

Grains



CULTURE DEVELOPMENT STAGES

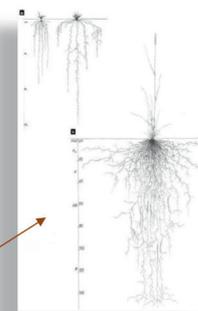
| Application recommendation: | | | Grains | | | | | | | | | | |
|-----------------------------|----------------------------------|---|----------------|------------------|----------------|-----------------------|------------------------------|---------------------------------|----------------|-------------------|----------------------------|----------------|--|
| | | | | | | | | | | | | | |
| | | | 0 (00 - 09) | 1 (10 - 19) | 2 (20 - 29) | 3 (30 - 39) | 4 (40 - 49) | 5 (50 - 59) | 6 (60 - 69) | 7 (70 - 79) | 8 (80 - 89) | 9 (90 - 99) | |
| Macro stage (BBCH) | Soil treatment (-remediation) | Planting/seeding (-remediation) Treatment | Germination | Leaf development | Tillering | Shoot (main shoot) | Spike-/ panicle swellings | Ear-/ panicle Panicle shoots | Flowering | Fruit development | Fruit and seed ripening | Decay | |

Quelle: BBCH- Monografie, Julius Kühn-Institut (JKI), Quedlinburg 2018, Terra Optima AG Niederlassung Austria



What influence do available nutrients from deeper soil layers have on yield?

| Arable crop/utilisation | Yield situation | Fertilisation as required <small>According to the guideline for proper fertilisation as amended</small> | | |
|--|----------------------------|--|--|---------------------------|
| | | N kg/ha <small>(ohne Verluste)</small> | P ₂ O ₅ kg/ha | K ₂ O kg/ha |
| Wheat > 14% RP | High 1 5,5 – 6,75 to/ha | | | |
| | Ø 6,13 to/ha | 170 kg/ha | 65 kg/ha | 90 kg/ha |
| kg Yield / Fertiliser | | 36,06 kg Yield/kg N | 94,31 kg Yield/kg P2O5 | 68,11 kg Yield/kg K2O |
| g/m ² | 613 g/m ² | 17 g/m ² | 6,5 g/m ² | 9,5 g/m ² |
| Comparative weight (example €-coins /m ²) | | | | |



Soft wheat (winter wheat), *Triticum aestivum*
 a) Left: H-T-S = 7-74-27 cm, 70 days after sowing on 02.12.1956, right: H-T-S = 7-120-54 cm, after winter dormancy on 22.03.1957, both near Grafenstein, Km. AT, 418 m above sea level. Field on mulleyley soil.
 b) H-T-S = 93-153-128 cm, near St. Donat, Carinthia, AT, 482 m above sea level. Field on brown soil, June 2003.
 c) (Kutschera 1966, Fig. 9; Kutschera et al. 2009, Fig. 49)

