

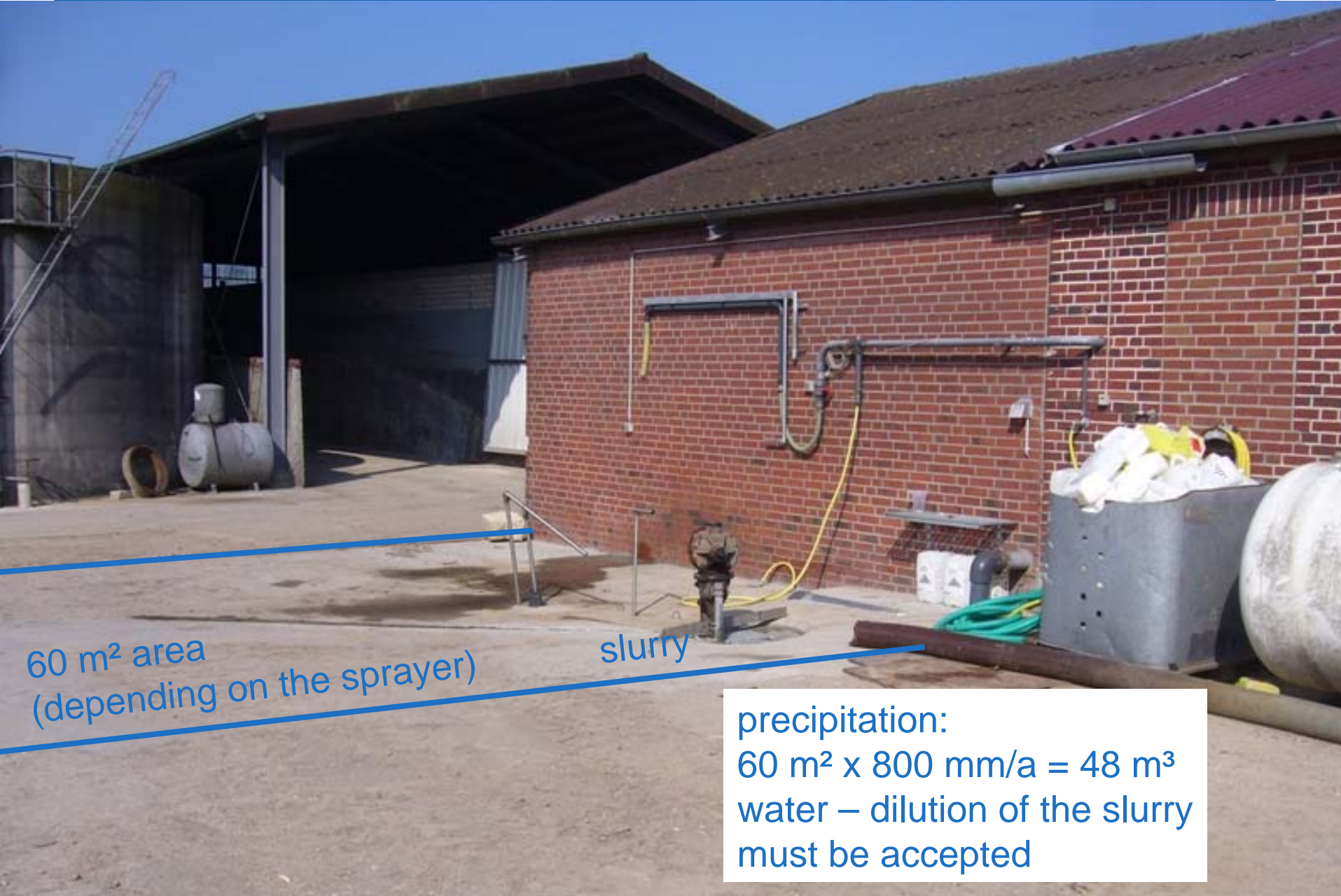


Washing places connected to a slurry tank
or
the saucer principle
(2 Demo farms included in the TOPPS project)

