Before a precedent:
Patent claiming conventionally bred maize

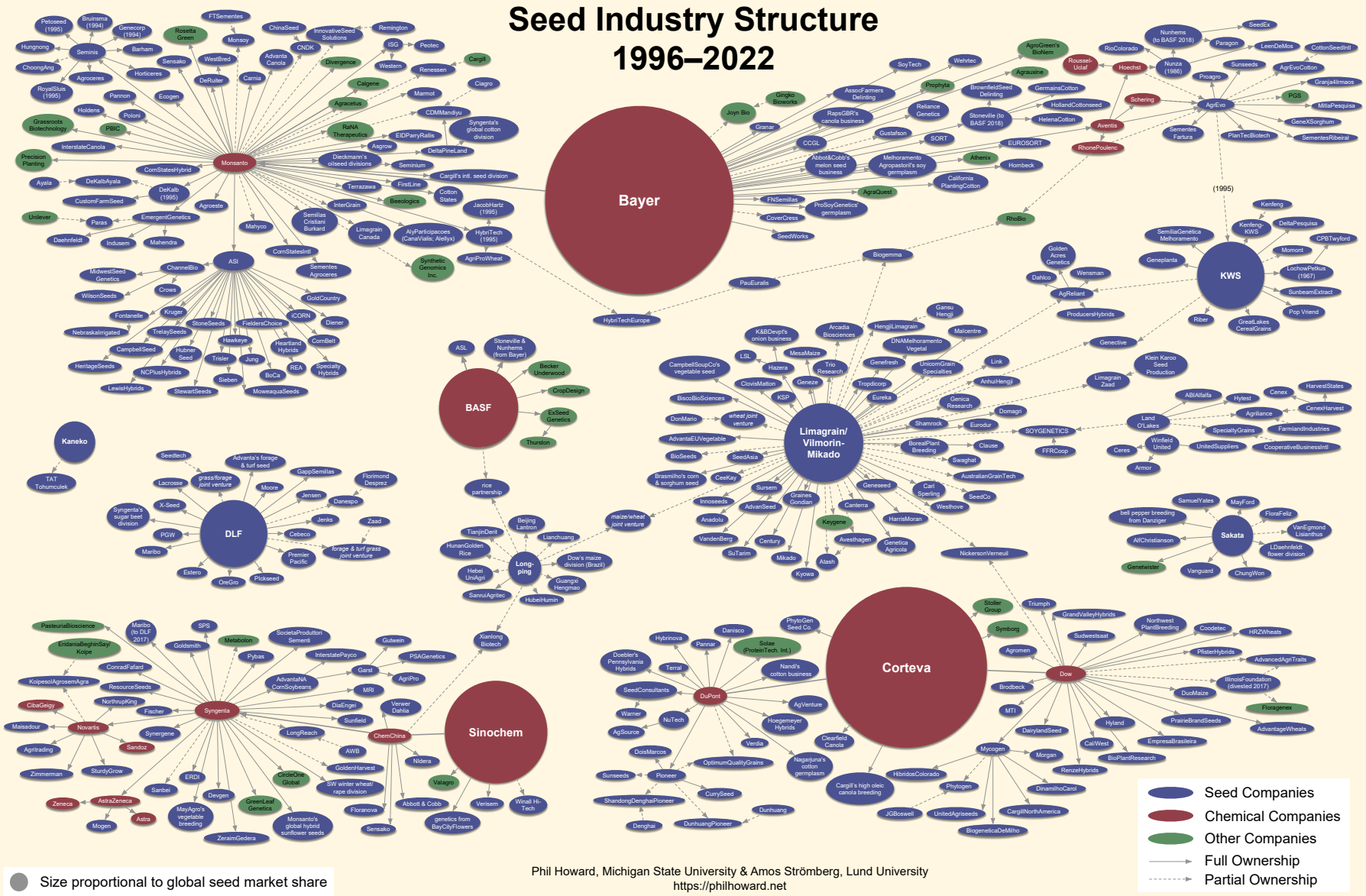
Webinar, 4th of November 2025

Nordic Maize breeding
Breeding for diversity in agriculture

Grietje Raaphorst-Travaille

Started 1st of October 1990

7 companies with maize breeding program



Nordic Maize breeding

Breeding for diversity in agriculture

