



itab

l'Institut de l'agriculture
et de l'alimentation biologiques

Common bunt management on organic wheat: **multi-factorial, knowledge-based**

**Stephanie KLAEDTKE – XXI International Workshop
on Bunt and Smut Diseases – May 6th, 2021**

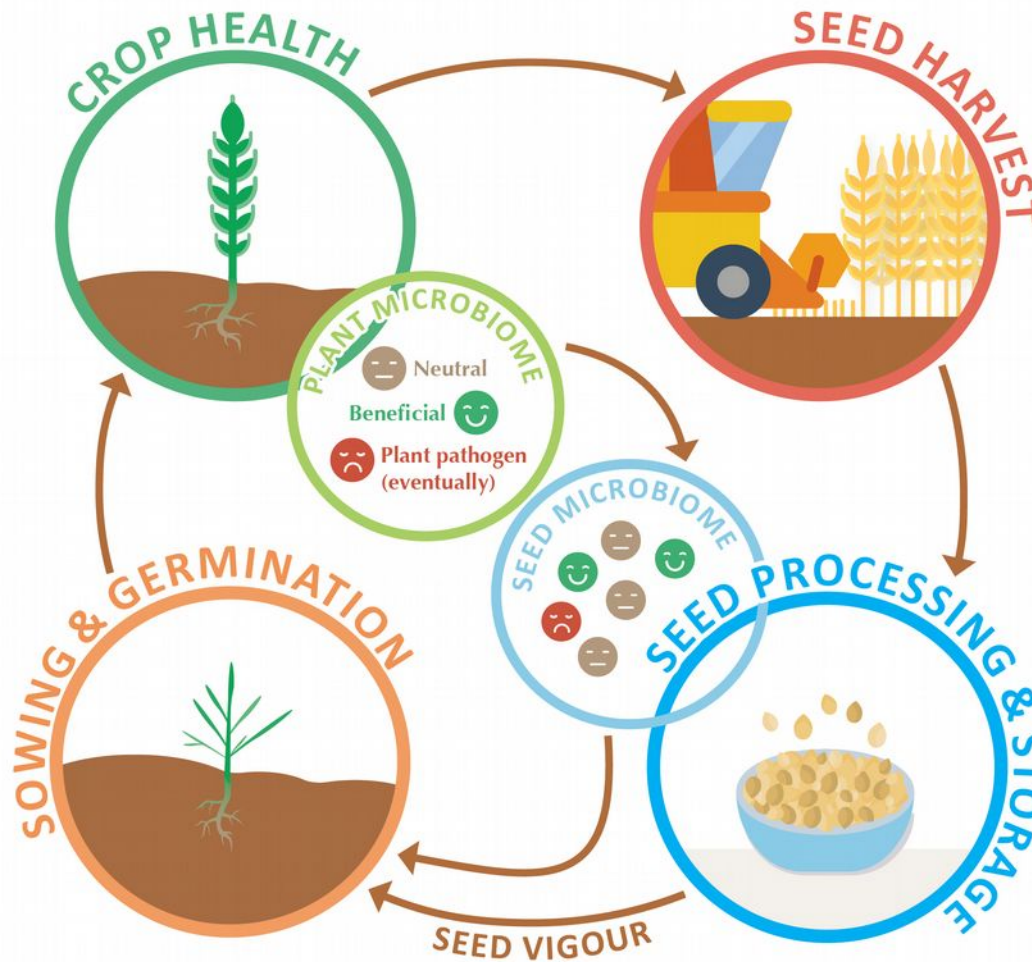


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SUMMARY

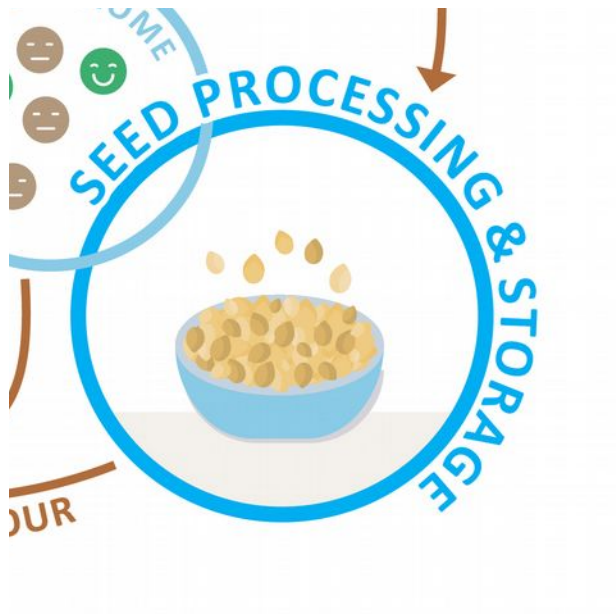
- 1. Organic seed health strategy produced by LIVESEED**
- 2. Organic seed health strategy and common bunt**
- 3. Conclusion**

SEED & PLANT HEALTH: A CONTINUUM



How does this apply to the management of common bunt?

Organic seed health strategy by LIVESEED



Management of common bunt in organic agriculture is not as easy as that !

Common bunt management heavily relies on

→ **seed analyses**

- Bunt requirements for certified seed according to country

→ **seed sanitation / treatments**

- Brushing, (washing)
- Thermal treatments
- Vinegar
- Mustard
- Biologicals (*Pseudomonas chlororaphis* in CERALL®)
- Cu-based products

Recommendations on spore contamination rates depend on technical means and available treatments!



Favour good conditions for germination and emergence !

- **seed quality / vigour** for quick germination
- **avoid excessively cold, unfavourable conditions**
 - Trade-off with false seedbed method against weeds!