Harald Kramer

1. Washing and filling place (slurry)
2. Filling place (saucer principle)
3. In field Cleaning of sprayers
4. Summary

Washing and filling place - slurry



60 m² area
(depending on the sprayer)

slurry

precipitation:

$$60 \text{ m}^2 \times 800 \text{ mm/a} = 48 \text{ m}^3$$

water – dilution of the slurry
must be accepted

Washing and filling place - slurry

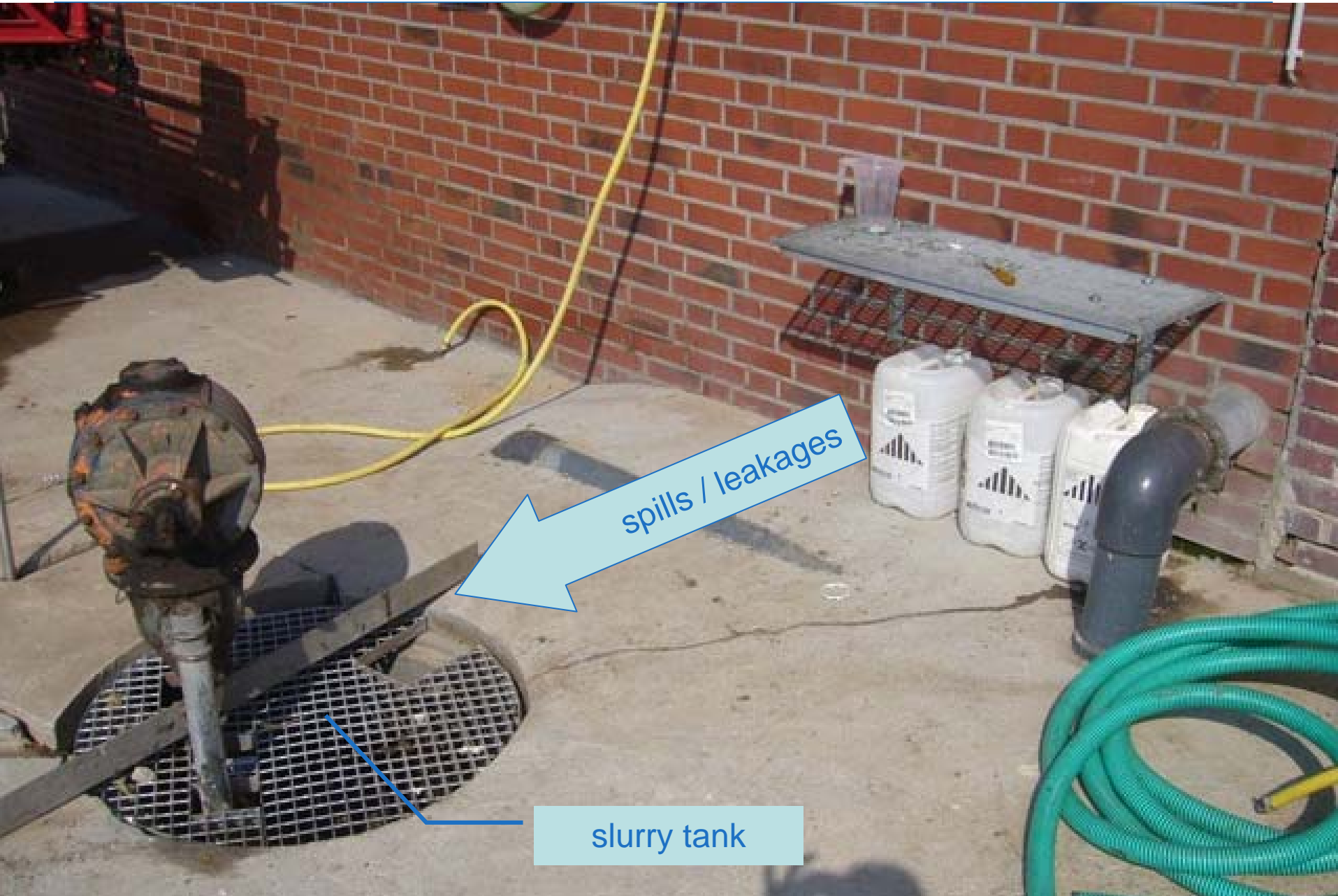


Water supply (filling)