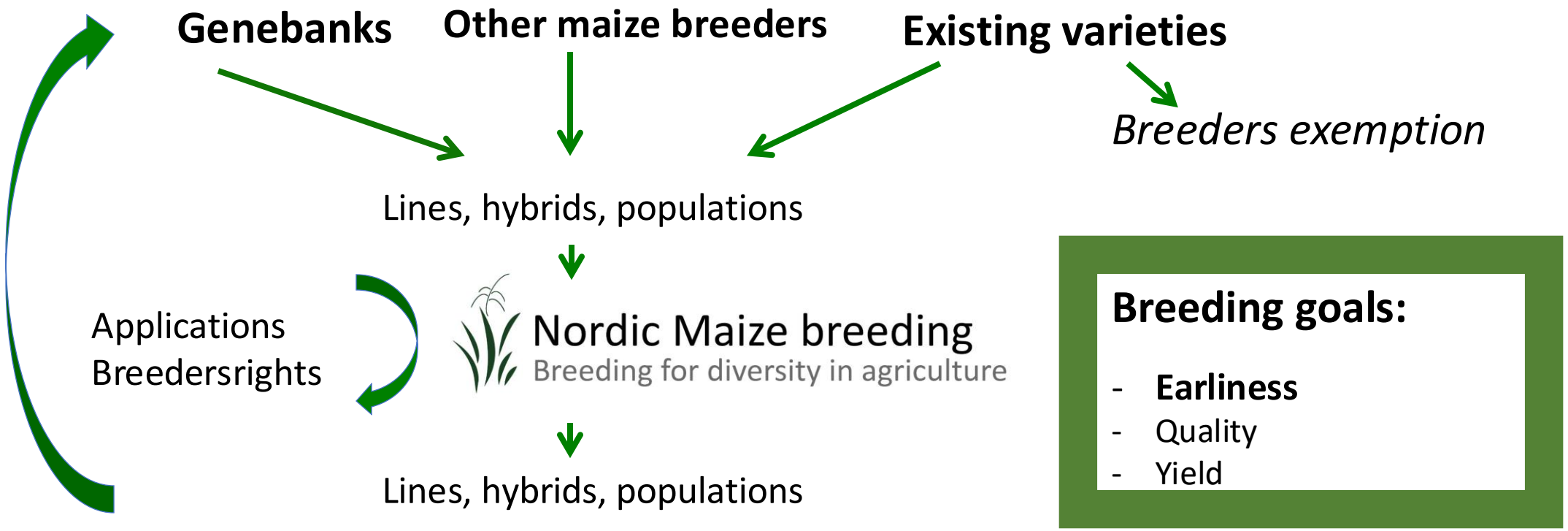
Nordic Maize breeding (NMB) started in 2002

Silage maize in the North of the Netherlands was harvested in November:

That ought to be earlier!

In 2015 we lost our first variety on GMO contamination (22 ton, Chili)

How did we started when the freedom of breeding still existed?



Breeding goals:

