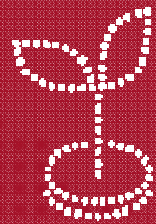




Challenges and wishes of vegetable seed companies related to seed treatment



SeedMeetsTechnology
Zwaagdijk, NL

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Limagrains Vegetable Seeds





I am going to talk about:

Challenges and wishes

Of vegetable seed companies

In order to supply

~~Treated~~ **Quality** seeds to international market

Now SeedTechnology Coordinator in Limagrain Vegetable Seeds (= HM-Clause + Hazera + Vilmorin-Mikado)

Previously in charge of SeedTechnology Research in HM-Clause for 11 years

President of Vegetable Seed Treatment Working group in UFS (French Seed Association) since 2012

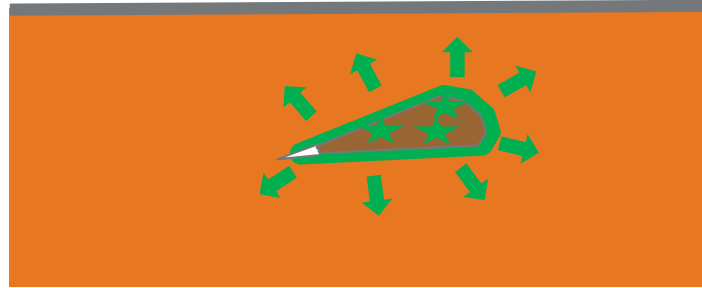
Member of EU Minor Uses Commodity Experts Group Seeds (linked to ESA - European Seed Association) since 2013

Member of at Minor Uses Working Group in ISF (International Seed Federation) since 2013

1.

Challenges

Challenge N°1 To supply Quality Seeds



1 Kill seed transmitted pathogens

2 Kill soil pathogens around the seed



Alternaria dauci transmitted by carrot seeds

University of Minnesota
<https://apps.extension.umn.edu/garden/diagnose/plant/vegetable/carrot/leavesspots.html>



Pythium sp. / damping off on melon

Compendium of Cucurbit Diseases and Pests, Edition: 2nd, Chapter: Pythium damping off and root-rot,
 Publisher: American Phytopathological Society, Editors: A. P. Keinath, W. M. Wintermantel, and T. A. Zitter,
 pp.48-50

➔ Seed Treatment allows to limit damages of seed transmitted pathogens and damping off and their impact on final plant yield

