

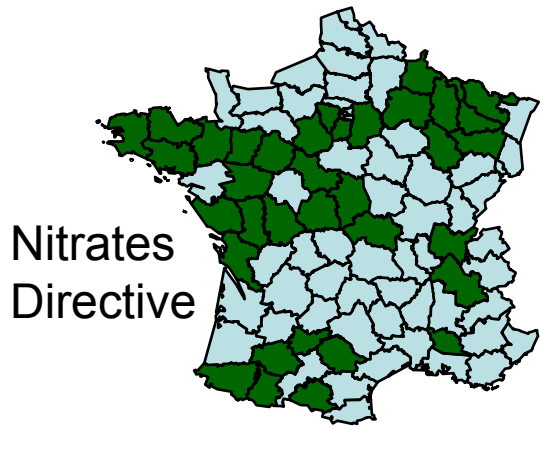
Grass buffer strips

How they limit soil erosion.

How they protect the quality of run-off water.

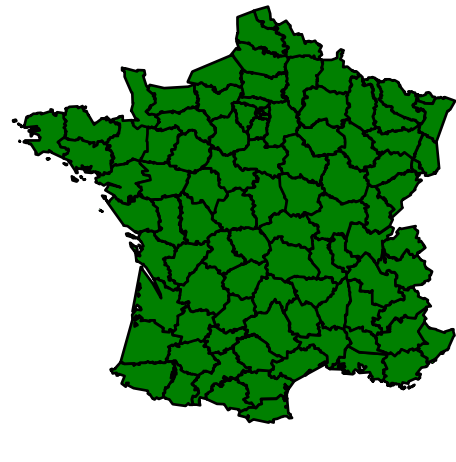
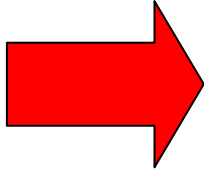


