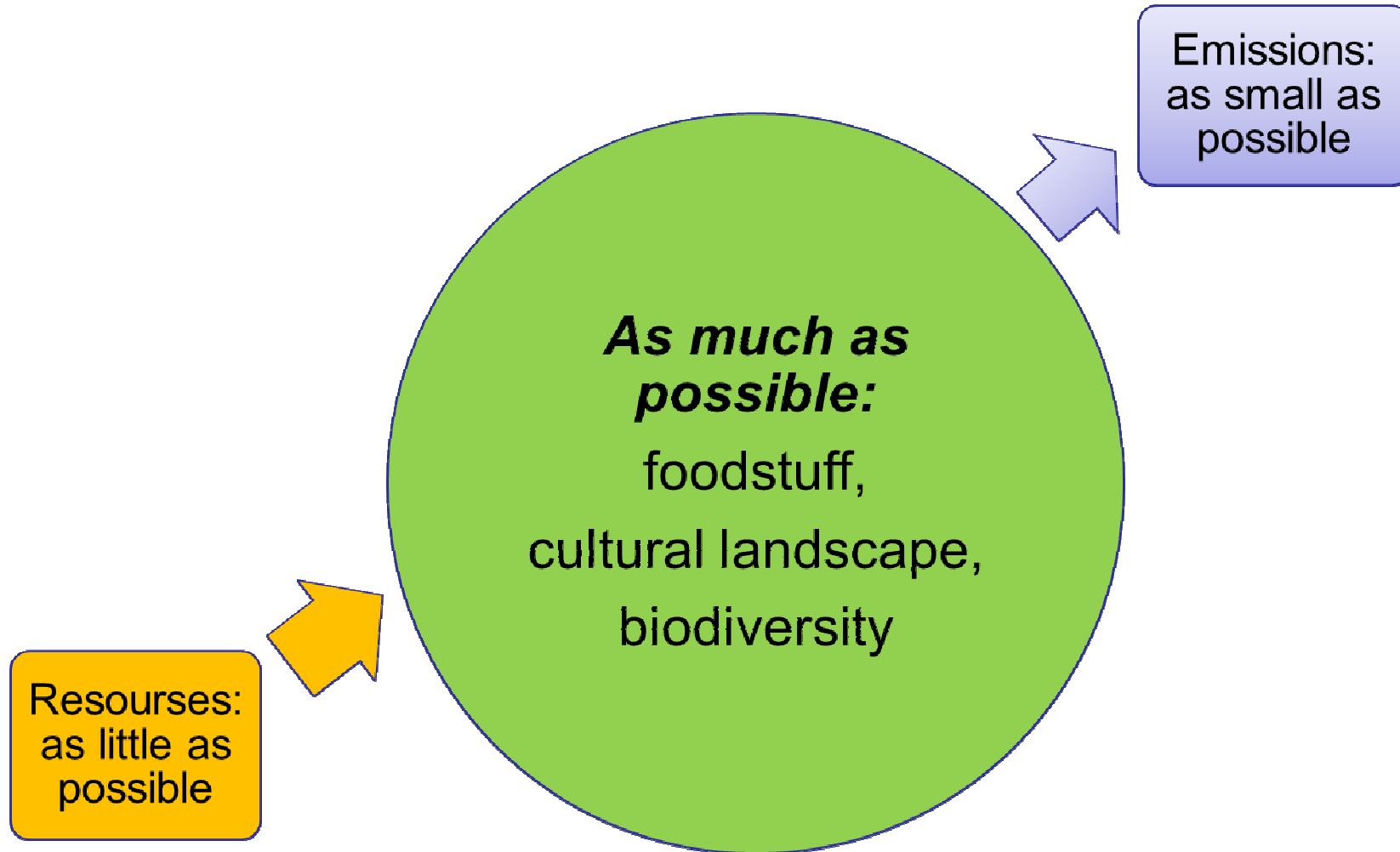
*Swimming  
in the Rhine (Basel)*

Agriculture contributes to maintain clean surface waters  
N.B: 1965: Only 14% of the Swiss population was connected to a central wastewater treatment plant. Today: 98%



## 6. Perspective

# Major challenges in one word/world







## 6. Perspective

### Further progress

- Generally: Standard of PEP will remain on a high level;
- Standards in public Training and Advisor Services have to be maintained;
- Use of pesticides: better targeted and more ecological compatible
  - Further programs (ongoing reform) within specific incentives for an efficient use of resources are foreseen. Examples:
    - promotion of precise techniques for the application of pesticides: «Droplegs»
    - accurate disposal of leftovers of pesticides: «Biobed / Biobag»
    - **NEW IDEAS / NEW APPROACHES**



# THANK YOU FOR THE ATTENTION!

