Dose expression Workshop Vienna 20.10.2016

Vegetable group

Dose adjustment beyond the one triggered by the harmonized dose expression

- Is not relevant for efficacy evaluation

- This additional dose adjustment is related to: pest/disease pressure, cropping system, “porosity” of crop, LAI, type of product
- Is relevant for advices and use in practice.

Efficacy trials

- Applications must be done with an appropriate amount of water
- Proper coverage of the treated area is mandatory
- Best available equipment should be used

Trial reports

- Trial reporting (quality and completeness) can and should be improved
- It was suggested to have clear and complete tables for the relevant parameters

- Time is needed to implement changes in reporting tools

Renewals

- Old data should be accepted as valid if no unpredicted GAP change occurred

Residue trials

- To be discussed in the right group if a dose expression change is possible
- If yes, when?
- to be considered: 25% rule, covering potential worst case
- Existing trials must remain valid

Approval of our proposal

- Evaluators in Europe must discuss the proposal and validate it.

- If this proposal is not considered valid a better proposal is needed
  but ha expression must not be the future (for efficacy)

Concentration (%) expression model

Advantages

- simple model – easy to prepare spray tank
- Indirectly (via water volume used) adapted to crop structure
- No issues e.g. with operator exposure or phytotox

Disadvantages

- Comparability and reproducibility of trial data is questionable unless the water volume is predefined in protocols.
- To consider crop structures directly a strict correlation between water and crop needs to be defined (not seen in existing trials)
- Reference product may not be registered with a concentration.
- In GAP regulatory limitation (dose/ha ground) is needed in addition.

General conclusion:
Concentration was **not** considered as potential harmonised expression for efficacy as disadvantages were considered relevant and EPPO 239(2) does not recommend it.
Watervolumes and sprayers used in trials are variable

Fixed rate along the season (rate/ha ground)

Advantages

- Simple, well established model
- (max) rate/ha is reflected in GAP, consequently applications are within regulatory frames.
- For each reference product a rate/ha is known

Disadvantages

- Does not consider the crop development and treated area, no accurate dosing, no fit to minimum effective dose definition
- In the past sometimes differently interpreted (maybe?) to adjust rate to the crop

General Conclusion:
fixed rate per ha ground was **not** considered as potential harmonised expression for efficacy as there is a severe disadvantage.

tLWA expression model

Advantages

- it considers the vertical crop development and row spacing, is more accurate than /ha expression
- SIMPLE model – only few parameters need to be measured (already existing data from industry)
- Vegetables are cultivated in a more standardised way
  less variability in thickness (tbc)
- Allows reproducibility and comparability of trials

Disadvantages

- Width of rows not considered
- Reference products not registered with this expression
- Training of technicians is needed
- Identification of tLWA prior to preparation of spray needed

General conclusion:
tLWA expression model was considered as potential harmonised expression for efficacy

TRV expression model

Advantages

- More accurate, more realistic than tLWA approach as it considers also the width of the crop (real 3D)

Disadvantages

- Training e.g. on width measurement needed (at which height, how many measurments, how accurate?)
- Bears also more risk for mistakes and more variability
- Identification of TRV prior to preparation of spray needed
- Reference products are not registered with this expression
- Today only very few TRV data available, unclear if improved accuracy has enough relevance to justify considering width

General conclusion:
TRV expression model was considered as potential harmonised expression for efficacy

Width data recording needed, data compilation and analysis of correlation needed

Summary

- **One voice agreement to the proposal to use tLWA as dose expression for efficacy** *
- Possibility to change to an even better expression may be discussed at a later point in time.
  Proposal to collect data to reflect TRV in trials (timeframe not defined) to allow analysis in future trials.
- tLWA rate must be reflected in GAP
- translation to a min-max ha rate needed, too.
  -> realistic transparent country specific parameter data are needed
- Use of reference products needs to be rediscussed.
- Transition period needed (involvement of other departments eg regulatory, training needed) but duration is not specified yet

* If other groups prefer TRV, it is proposed to have TRV in vegetables as well.