Working platform

Storage of
cleaned & empty
PPP container

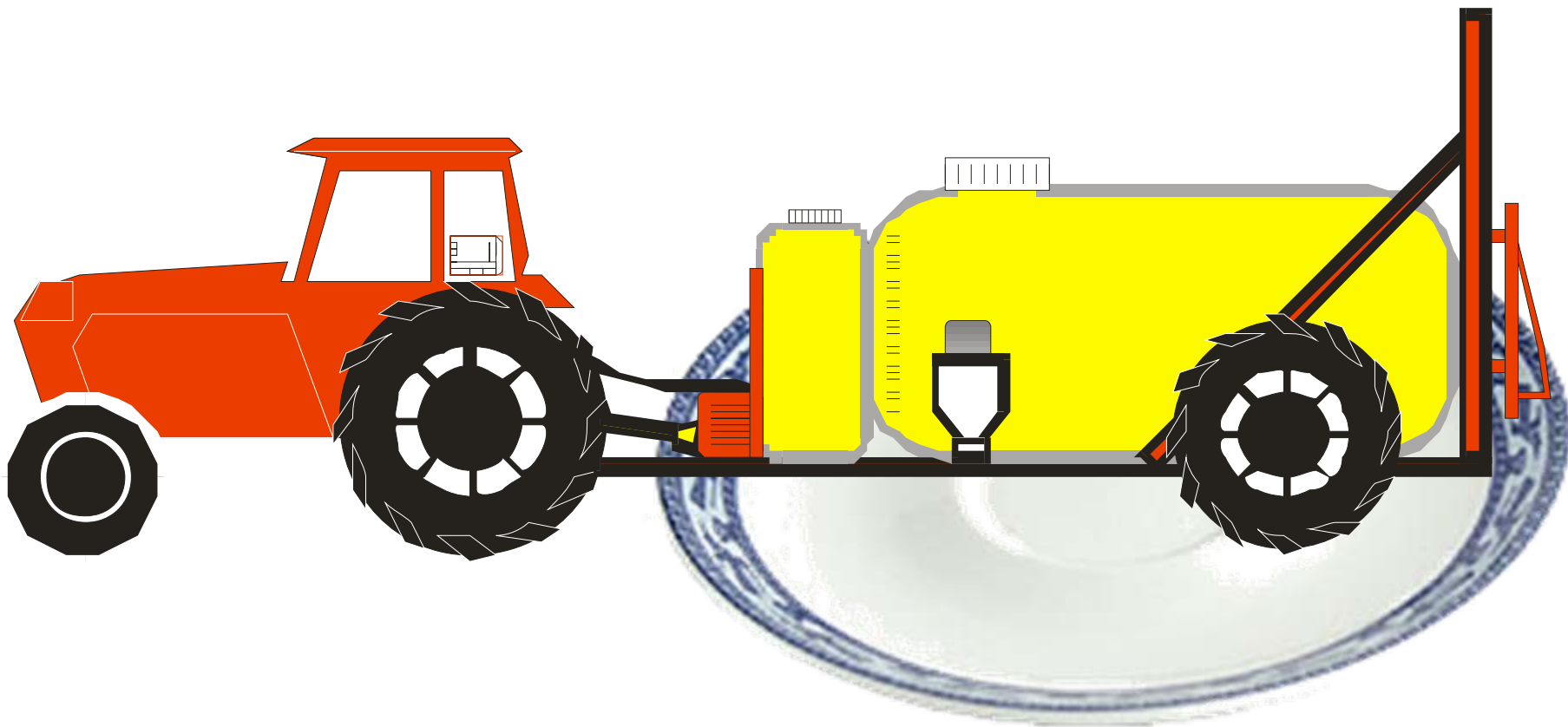
Washing and filling place - slurry



spills / leakages

slurry tank