French farmers have to cover a part of their surface with grass strips



Nitrates
Directive

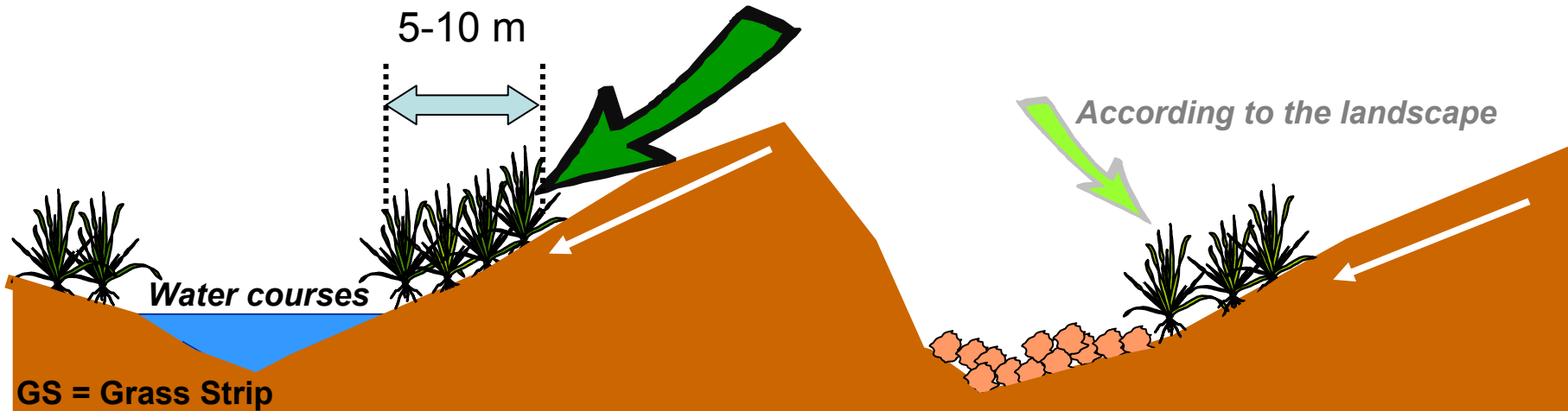
< 2005 : 1/3 of the french territory



GAEC

≥ 2005 : the whole territory is concerned

GS = 3 % of the annual crops surface



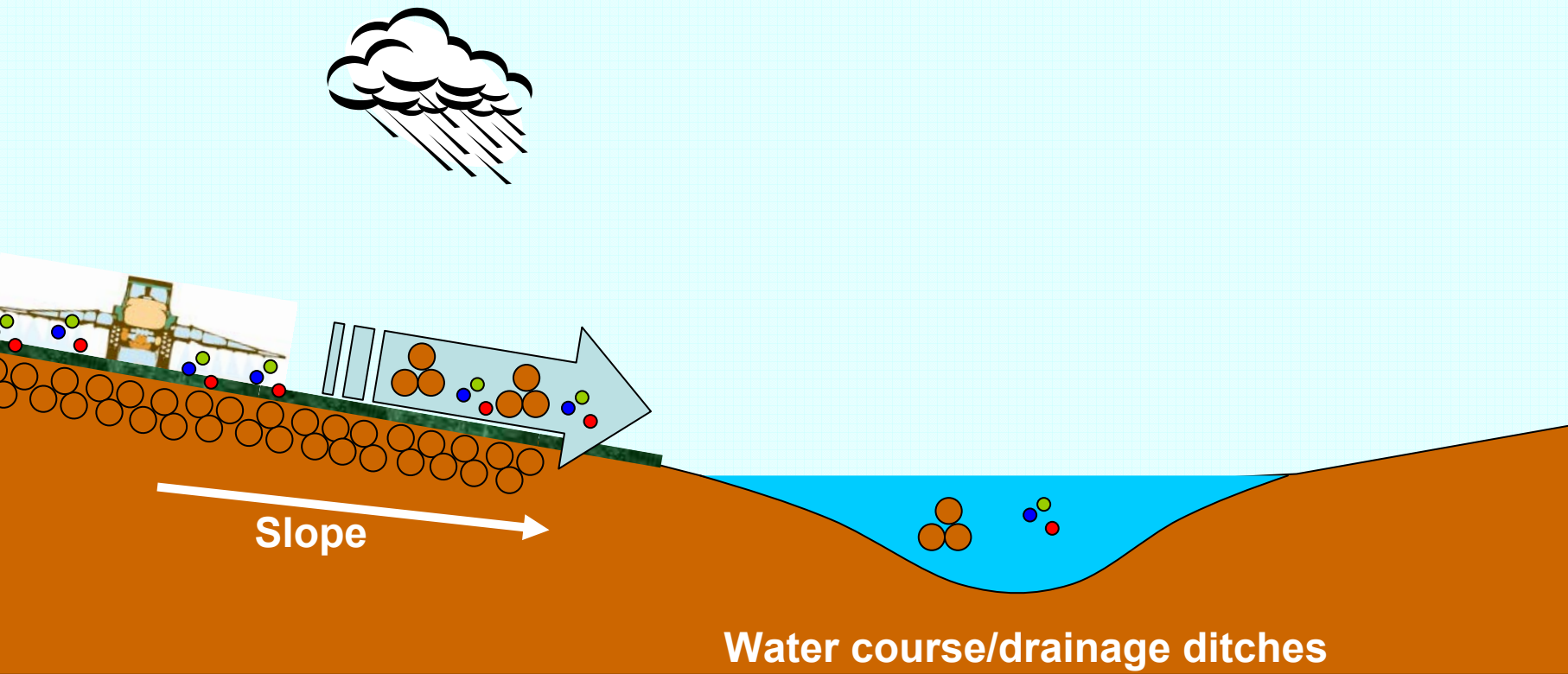
5-10 m

