

# Development in the production and use of organic vegetable seeds *experiences from the Netherlands*

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# agenda

- Producers of organic vegetable seeds
- Organic breeding
- Progress in different vegetable crops
- Challenges & opportunities



# Producers of organic vegetable seed I

- 100% organic seed companies:
  - Organic seed production and breeding
  - Consumer and professional market
  - No patents and no GMO
  - Bingenheimer Saatgut, De Bolster
- 100% seed companies
  - Originally a family business (Rijk Zwaan, Bejo, ENZA/Vitalis)
  - Organic seed production for a limited amount of crops
  - Breeding for organic: selection and testing under organic conditions
  - No GMO

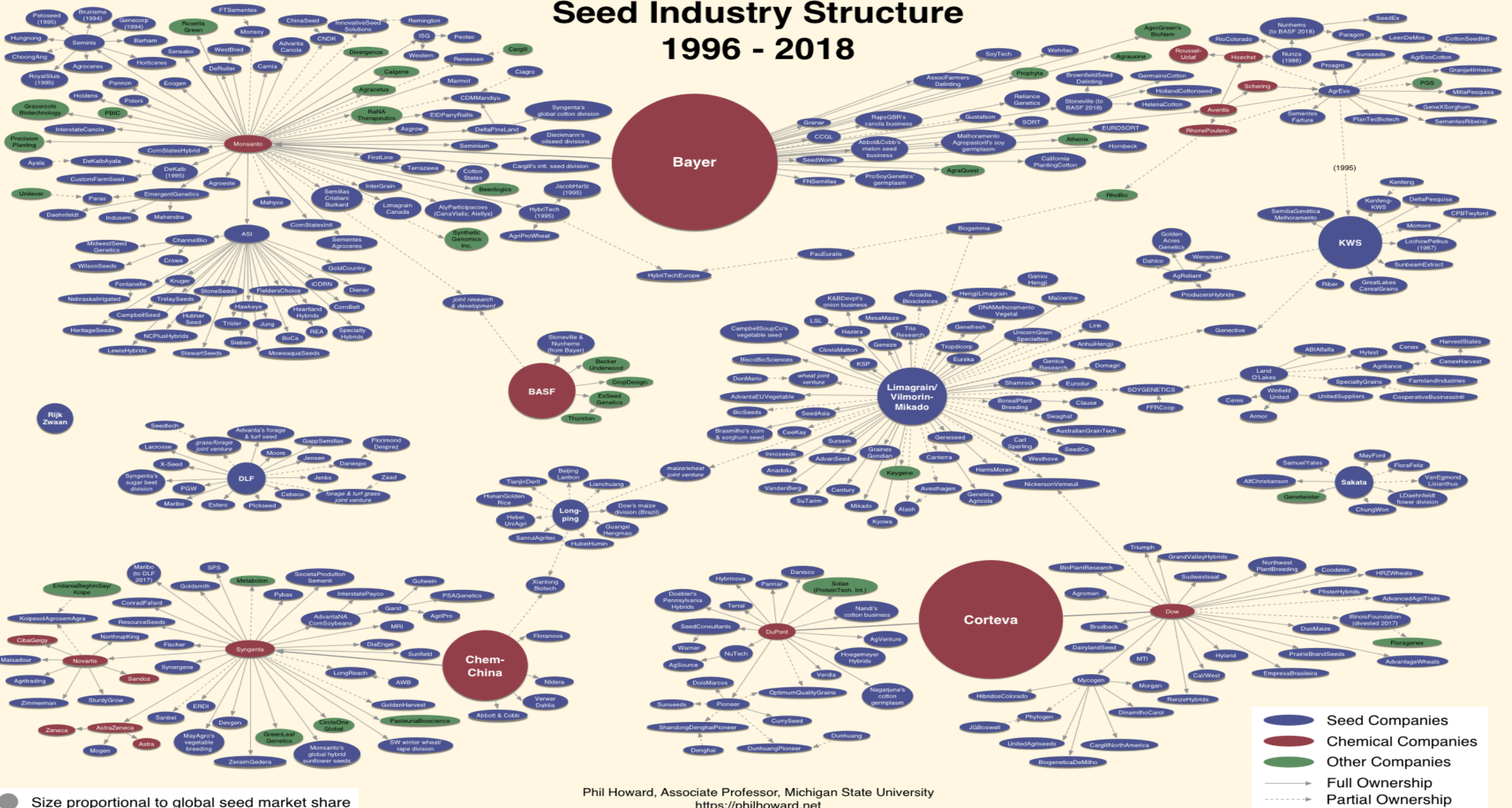


# Producers of organic vegetable seed II

- Argo chemical companies
  - Originally producers of chemicals
  - who have bought several seed companies
  - Only recently involved in organic seed production
  - Nunhems (BASF), Monsanto Holland (Bayer),.....



## Seed Industry Structure 1996 - 2018



Phil Howard, Associate Professor, Michigan State University  
<https://philhoward.net>

# Producers of organic vegetable seed II

- Argo chemical companies
  - Originally producers of chemicals
  - who have bought several seed companies
  - Only recently involved in organic seed production
  - New companies
- New seed companies
  - Novisem; focus on niche crops
- Organic farmers/cooperatives
  - De Zaderij , Beersche Hoeve



# Organic breeding

- Limited to a few companies and crops
  - Tomato
  - Lettuce
  - Pumpkin
  - Zucchini
  - Cabbage



# Organic breeding II

- Focus on resilience/robustness
  - Low input
  - Disease resistance
  - Drought resistance
- CMS free (cabbage crops)
- New farming systems
  - Strip cropping
  - Pixel farming





# Progress in different vegetable crops



# Challenges & opportunities

- More companies need to invest in organic seed production
- Learning curve takes time
- International cooperation between countries that operate in the same market
- Creates level playing field for farmers
- Increases support to use organic seed





Thank you for your attention

questions?

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