ARCHE NOAH

Seed Patents:

Possible Legislative Solutions

23 May 2025

Katherine Dolan

katherine.dolan@arche-noah.at

ARCHE NOAH

Arche Noah – Who we are

Summary of the Problem

ARCHE NOAH

- Patents on plant traits are hindering the work of conventional and organic plant breeders – contrary to the intention of EU
- What about the EPO "disclaimer"?
    - It does not fix the problem, as it only apples to plants derived exclusively from crossing and selection – it does not extend to use of naturally occurring genetic variability or random mutagenesis, or the use of markers
- De-regulation of NGT plants will hugely accelerate the problem, as the market will be flooded with patented seeds

Scenario: NGT De-Regulation

ARCHE NOAH

- The reality: All NGT plants will be covered by at least one patent
- In 2019, 3 of circa 700 varieties had stacked traits; by 2024, 108 out of 881 varieties (Kock, 2021)

No of Patents	Sunflower	Pepper	Brassicas	Melon	Tomato	Lettuce	Cucumber	Maize	Other	Total
1	38	69	54	49	104	178	28	122	131	773
2	5	5	9	4	6	24	8	21	9	91
3			1			1				2
4	15									15
Total	58	74	64	53	110	203	36	143	140	881
% Stack	34.5	6.8	15.6	7.5	5.5	12.3	22.2	14.7	6.4	12.3
Stack with mixed patent ownership			1			19				

Kock, M. (2021). *Open intellectual property models for plant innovations in the context of new breeding technologies*. **Agronomy, 11**(6), 1218. https://doi.org/10.3390/agronomy11061218

- **Farmers and breeders will increasingly struggle to find patent-free seeds**

Scale of the problem: Tomato patent

ARCHE NOAH

Perfection Fresh to slash 'significant number of jobs' amid tomato virus outbreak

By Yashee Sharma | 7:10pm Sep 25, 2024

yahoo!news

Cost of supermarket staple could rise if highly-contagious virus spreads

The devastating virus can cause crop losses of up to 70 per cent, meaning demand could outweigh supply if it is not managed.

Kamilia Palu · News Editor
Updated 31 January 2025 · 4-min read

Virus Outbreak Threatens Morocco's Thriving Tomato Industry

Moroccan desert tours

In the fields of Morocco, a silent adversary is threatening to wreak havoc on the nation's thriving tomato industry — the Tomato Brown Rough Fruit Virus (ToBRFV).

by mahamadou-simpara — Nov, 09, 2023

0 0 AA

- As the virus spreads, farmers increasingly demand resistant varieties – so patent holders will get a monopoly on the market for tomato seeds
- This is just one example: Overall effect risk to resilience of our seed and food systems
- Policy-makers must act!

Position of the EU institutions

ARCHE NOAH

European Commission

- Study on impact of patenting on innovation, access to patented NGT plants, and competitiveness – due Q3 2025
- Unclear if it will adequately consider the impact of continued patenting of classically bred plants, or impact on farmers' rights
- Rules out re-opening Directive

Council

- Negotiations on NGT file stalled owing to patent concerns, but proposal only includes minor transparency measures

European Parliament

- NGT vote includes changes to Biotech Directive

Key Proposals of European Parliament

ARCHE NOAH

- New exclusions from patentability:
  - NGT plants, plant material, parts thereof, genetic information and process features they contain
  - Plants, plant material, parts thereof, genetic information and process features they contain that can be yielded by techniques excluded from the scope of Directive 2001/18/EC as listed in Annex I B to that Directive [mutagenesis and cell fusion]
  - Plant products of a patentable technical process that is not distinguishable from plant products containing or consisting of the same genetic information obtained by an essentially biological process
- Limitation to scope of patent protection – protection does not extend to biological material that is obtained independently of the patented material and is from essentially biological processes

Analysis of European Parliament Position

ARCHE NOAH

- Welcome that European Parliament recognises urgency of the problem – proposal could fix a key part of the problem
- The proposal could be strengthened further:
    - to codify exclusion of plants obtained exclusively from EBP as per Commission Notice 2016 and EPC Implementing Regulations, and to clarify this includes the genetic information of these plants
    - to better protect farmers from patent risks, which would rise with a de-regulation of NGTs
- Unresolved issue of compatibility with EPC:
    - Article 53 excludes only essentially biological processes from patentability – so excluding NGT plants would need a change to the Convention

What Can Be Achieved Now?

ARCHE NOAH

- Short-term goal must be exclusion from patentability of plants derived from classical breeding techniques, including the use of spontaneous genetic variability and random mutations, and limitation of scope of protection

  Compatible with EPC –only requires change to definition of "essentially biological processes" in Implementing Regulations by EPO Administrative Council to take effect

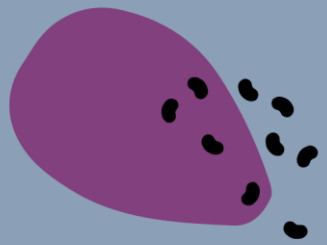
- Example at national level– Austrian Patent Act 2023:

> "A process for the breeding of plants or animals is essentially biological if it is entirely based on natural phenomena such as crossing, selection, non-targeted mutagenesis, or on random genetic variability occurring in nature."

Long-term goal

ARCHE NOAH

- In the medium term: Full overhaul of European patent legislation to excludes patents on all plants and seeds, as well as the genetic information contained therein
- Complex and lengthy process requiring revisions of the EU Biotech Directive and EPC
- Necessary to once and for all put an end to legal loopholes that can be exploited to gain monopoly rights over the plants and seeds that are the starting point for our food security!



Danke,

für Ihre Aufmerksamkeit!

www.arche-noah.at