Water courses

According to the landscape

GS = Grass Strip

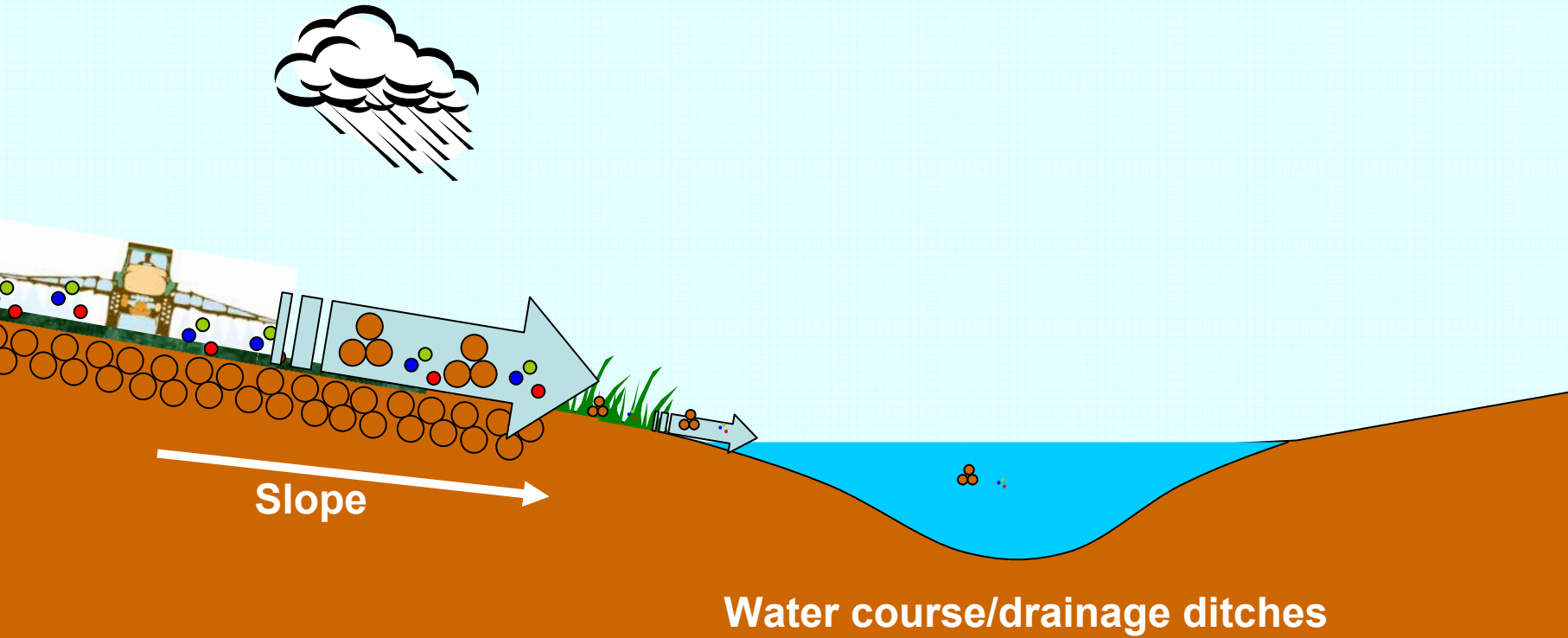
Impact of GS on the quality/ the quantity of water run-off



The negative effects of run-off :

- *Soil deterioration (structure, fertility)*
- *Watercourses pollution (chemicals, fertilizers, water turbidity)*