- **Earliness**
- Quality
- Yield

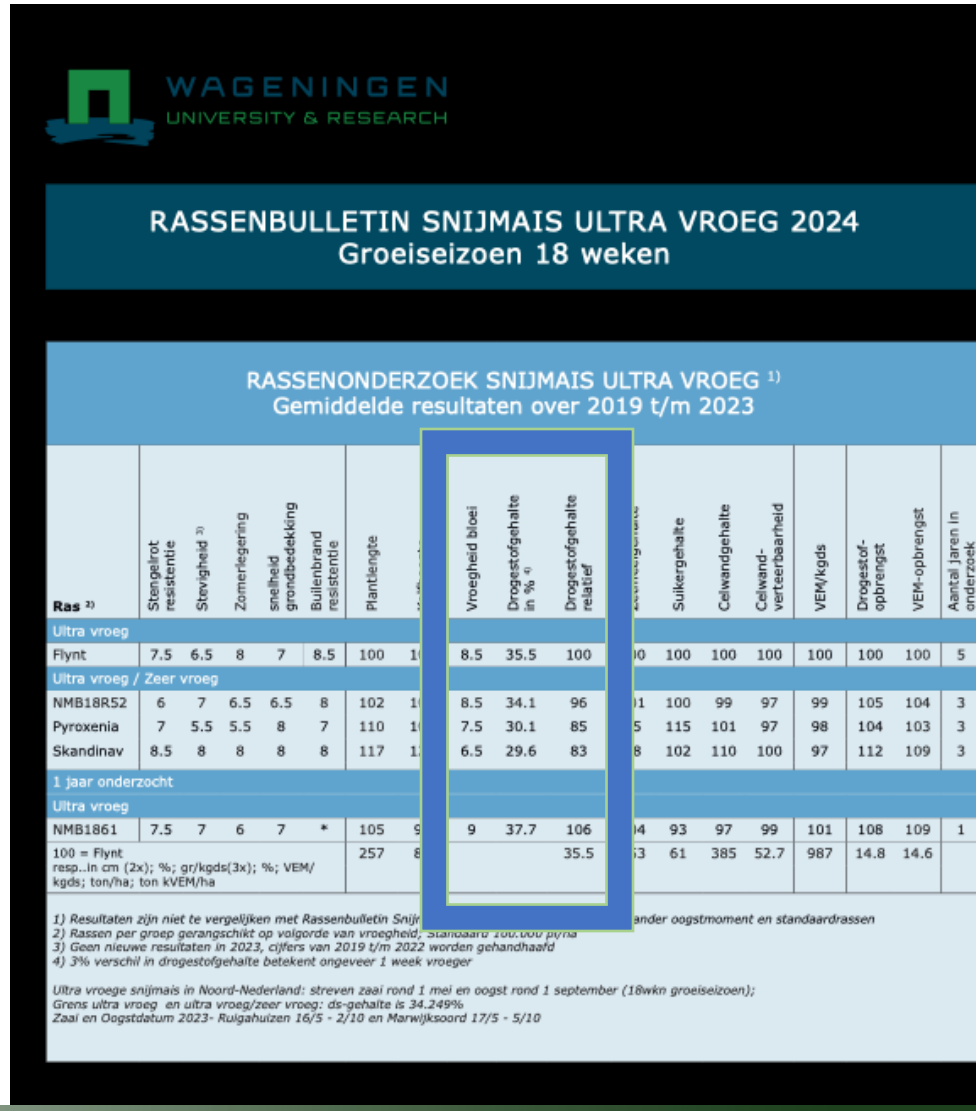
The only 100% Dutch maize breeding company

NMB developed the earliest maize varieties

Farmers can earn sustainability points with only NMB varieties (harvest before 1st September)

NMB produces (organic) maize seed in the Netherlands (~third of the market)

Regional breeding works!



WAGENINGEN
UNIVERSITY & RESEARCH

RASSENBULLETIN SNIJMAIS ULTRA VROEG 2024
Groeiseizoen 18 weken

RASSENONDERZOEK SNIJMAIS ULTRA VROEG [1]
Gemiddelde resultaten over 2019 t/m 2023

Ras [2]	Stengelrot resistentie	Stevigheid [3]	Zomerlegering	snelheid grondbedekking	Builenbrand resistentie	Plantlengte	Vroegheid bloei	Drogestofgehalte in % [4]	Drogestofgehalte relatief	Suikergehalte	Celwandgehalte	Celwand-verteerbaarheid	VEM/kgds	Drogestof-opbrengst	VEM-opbrengst	Aantal jaren in onderzoek
Ultra vroeg																
Flynt	7.5	6.5	8	7	8.5	100	8.5	35.5	100	100	100	100	100	100	100	5
Ultra vroeg / Zeer vroeg																
NMB18R52	6	7	6.5	6.5	8	102	8.5	34.1	96	100	99	97	99	105	104	3
Pyroxenia	7	5.5	5.5	8	7	110	7.5	30.1	85	115	101	97	98	104	103	3
Skandinav	8.5	8	8	8	8	117	6.5	29.6	83	102	110	100	97	112	109	3
1 jaar onderzocht																
Ultra vroeg																
NMB1861	7.5	7	6	7	*	105	9	37.7	106	93	97	99	101	108	109	1
100 = Flynt resp...in cm (2x); %; gr/kgds(3x); %; VEM/ kgds; ton/ha; ton kVEM/ha						257			35.5	61	385	52.7	987	14.8	14.6	

