



Training in organic seed quality & health

Module 11: **General Introduction to Seed Quality and Health**

Unit 11.2: **Seed quality: Driving factors and scope**

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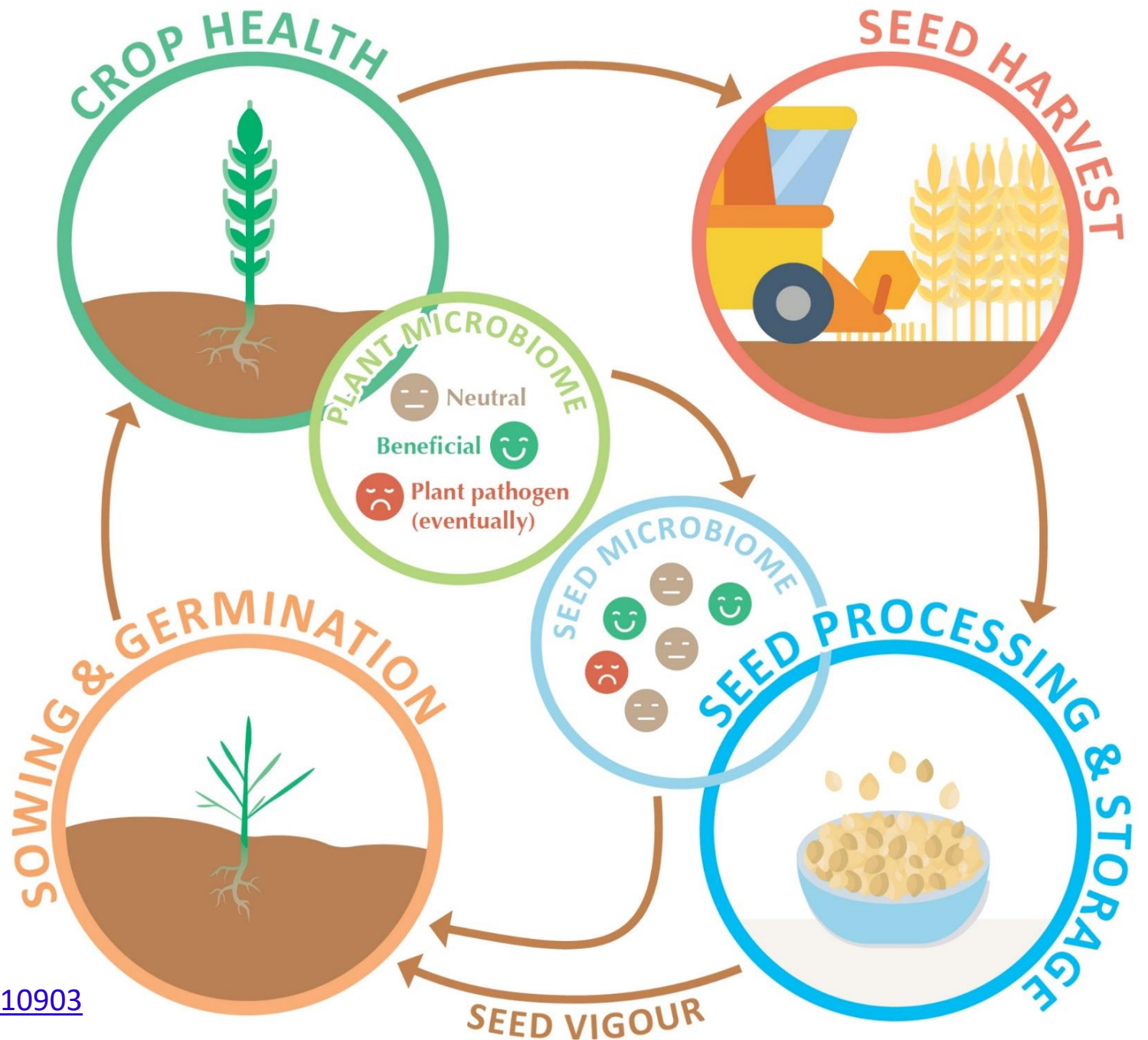
Content