Challenge N°1 To supply Quality Seeds

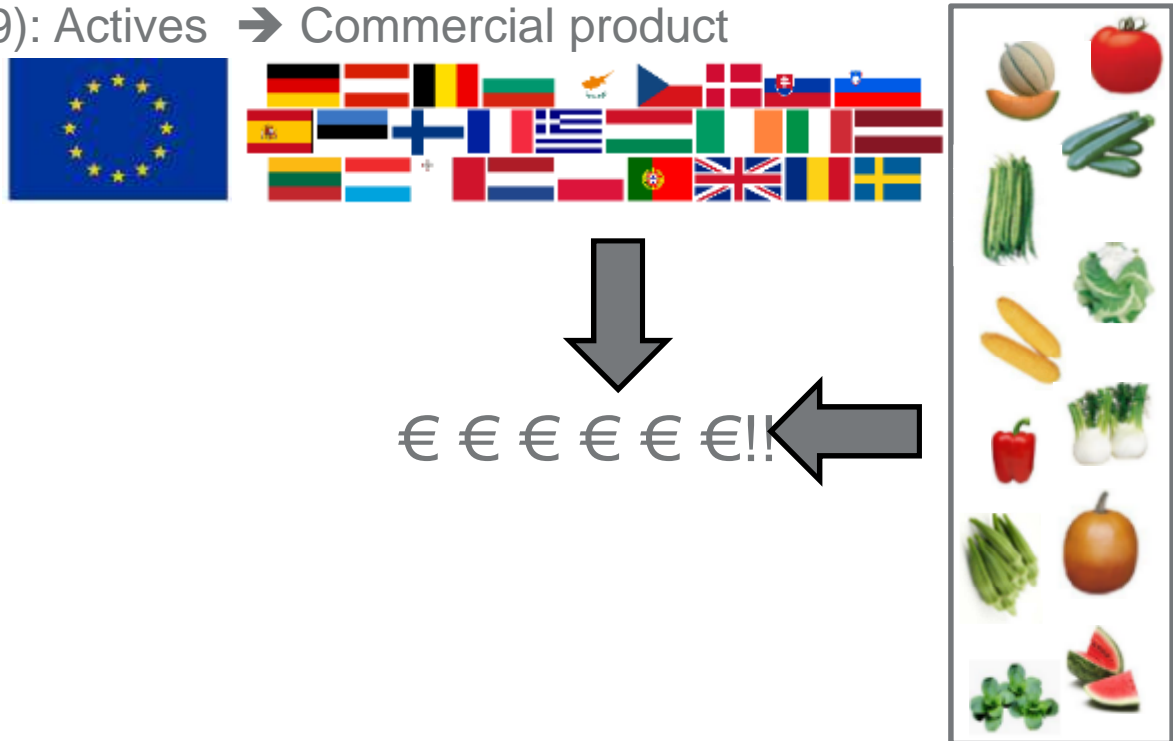


Cornsalad production (France)
Seed density = 1000 seeds / m²
0,1% contamination = 1 seed / m²
Specialised production (watering - soil - under cover - all year around)

→ Seed protection allows professional practices and is asked by clients

Challenge N°2 To supply International market

Authorization * in EU (1107/2009): Actives → Commercial product

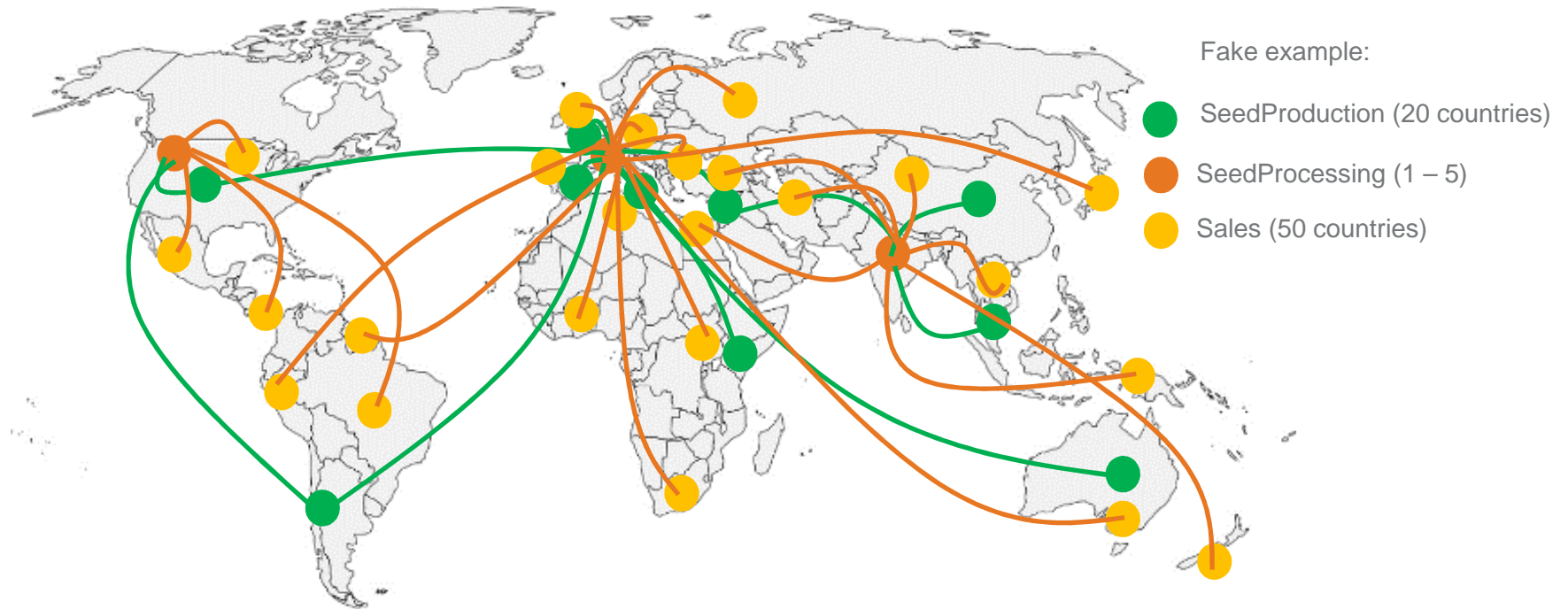


In French Catalog, 36 species to cover all vegetables

* out of EU: it depends (clear no reevaluation until unclear)

