



**Upcoming changes of dose expression for PPP  
into kg or L/ha leaf wall area (LWA)  
considered for the evaluation and registration  
of grapevine uses in Germany**

## ... to be considered when changing the dose expression system

- In DE grapevine is cane-trained using vertical trelling structure („Guyot“ system) in single rows → > 95%
- Leaf wall area (LWA) changes during the season



Quelle: H. Koch, 2016

Fig. 1 Guyot system at BBCH 13 (3rd leaves unfolded)



Quelle: H. Koch, 2016

Fig. 2: Guyot system at BBCH 89 (ripe for harvest)

# Current dose expression in grapevine uses „factor system“

## Application rates according to BBCH-scale per ha

- Basic rate: 0.6 kg/ha (ground area)
- BBCH 61: 2 x basic rate: 1.2 kg/ha (ground area)
- BBCH 71: 3 x basic rate: 1.8 kg/ha (ground area)
- BBCH 75: 4 x basic rate: 2.4 kg/ha (ground area)

## Change of dose expression for already authorised uses, for uses of renewal, or only for uses of new applications?

### ➤ already authorised uses/ renewal applications:

- „old“ efficacy studies without having data of crop structures acc. to EPPO standard PP1/239(2) *Dose expression for PPP*

### ➤ new applications (new products):

- efficacy studies with data of crop structures acc. to EPPO standard PP1/239(2) *Dose expression for PPP*

## Current appl. rates recalculated on LWA

current “factor system“/ BBCH	appl. rate [kg/ha ground]	LWA [m <sup>2</sup> /ha ground]	recalculated appl. rate [kg/ha LWA]
Basic rate	0.6	4,200	1.43
BBCH 61	1.2	12,650	0.95
BBCH 71	1.8	15,000	1.20
BBCH 75	2.4	18,000	1.33



No change for already authorised uses!

## Applications (renewals) without data of crop structures acc. to EPPO standard PP1/239(2) – which recalculated rate shall be used for renewal authorisation?

current “factor system“/ BBCH	appl. rate [kg/ha ground]	LWA [m <sup>2</sup> /ha ground]	recalculated appl. rate [kg/ha LWA]	appl. rate used in renewal application [kg/ha LWA]		recalculated rates from renewal appl. [kg/ha ground]	
Basic rate	0.6	4,200	1.43	1.33	1.43	0.5	0.6
BBCH 61	1.2	12,650	0.95	1.33	1.43	1.7	1.8
BBCH 71	1.8	15,000	1.20	1.33	1.43	2.0	2.1
BBCH 75	2.4	18,000	1.33	1.33	1.43	2.4	2.6 !!!

 Using recalculated value from max. appl. rate/ ha ground area at max. LWA

## Decisions about what uses should be changed:

- already authorised uses: **No**
- renewals: **Yes**, with the help of a LWA standard
- new applications: **Yes**, with the help of data of crop structures acc. to EPPO standard PP1/239(2)

**Needed?**

**Yes, but which ...**



## Max. appl. rate/ha ground area in reference to different sizes of LWA in typical vineyards in DE – effect in practice

max. appl. rate [kg/ha ground]	LWA [m <sup>2</sup> /ha ground]	recalculated appl. rate [kg/ha LWA]	recalculated appl. rate for <i>high</i> LWA situation (18,000 m <sup>2</sup> LWA/ha ground) [kg/ha ground]
1.0	18,000 (high)	0.56	<b>1.0</b>
1.0	15,000 (medium)	0.67	<b>1.2</b>
1.0	12,000 (low)	0.83	<b>1.5</b>

➔ Using low LWA as the standard it results in too high appl. rates per ha ground area when treating vineyards with high LWA !

➔ Using realistic worst case situation as LWA standard ?!

## What are crop standards for?

- for recalculation of doses when not having data of crop structures and/or (treated) LWA („old“ efficacy studies)
- comparability of appl. rates/ha ground area between different countries/ within a zone
- realistic evaluation/authorisation

## Advantages of harmonized standard(s)

- ease evaluation process
- ease zonal authorisation process
- ease mutual recognition

➡ *at least knowledge of crop structures of other countries/zones must be available*

## Disadvantages of not having harmonized standard(s)

- vice versa to advantages

## Different types are necessary:

- For the risk assessment (max. application rates per ha ground area)
- Efficacy evaluators (rate/ ha LWA + max. rates/ ha ground area)
- Dose for the farmer (rate/ ha LWA + max. rates/ ha ground area)

## GAP after changing dose expression

crop:	grapevine (VITVI)
target:	powdery mildew (UNCINE)
local of application:	open field
max. number of applications	
in the use:	5
in the crop:	5
appl. technique:	spraying
<b>application rate:</b>	<b>1.33 kg/10,000 m<sup>2</sup> LWA in 200 - 500 L water/10,000 m<sup>2</sup> LWA</b>
<b>max. single appl. rate:</b>	<b>2.4 kg/ha (ground area)</b>
<b>max. total dose in the crop:</b>	<b>9.0 kg/ha (ground area)</b>

 appl. rate per 10,000 m<sup>2</sup> LWA as an additional information in the GAP

- **EPPO workshop, Vienna, Oktober 2016**
- **Definition of standards (national or zonally harmonized?)**
- **Implementation concept to be published (incl. LWA development during the season acc. to BBCH) for changing dose expression with timelines**
- **Concepts for other high growing crops will follow**

# Thank you very much for your attention!

## contact:

Dr. Gregor Kral  
Federal office for consumer  
protection and food safety (BVL)  
- Germany -

[gregor.kral@bvl.bund.de](mailto:gregor.kral@bvl.bund.de)