TOPPS Saucer principle – contractor or large farmer



TOPPS Saucer principle – contractor or large farmer

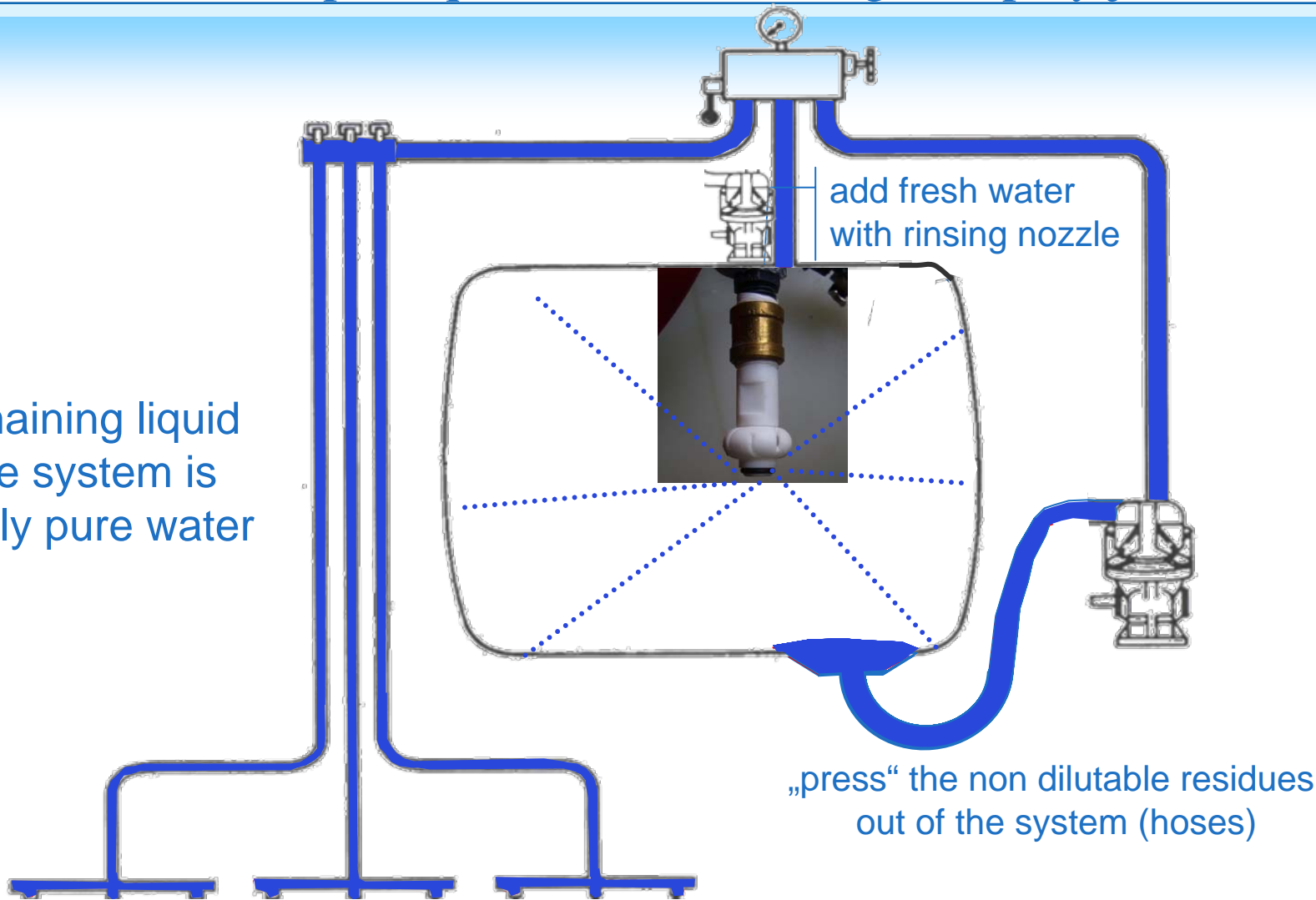


TOPPS Saucer principle – contractor or large farmer