→ Vegetable Seed Companies need to fit legislation diversity / particularities

Challenge N°2 To supply International market



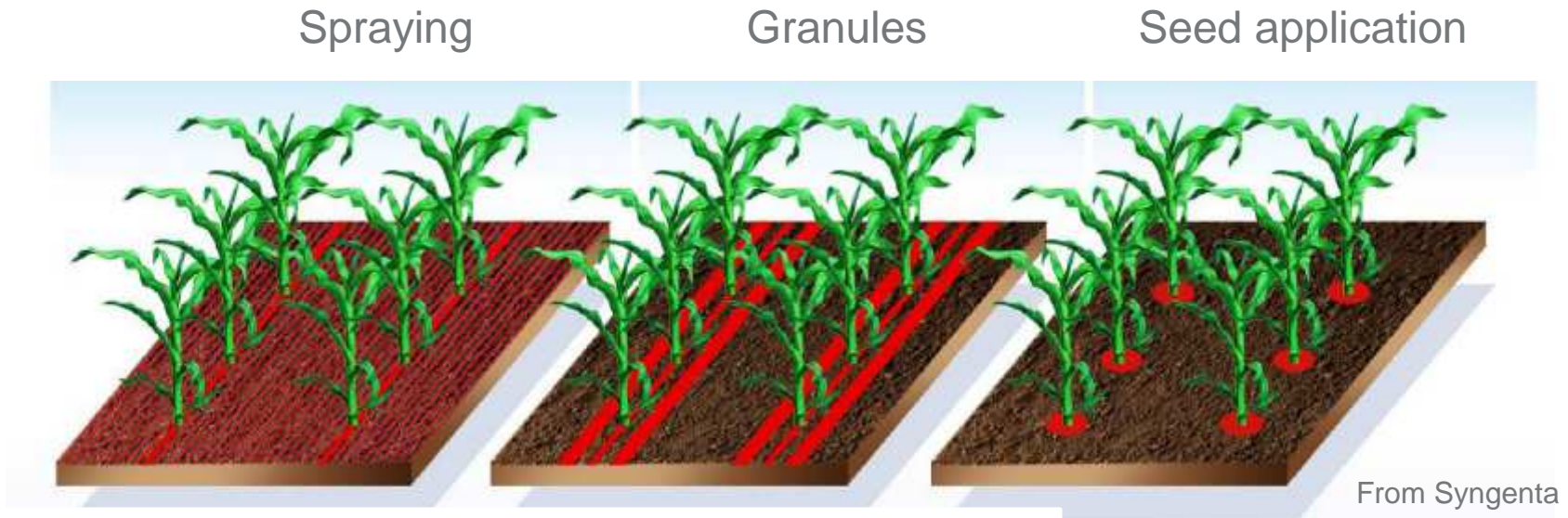
Very complicated supply chain network
2000 varieties

Even more of articles (packaging format – quality levels...)
Other constrains (country of origin – delays of all steps)

→ Seed Treatment is only 1 component of Supply chain complexity
in vegetable seed companies

Challenge N°3

To support Seed Treatment actives



Dosage (g active ingredient / ha)



Treated surface (m²)



→ Seed Treatment represents very low volumes – less market interest for chemical companies to support authorization fees

Challenge N°3

To support Seed Treatment actives

Active	Reevaluation date in EU (by order)	
Thiabendazole	< 30/06/2017	RE-APPROVED for period between 01/04/2017 until 31/03/2032
Fipronil	< 30/09/2017	NOT APPROVED. NL validated a grace delay, allowing the sales of MUNDIAL Cabbages seeds in the NL until 31/03/2019
Iprodione	< 14/11/2017	NOT APPROVED. Ban from 05/03/2018 with possible grace delay defined by country until max 05/06/2018 Still possible to sale iprodion treated seeds >05/06/2018 in all EU countries except FR and GE
Fludioxonil	< 31/10/2018	On substitution list to substitute in EU before 31/10/2019
Thiophanate methyl	< 31/10/2018	VERY PROBABLE NON RENEWAL. Close to Carbendazim, banned in EU
Chlorpyrifos ethyl	< 31/01/2019	DEAD due to non support of active by chemical company (HU + NL for export still have authorization, until 01 or 12.2019)
Thiram	< 30/04/2019	VERY PROBABLE NON RENEWAL. Many support action done by Seed companies representatives. EU commission today's position is the non renewal
Thiametoxam	< 30/04/2019	DEAD due to non support of active by chemical company. Neonicotinoïd – Ban announced on April, 27th 2018.
Metalaxyl M (= Mefenoxam)	< 30/06/2019	On EU substitution list
Tefluthrine	< 31/12/2021	Too early to really know
Imidaclopride	< 31/07/2022	VERY PROBABLE NON RENEWAL. Neonicotinoïd – Ban announced on April, 27th 2018

➔ Most of actives used as seed treatment will not be renewed in EU (70% loss of actives between 2017-2020)
Very limited replacant which are efficient AND authorized

2.