1) Resultaten zijn niet te vergelijken met Rassenbulletin Snijm... ander oogstmoment en standaardrassen
2) Rassen per groep gerangschikt op volgorde van vroegheid; Standaard 100.000 pl/ha
3) Geen nieuwe resultaten in 2023, cijfers van 2019 t/m 2022 worden gehandhaafd
4) 3% verschil in drogestofgehalte betekent ongeveer 1 week vroeger

Ultra vroege snijmais in Noord-Nederland: streven zaai rond 1 mei en oogst rond 1 september (18wkn groeiseizoen);
Grens ultra vroeg en ultra vroeg/zeer vroeg: ds-gehalte is 34.249%
Zaai en Oogstdatum 2023- Ruigahuizen 16/5 - 2/10 en Marwijksoord 17/5 - 5/10

Nordic Maize breeding
Breeding for diversity in agriculture

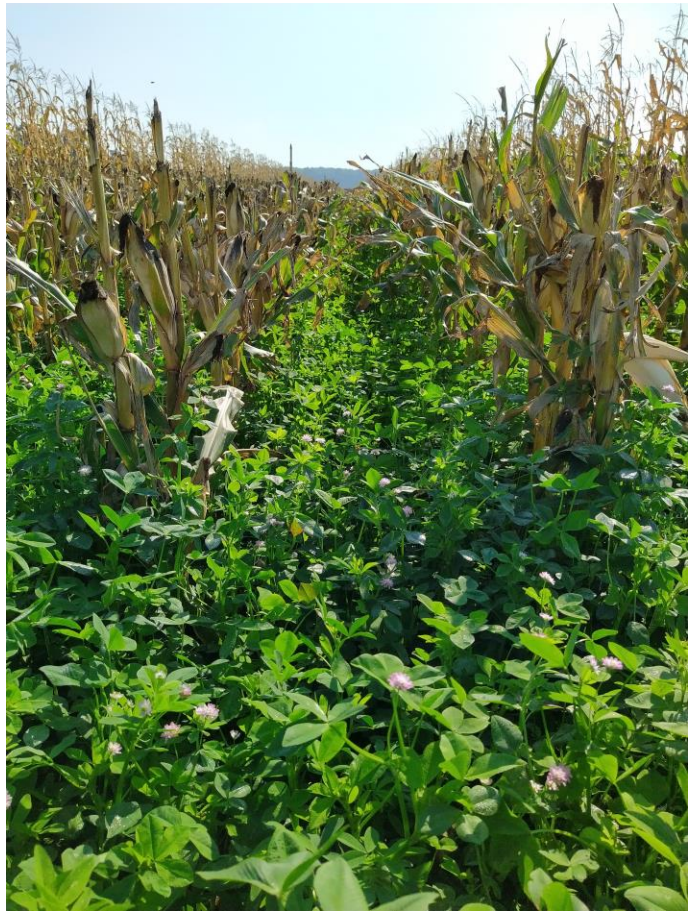
Short season varieties enable croprotations:

April	May	June	July	August	September	October
	Maize season					
	ultra-early maize				wintercereal/winterhardy peas	
grass/winterhardy peas		ultra-early maize				
	ultra-early maize				winterrapeseed	
spinach/lettuce		ultra-early maize				
	ultra-early maize				green manure	
early potatoes/wintercereal/bulbs			ultra-early maize			