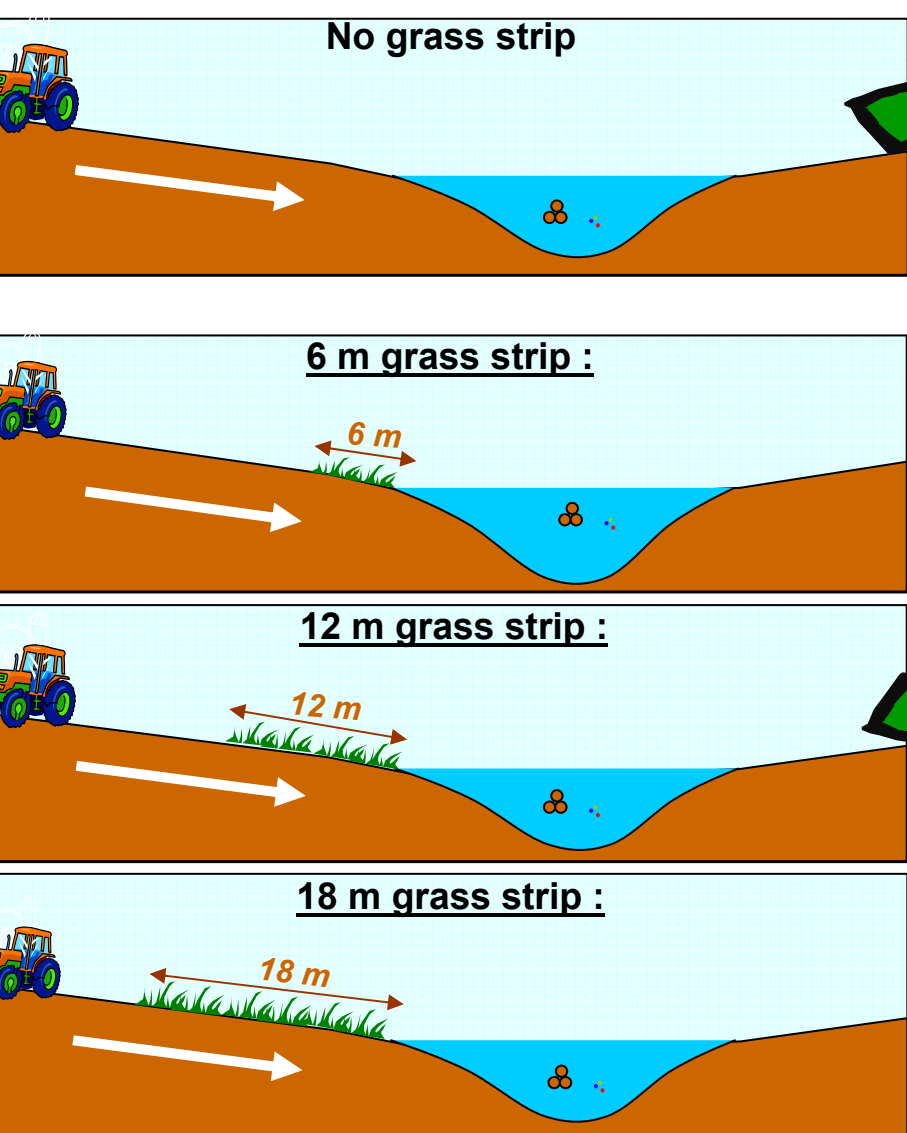
Impact of GS on the quality/ the quantity of water run-off



Expecting benefit effects of grass strips :

- Elements are fixed on clay-humus combination, on humus and on plant residues
- Roots help to catch soil particles, fertilizers