Wishes

Wish N°1

Apply harmonized rules in EU

→ Definition should be the same in each EU country

* Use

* Minor Uses

Portugal Cultivation area >10 000 ha and dietary intake >7.5 g/day-

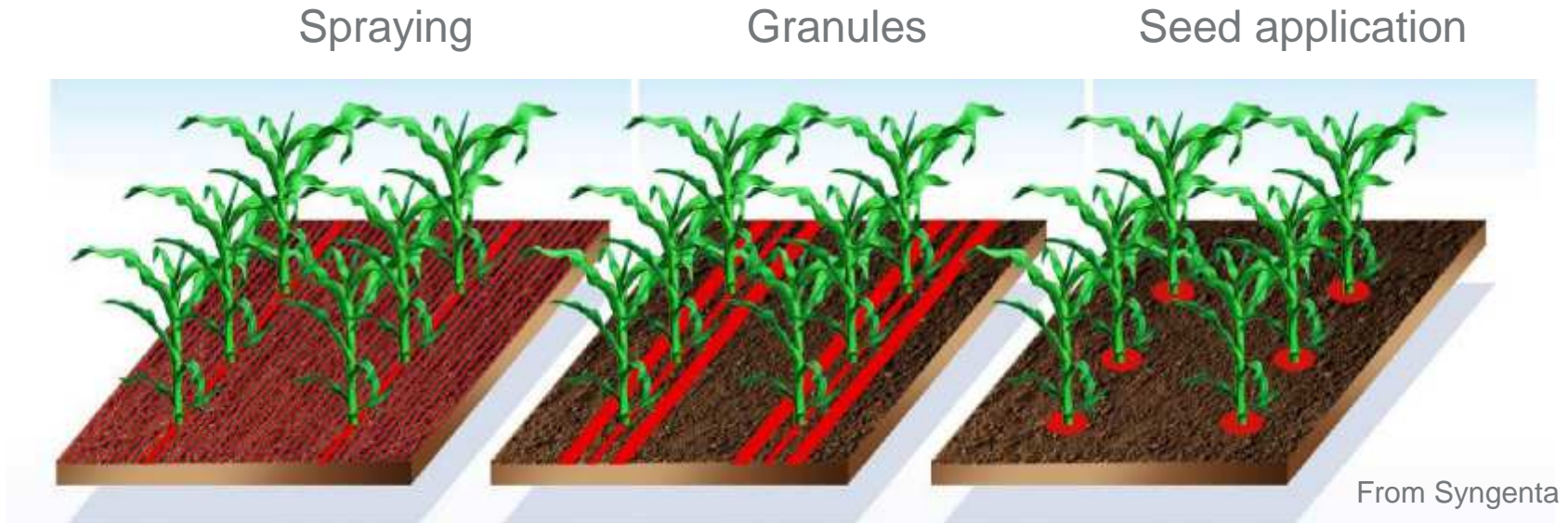
Estonia Cultivated area >1% of total utilised agricultural land of agricultural households
Production > 1% of total plant production volume of agricultural households
and/or average daily consumption rate per capita >7.5 grams

→ As 1107/2009 promotes EU harmonization, countries should not have specificities (additional informations when mutual recognition, ban...) to avoid competition distortion

