

# Patents on Terminators

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# Patents and terminators

- Terminators avoid farmers from saving seeds
- Patents do the same
- Why do you need both?



- The patent cannot be enforced in any place, esp. not in developing countries, so the companies need the biological seed control
- As biological control there are hybrid plants and terminators



- Each step of gene technology is patented

On the other hand

- Publication is useful for us to know what is planned by the companies



# Examples of granted terminator patents

- Bayer: female sterility, also terminator; granted in 2000; also in JP, PT, US/AU, CA, IE, IL, ZA
- Syngenta: Control of germination; granted 2002; also in AU/CA, US
- Delta & PineLand: Seeds not germinating; granted 2005; also in AU, CA, CN, EG, HK, US/ BR, JP, TR, ZA
- Pioneer: Sterile plants; granted 2005; also in AU, CA, US/ AR, HU, JP, BR, MX, NZ
- Syngenta: cytotoxic gene expressed in sexual organs; granted 2005; also in AU, US/CA, GB, ID, IL, JP, KR, NO, NZ, SK
- Unicrop: Blocking of germination; granted 2006; RU, US/AU, BR, CA, CZ, IL, MX, NZ, PL, SK, US



# Examples of patent applications

- Ceres: unfertile seeds, applied 2004; also in CA, IL, JP, MX, NZ
- Icon Genetics (Bayer): sexual reproduction impaired; applied 2004; also in AU, CA, DE, JP, US
- Japan Science & Technology: sterile plants; applied 2005; also in BR, CA, CN, JP, RU
- BASF: control of germination of seeds; applied 2005; also in AU, CA, US
- Ceres: unfertile seeds; applied 2006



# Who is working on terminators?

- All multinational companies, as Syngenta, Bayer, Monsanto (D&PL), Ceres, Pioneer, BASF
- Some universities



# Content of terminators

- Production of hybrid seeds!
- No spread of unwanted seeds or pollen! Is it so?
- Production of biomass! Development of sexual organs takes energy, growth is stopped. With the terminators their is control of life!
- Fruits without kernels! And the flavor?
- Tubers not sprouting any more! For whom?

In fact it is an

- enforcement for farmers to buy every year „high-productive“ new seeds, that they may have high yield, but certainly high costs and total dependence.