and chemicals and contribute to degrade them
- Run-off is limited

Impact of GS on the quality/ the quantity of water run-off



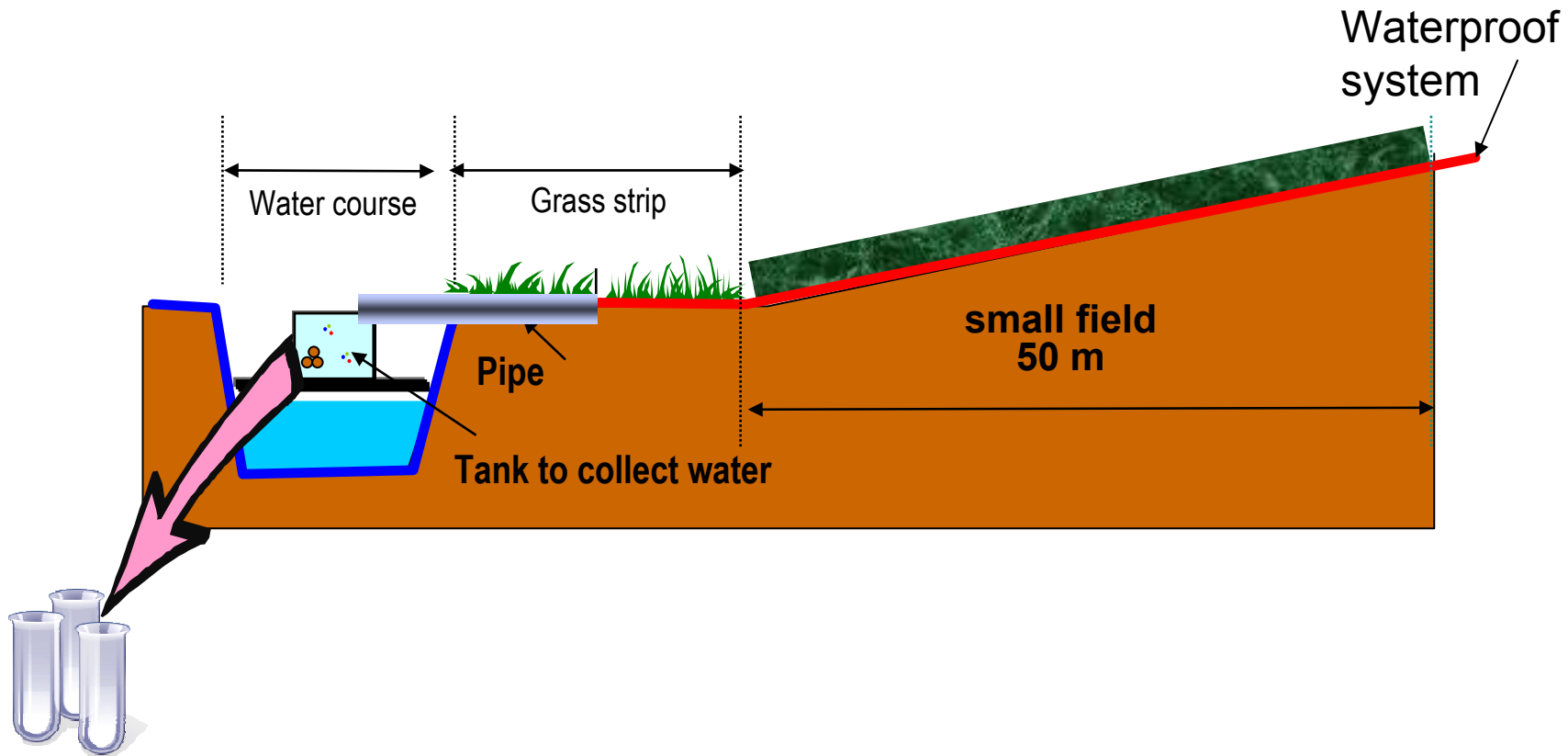
- *Quantity of Pesticides residue, Nitrate, Phosphorus and Soil particles found in water courses*