1. Factors driving seed and plant health
2. Interactions between seed vigour and seed health
3. Critical situations for organic seed health & quality: some examples

Content

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2. Interactions between seed vigour and seed health
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Seed & Plant health: a continuum

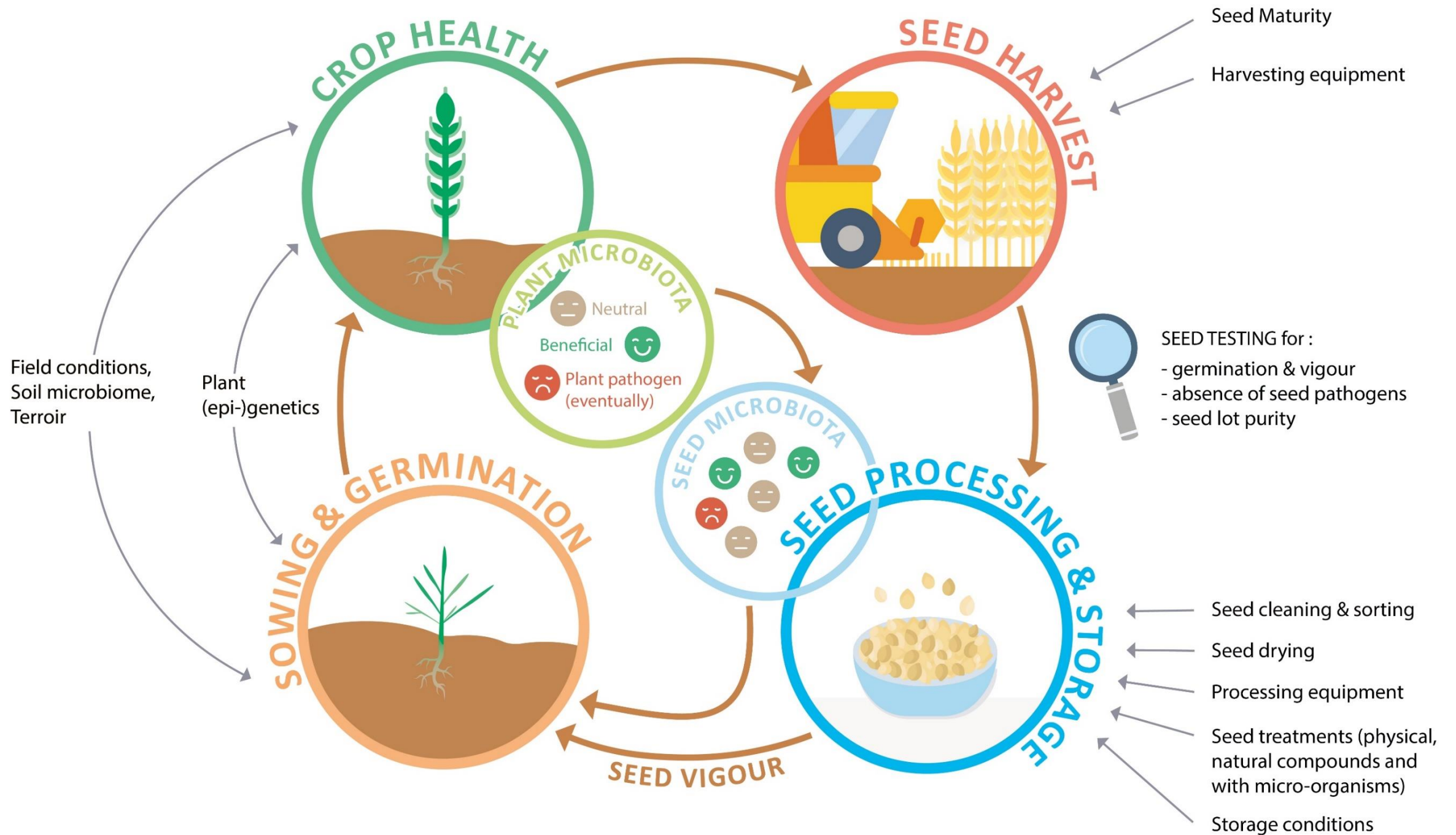


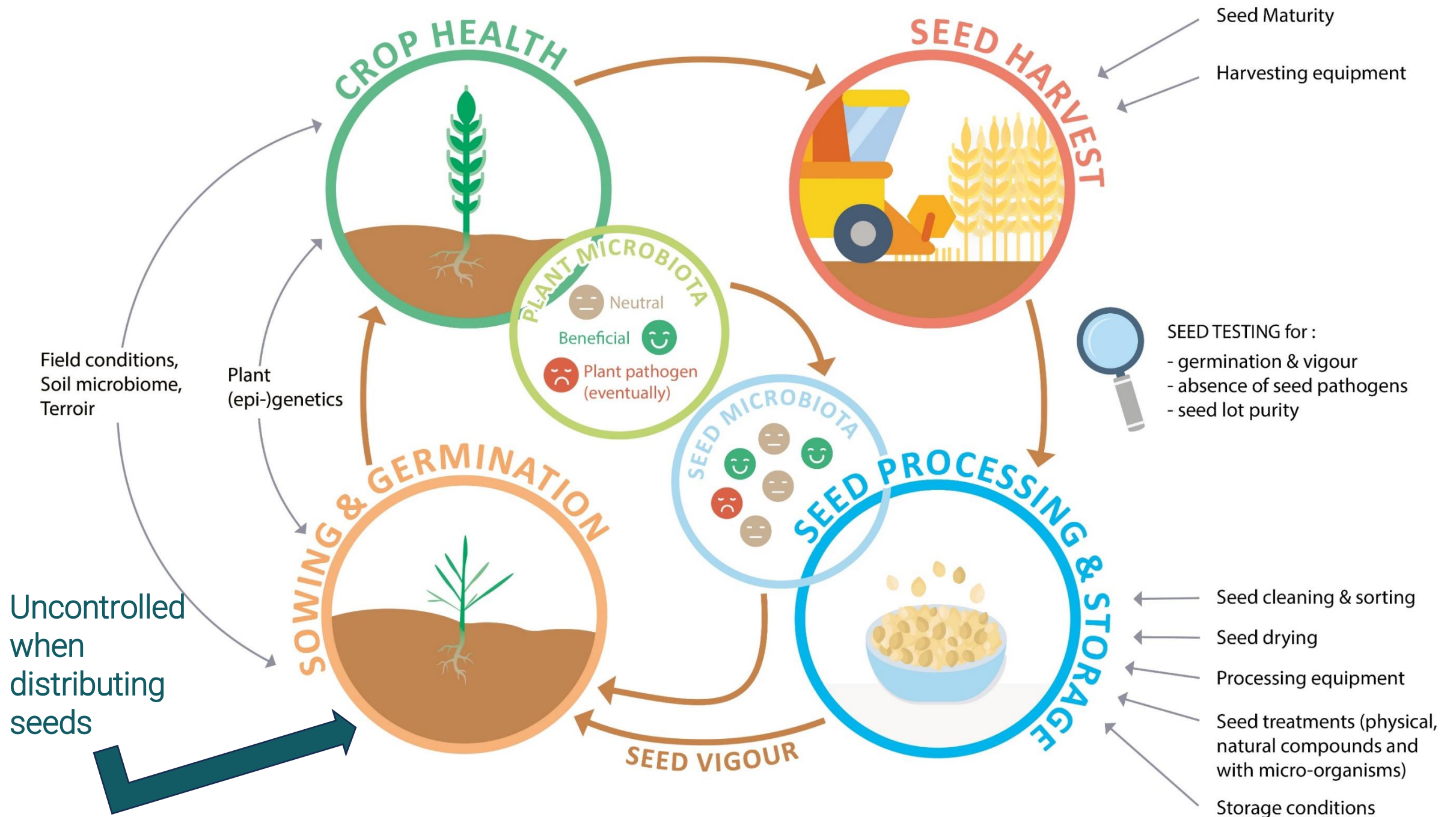
Klaedtke.; Rey; Groot. 2022. Designing a Seed Health Strategy for Organic Cropping Systems. *Sustainability* **2022**, *14*, 10903.