Cleaning procedure in the field prerequisite after finishing the spray job

Remaining liquid
in the system is
nearly pure water



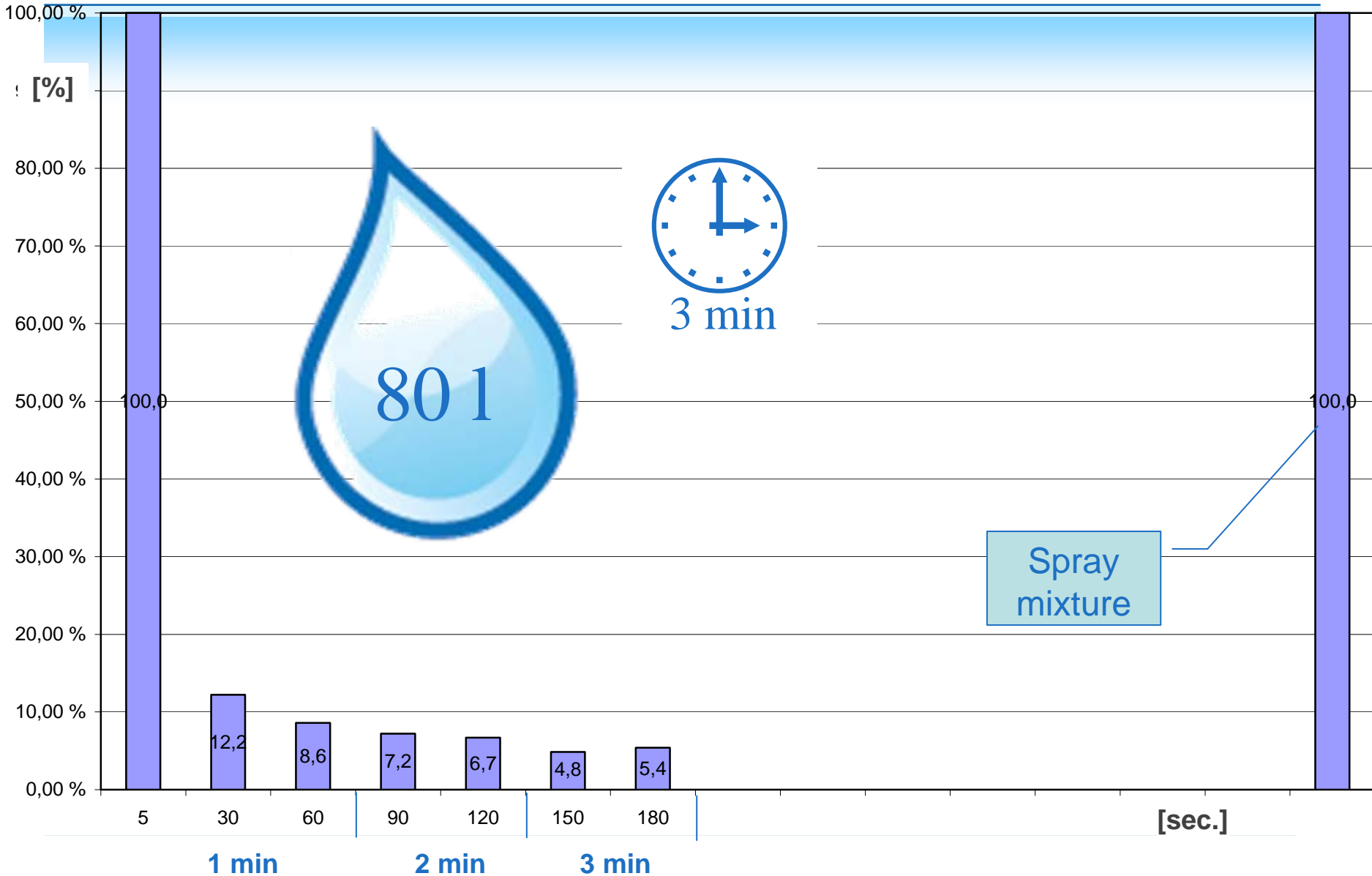


Cleaning with fresh water:

1. 80 l at once (practice)
2. 3 times 20 l (split 60 l)
3. 10 l/min continuously

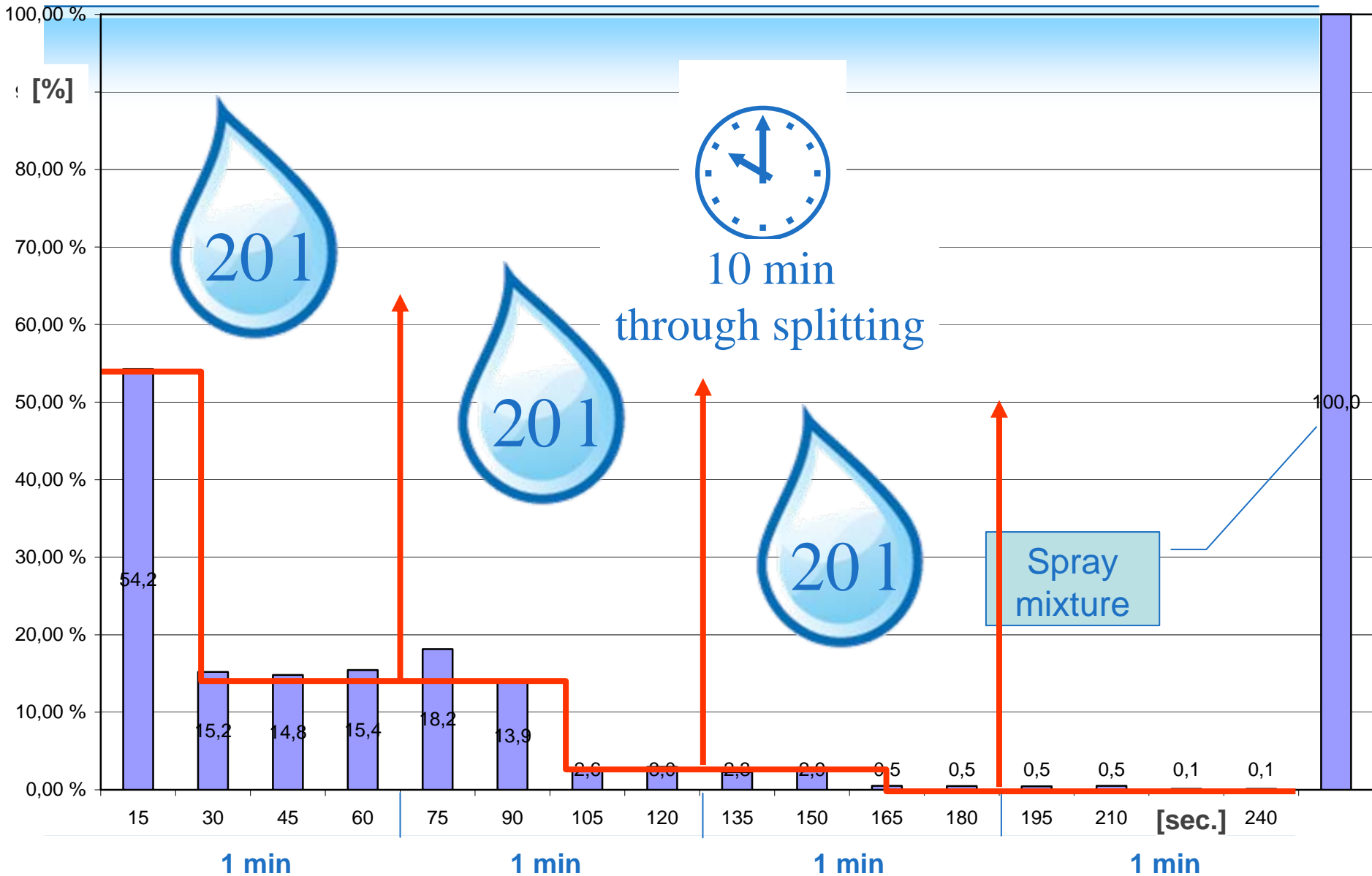
Cleaning success (results) – field sprayer (600 l)

80 l H₂O (1 x 80 l) – 12 m boom – Airmix 03 – 1,7 l tank residue (8,5 %)



Cleaning success (results) – field sprayer (600 l)