Glossary of terms

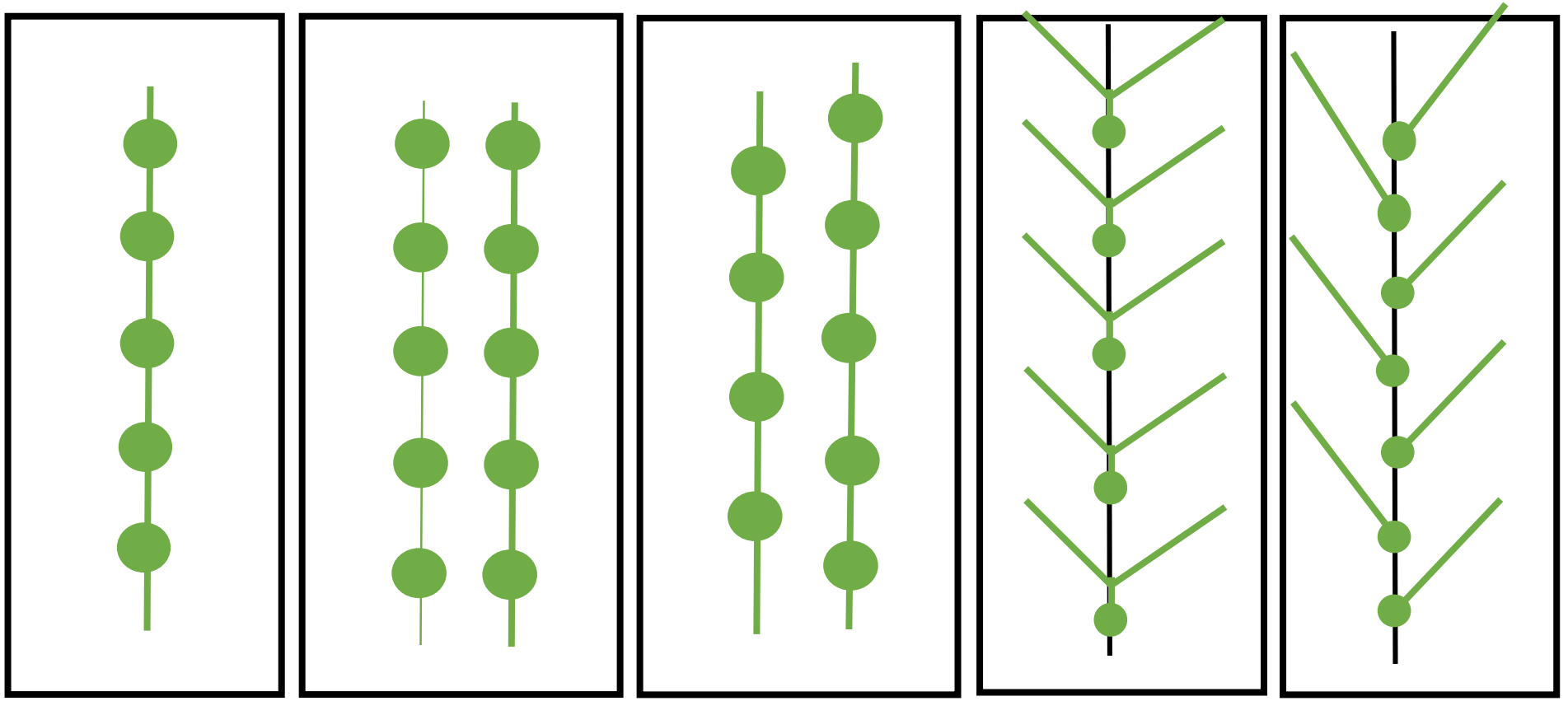
- Canopy / foliage (repetitively used)
- Row sides applied – pictures would help
- Ground area (with/without headlands)

Required parameters

Assumption: Trials for new products are conducted in a harmonized way
Dose expressed as used.

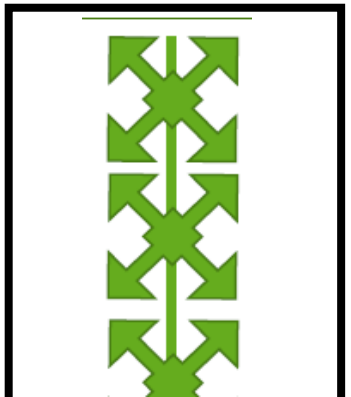
- Plot size
- Cropping system (single row, double row*)
- Row spacing
  and spacing within row,
  and spacing between double rows

Single Row **Double Rows** **Shifted double rows** **Y-rows** Oblique cultivation

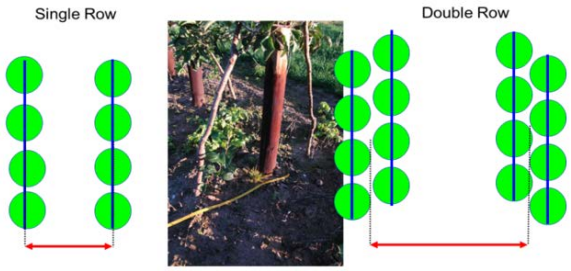


← -- -- -- ("equivalent" to double row) -- -- →

X-rows



Measurement of the Row spacing:



Required parameters

Assumption: Trials for new products are conducted in a harmonized way
Dose expressed as used.

- Plot size
- Cropping system (single row, double row*)
- Row spacing
  and spacing within row,
  *and spacing between double rows
- Treated canopy height / spray band height at application
- Canopy height at application
- Mid width of the canopy at application
- BBCH growth stage at application
- Actual applied spray volume (per ground area)
- Information on application equipment