AWARENESS and OBSERVATION

Sound management practices (wide and diversified crop rotations)

(Resistant cultivars)

Field resistance mechanisms?

Resistance mechanisms during plant growth?



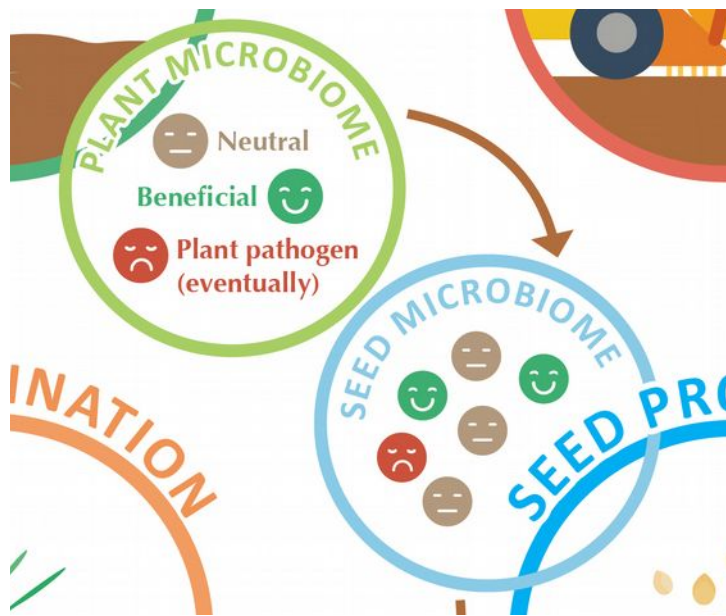


Caution and good practices at harvest time

- harvest consumption grain before seed lots
- clean / flush combine equipment if in doubt

Organic bunt management: multi-factorial, knowledge-based!

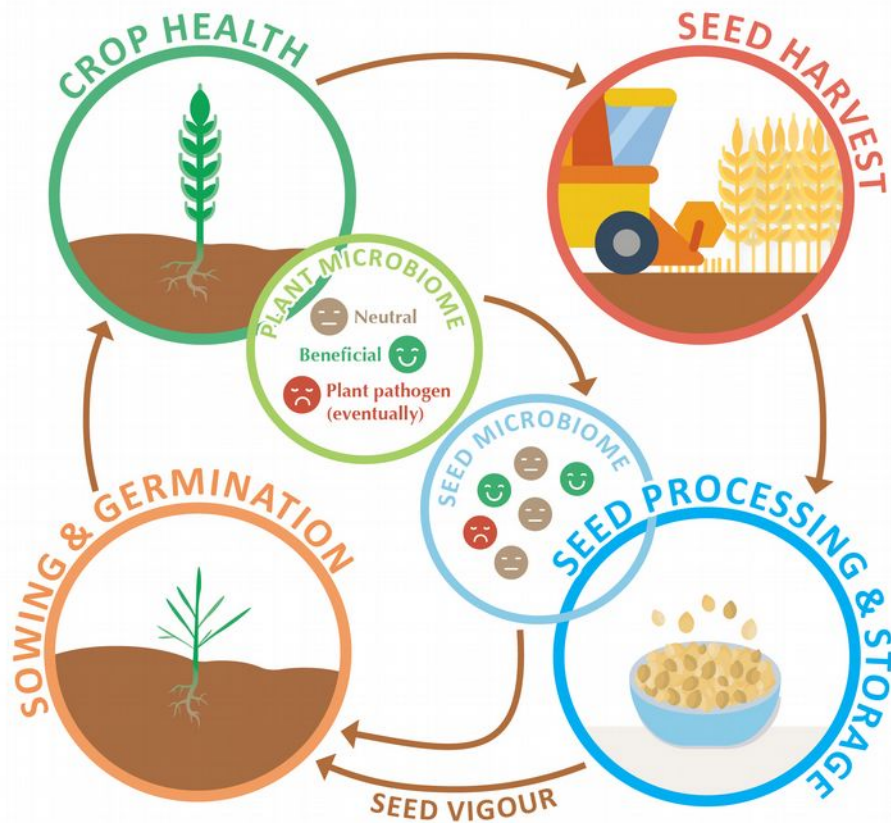
- also dependent on context : seed system, available means for analyses and sanitation...



What about interactions with microbial life?

- Antagonistic taxa on seeds and in soils ?*
- Interactions between seed microbiota, seed vigour and *Tilletia* ssp. ?*
- How does soil inoculum behave in no-till soils?*

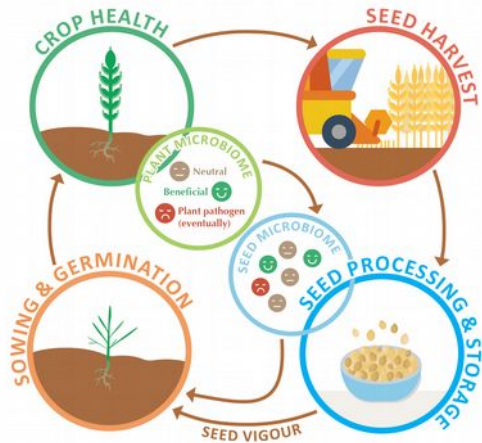
= Questions worth elucidating



Keeping in mind that organic seed and plant health management will always be multi-factorial

to respect the organic (IFOAM) principles of

- **health**
- **ecology**
- **fairness**
- **care**



Take home message :

Organic bunt management is multi-factorial and requires specific knowledge and know-how, but is **reliable and effective**

Organic bunt control is about **managing bunt infection levels at very low levels**, not about completely eliminating the presence bunt spores.

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THANK YOU



Photo :
Matteo Pettiti