www.liveseed.com

<https://www.mdpi.com/2071-1050/14/17/10903>





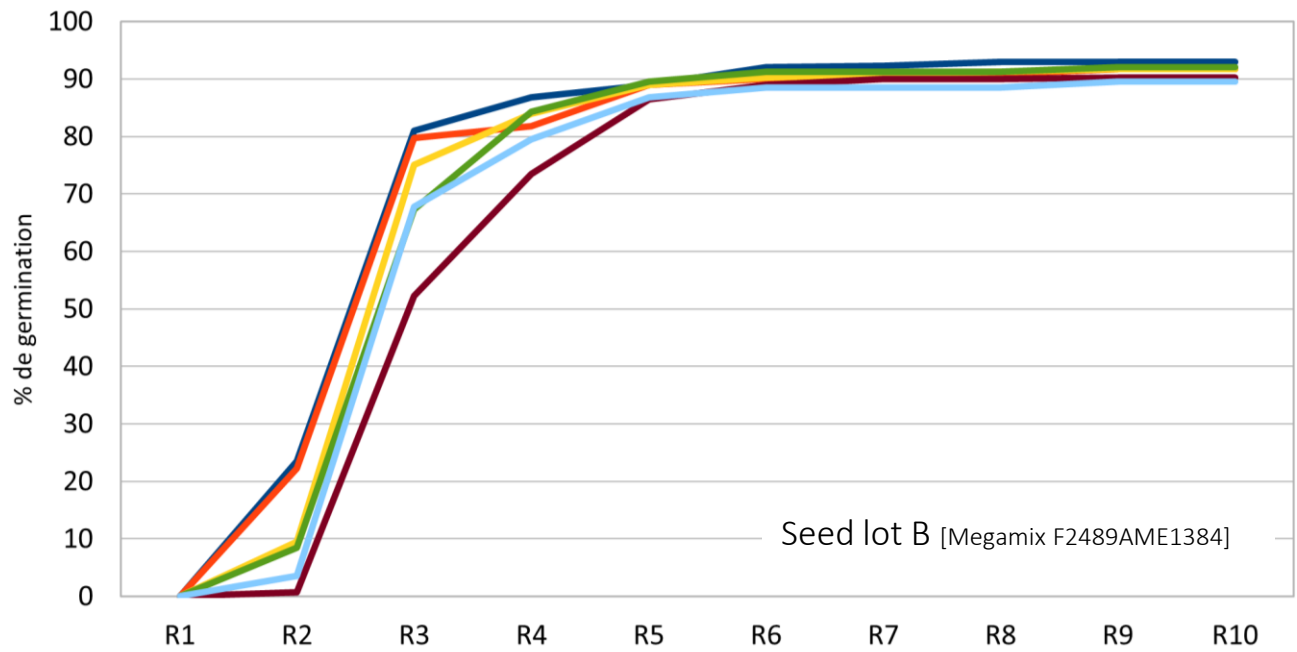
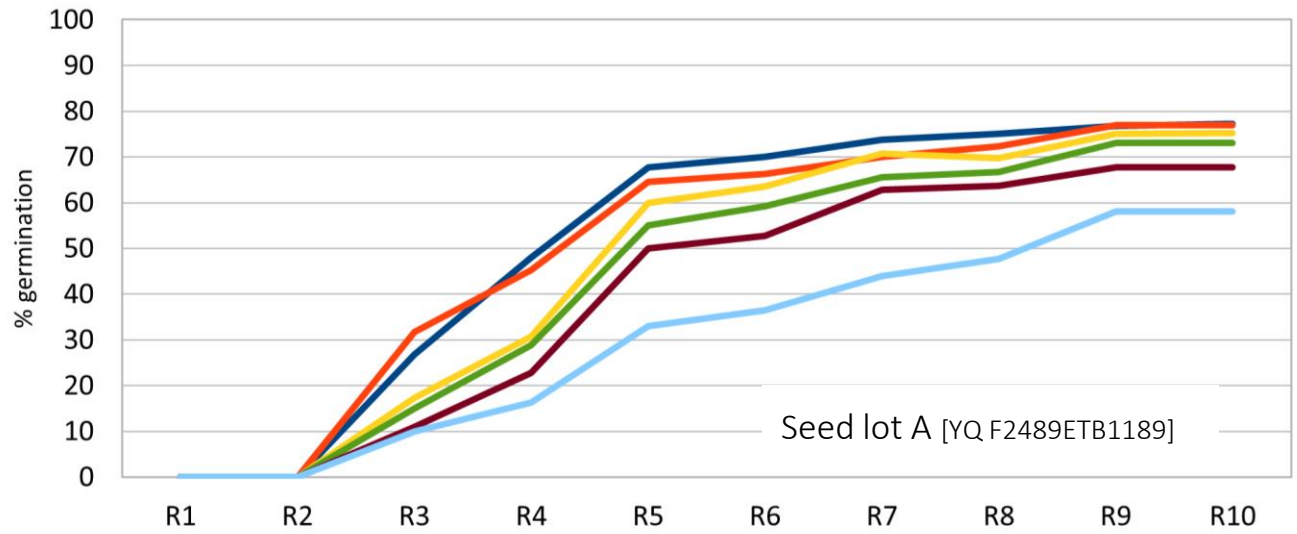
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Example: Seed tolerance to *Alternaria radicina* damping-off