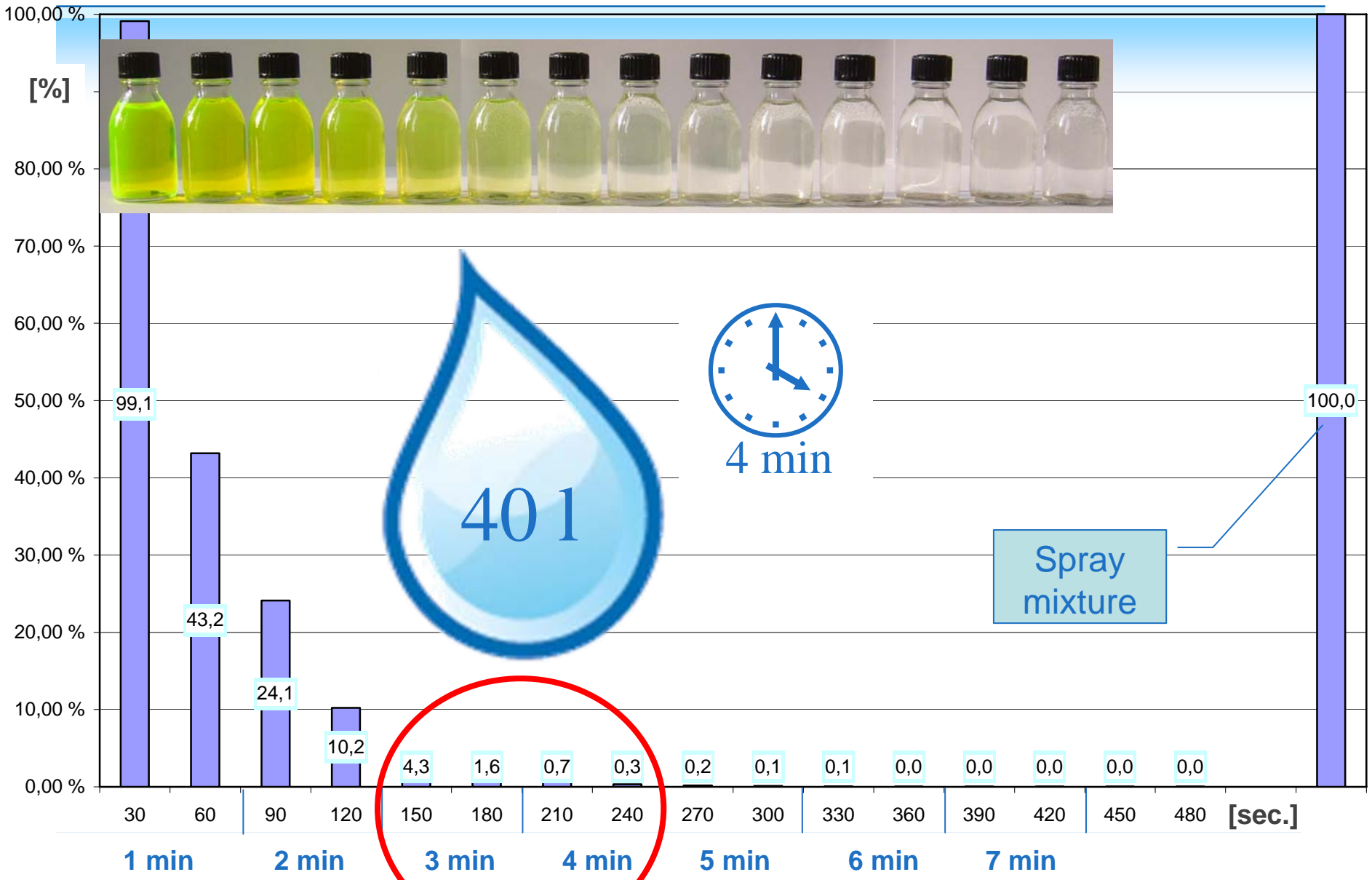
60 l H₂O (3 x 20 l) – 12 m boom – Airmix 03 – 1,8 l tank residue (6 %)



+ additional time for filling the fresh water into the tank

Cleaning success (results) – field sprayer (600 l)

10 l/min H₂O – 12 m boom – AirMix 03 – 1,6 l tank residue (7,5 %)





Field Sprayer 600 l – 12m	Minutes < 1% spray mixt.	Residue (sump + filter)	≅ l residues of spray mixture (sump + boom)	Allowed (EN 12761)
80 l	3 min (5,4 %)	1,7 l (8,5 %)	Σ 1,056 l = 3,9 %	27 l
3 x 20 l	10 min (60 l)	1,8 l (6,0 %)	Σ 0,130 l = 0,05 %	
10 l/min	4 min (40 l)	1,6 l (7,5 %)	Σ 0,123 l = <0,05 %	

More than 99 % of the allowed residues (EN 12761) will be left in the field with a small water amount (\Rightarrow external cleaning will be possible now)

**External cleaning kit with electrical pump - 9 l/min -
(if the sprayer is not equipped with a fresh water tank)**



Parking under a roof (weather protected)



Summary

1. Washing and filling place (slurry)
mixing, loading and washing without risk
⇒ expensive; not possible everywhere
2. Filling place (saucer principle)
collect spills (foam etc.) during filling process
and reuse them at once
⇒ easy to install (cheap versions available)
3. In field Cleaning of sprayers
prerequisite after finishing the spray job
⇒ parking under a roof is now possible
(with a tested sprayer – anti drip devices...)

TOPPS
CLEAN



Thank you for your attention