Wish N°2

Facilitate seed treatment authorizations

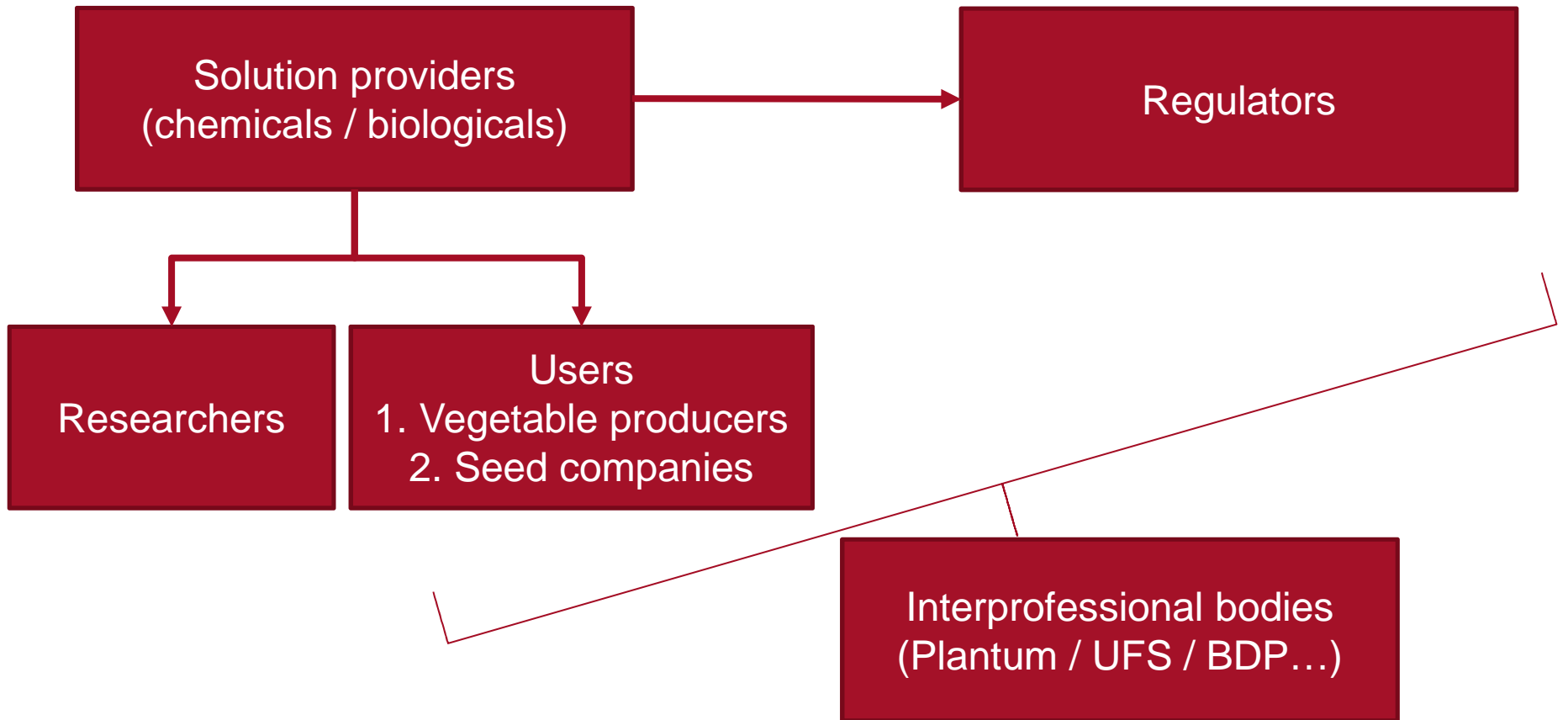
→ As Seed Treatment is a basis of Integrated Pest Management (IPM) system, authorization should be easier to obtain / cheaper compared to foliar applications



→ As Seed Companies' clients are worldwide, treatments should be possible in EU for export even if the actives are not authorised in EU

Wish N°3

Have a more proactive way of working



Have a EU approach
Organise meeting with solution providers
Have a Road Map per use

Wish N°3

Have a more proactive way of working

EU Minor Uses – Commodity Experts Group Seeds - Needs

<i>seed treatment:</i>	
damping off diseases / Ascochyta	all vegetable and ornamental crops, some arable crops (eg legumes)
Alternaria / Phoma	all vegetable crops, some arable crops (eg linseed), some ornamental crops
Pythium / Peronospora	all vegetable and ornamental crops, many (minor and major) arable crops
aphids	lettuce, endive, cabbage (and aphids as vector of virus in arable crops such as sugarbeet and chicory)
flies	bean, cabbage, carrot, onion, some arable crops
<i>seed production - foliar application:</i>	
desiccants	vegetable crops seed production (eg radish, carrot), arable crops seed production (eg alfalfa, rape, crucifers), seed potatoes
weeds	vegetable crops seed production (eg spinach, radish, onion, pea, bean, corn salad, cucurbits, herbs)
weeds	Seed production of grasses and legumes
weeds	flower seed production
fungal diseases: late blight; rust; leaf spots; Phoma; mildew	vegetable crops seed production
fungal diseases: rust	grass seed production
fungal disease: Alternaria, Phoma	Seed production of rape and crucifers
insects: Lixus (true weevil)	beet seed production
insects	Seed production of grasses and legumes



Conclusion

Seed Treatment allows, until now, Vegetable Seed Companies:

- to supply Seeds of high sanitary quality
- in a context of complex international supply chain / business
- and even if chemical companies interest is not favorable to seed treatment

Anyway, EU regulation goes towards seed treatment actives ban
What about other parts of the world?

When SeedTreatment actives will really disappear (or almost) in EU:

- * Non treated seeds will be sold
- * Alternative methods will be « the must-have »
 - to remove seed transmitted pathogens (physical methods)
 - to protect young plantlet (Biocontrol)
- * Vegetable production / SeedTreatment PLANT might move to other area

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Thank you for your attention!



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