Seed vigour and
vinegar seed
treatment on
winter wheat



Trial in collaboration with
Laurane BOFFIN and Estelle
SERPOLAY (Ubios)

- Count
- No treatment
 - Vinegar 4%
 - Vinegar 10%
 - Water
 - Vinegar 8%
 - Vinegar 10% + slaked lime

Content

1. Factors driving seed health and quality
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3. **Critical situations for organic seed health & quality: some examples**

Example 1: **Breeding**



Photo: Ambrogio Costanzo

Example 2:

On-farm natural selection for stress tolerance



Seed crop stressed
=
Seeds less filled
=
Less seed vigour

Photo: Frédéric Rey / ITAB

Example 3: Distributing seed

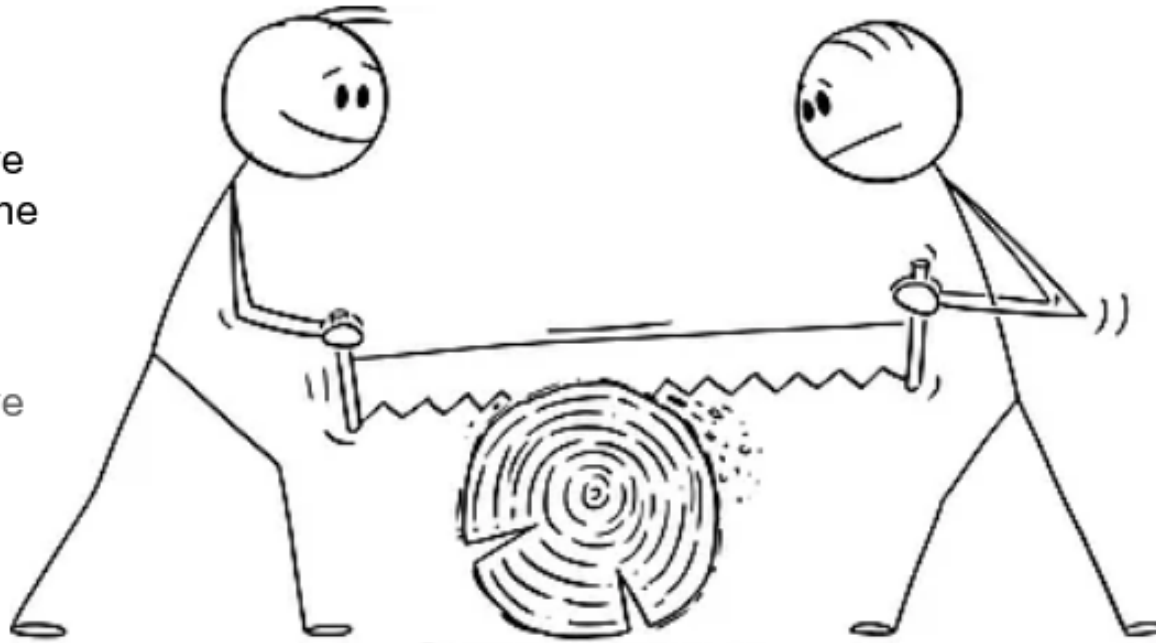


Photo: Steven Groot

Recap

Strengthen seed

- Optimise & preserve seed vigour [from the seed crop to seed handling]
- Optimise & preserve seed microbiome



Protect seed, as necessary

- Seed sanitation & protection from soil-borne diseases



Seed and soil-borne disease affect crop establishment