- *run-off volume*

Efficiency : % of decrease of the quantity/quality compared to the initial situation

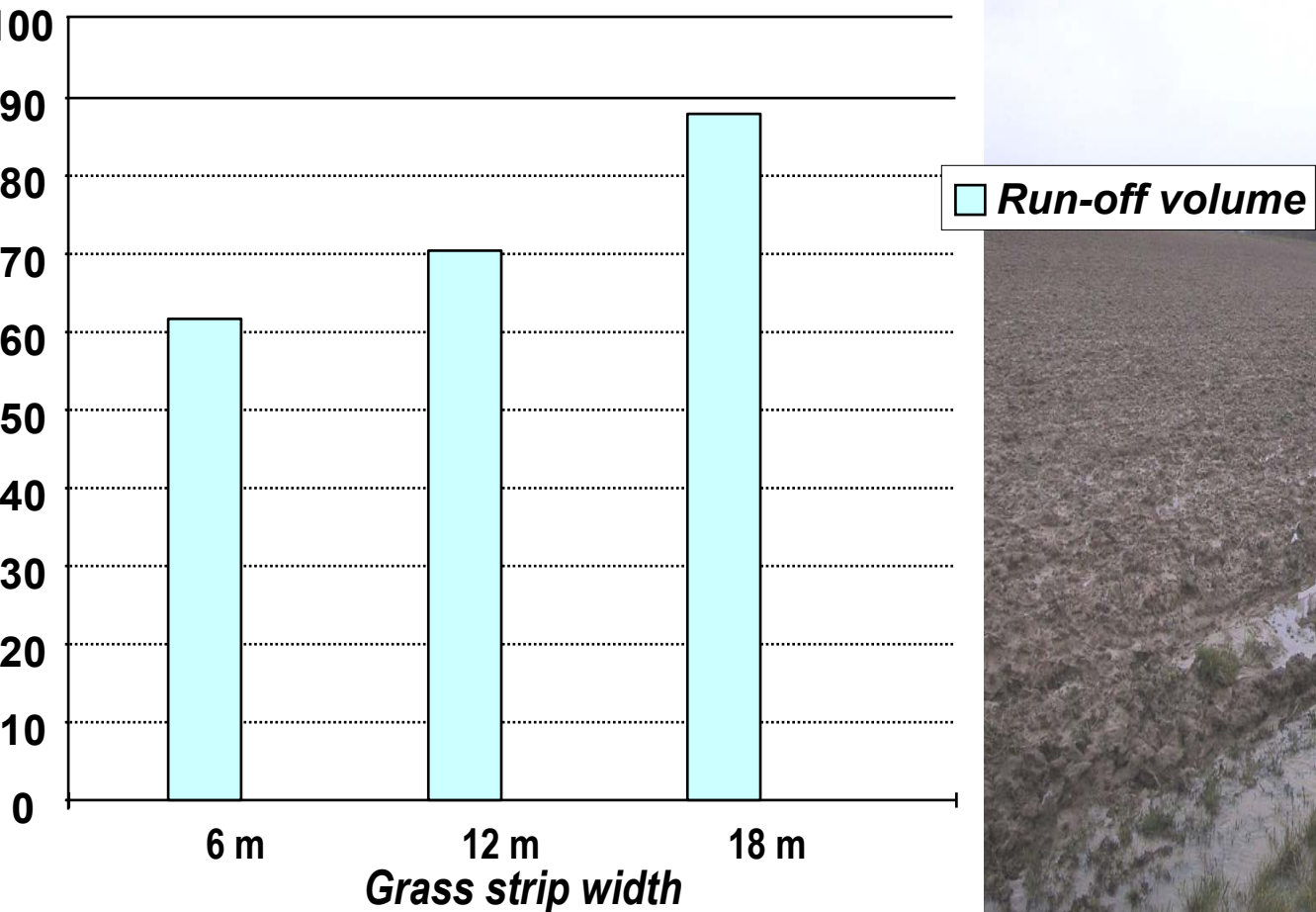
Impact of GS on the quality/ the quantity of water run-off