Winter cereal-winterpea

Winterrapeseed

Early varieties enable regional seedproduction



Seedproduction with clovermixture
Harvested before 1st of October

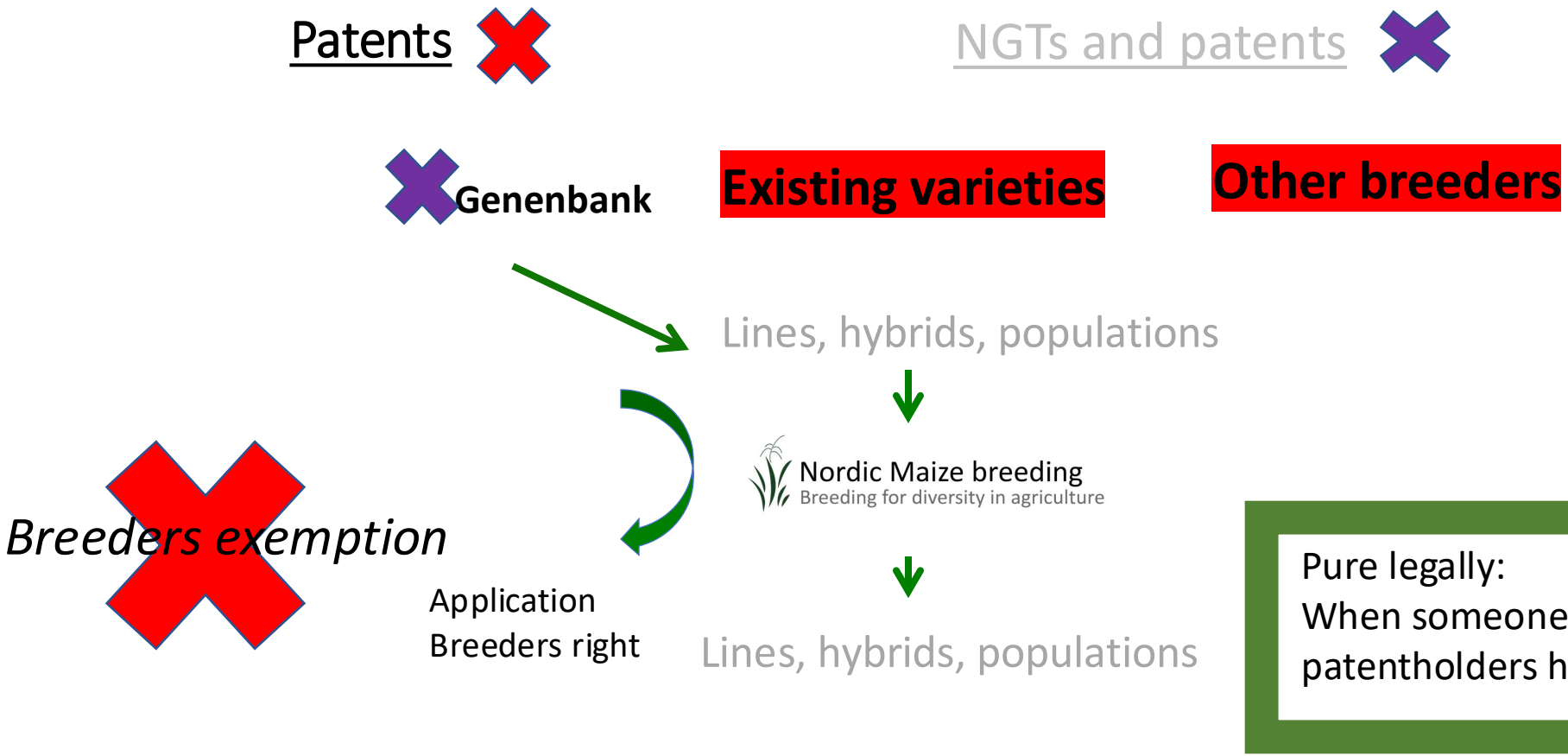
Nordic Maize breeding
Breeding for diversity in agriculture

Indepent breeding companies are:

- Capable to work ’out of the box’, real innovations
- Out of need of extreme efficiëncy
- Capable to develop ‘not money driven’ innovations
- Motivated to serve the sector
- Capable of serving regional markets

Indepent breeding companies strongly depend on

- Free accessible genetic sources
- The use of the Breeders Exemption



Pure legally:
When someone wants to start breeding, patentholders have to be contacted first

NMB does not know if our material contains patented genes
(the detection of the patented genes is also patented)

NMB is facing an uncontrollable risk of pollution with patented genes of our material
(Our biggest risk is with the contractor who plants maize for farmers,
which also make farmers fulnerable)

Should we, as solely a breeding and production company without a legal department, enter into discussion/negotiations with the laywers of patent holders?

Will patents on seed contribute to food security?

Patents have nothing to do with breeding. It is a lawyers job

Patents block starters and real innovation in plantbreeding.

We, in Europe, are now in the same unprotected situation as small scale breeders / farmers of the global south

Thank you for your attention

Sowing the Seeds of Love

Any questions?

#DNAisnatureowned

#breedingisahumanright