Seed vigour & microbiome affect tolerance to diseases

Contributions



Scientific project management : Monika Messmer (FiBL-CH)

Project leader: Mariano Iossa (FiBL-EU)

Designer of training modules on the production of high-quality organic seed (modules 11 to 18) : Stephanie Klaedtke and Stéphanie Mothes (ITAB)

Authors of videos, questionnaires, exercices : **module 11** Stephanie Klaedtke (ITAB), **modules 12 et 13** Steven Groot (WUR & International Seed Academy), **module 14** Gaspard de Tournemire and Stephanie Klaedtke (ITAB), Jan Kodde (WUR) and Valentin Gfeller (FiBL-CH) **module 15** Jelena Baćanović-Šišić (Bingenheimer Saatgut AG) **module 16** Mária Megyeri **module 17** Györéné Kis Gyöngyi (ÖMKi) and Diego Guidotti (Aedit SRL) **module 18** Maike Bender and Carl Vollenweider (Dottenfelderhof)

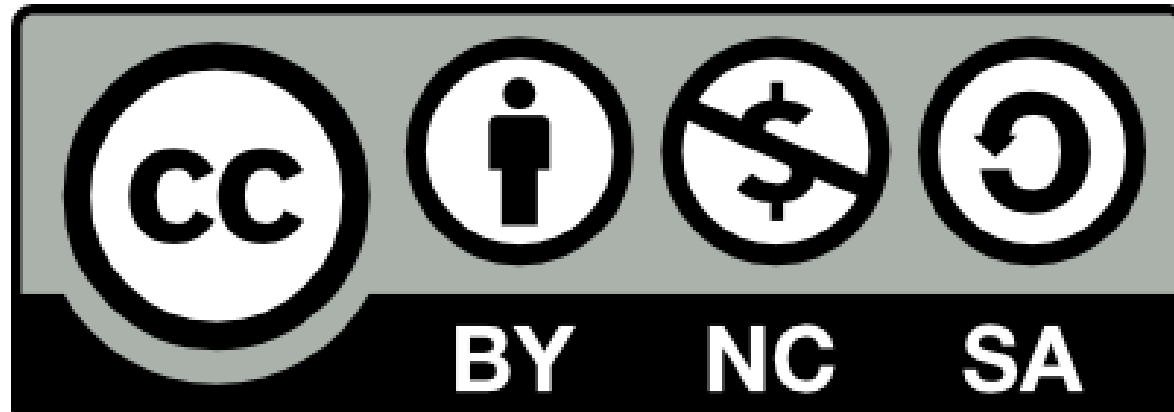
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E-learning modules on the production of high-quality organic seed

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