Some more details on the experimental device :



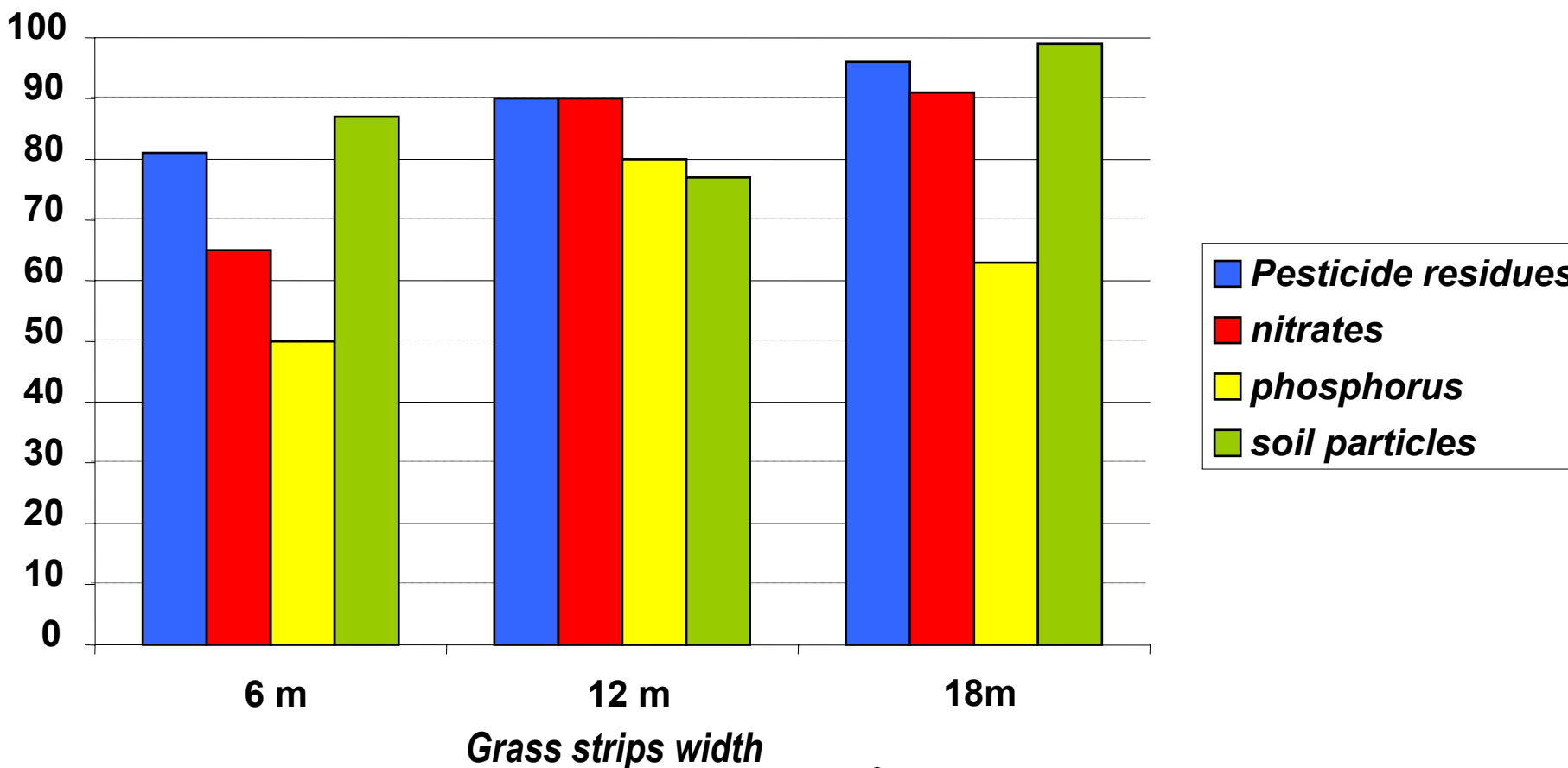
Reduction of run-off volume

Efficiency of the grass strip



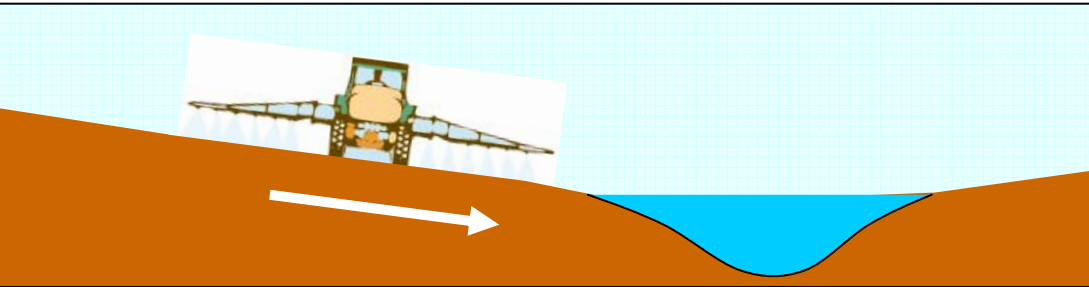
Effects on pesticides, fertilizers and soil particles

Efficiency of the grass strips

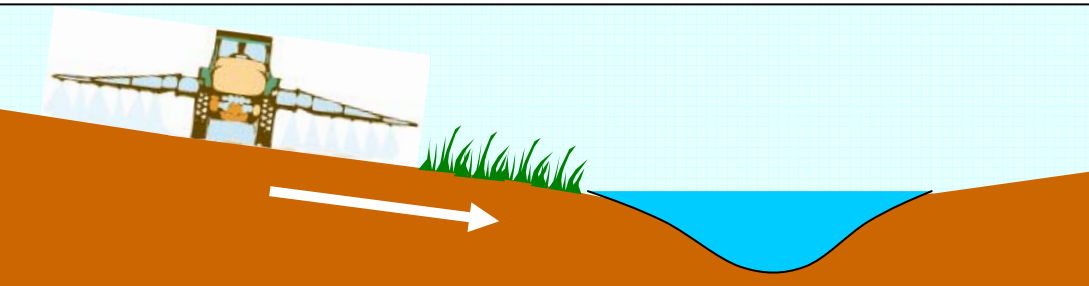


**Positive effect even
with a 6m wide strip**

The other interests of the Grass strips



Grass strips make a wider distance to protect watercourse against direct releases or drifts of spread pesticides and fertilizers

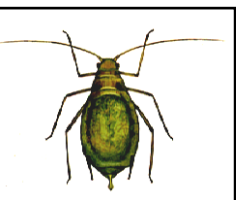


Grass strips are in favour of biodiversity. They ensure the maintenance of beneficial insects and of small wild animals

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Exemple : Impact of grass strips on aphid population in a wheat crop



Number of aphids per
counting point

