



Factors contributing to the occurrence of LLP/AP incidents

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Main factors contributing to LLP/AP

- Regulatory aspects (including asynchronicity)
- Plant breeding and plant growing procedures and programmes
- Carry-over during storage and transport

Main factors contributing to LLP/AP

- Regulatory aspects (including asynchronicity)
 - Crops may be approved in some countries, but not (yet) in others
 - There may be different procedures and asynchronicity between provinces/states/prefectures within countries



Main factors contributing to LLP/AP

- Plant breeding and plant growing procedures and programmes



During the phase of seed production admixture may occur of unauthorised GM crops

During the cultivation of the crop gene flow in the field (pollen) may occur leading to cross-pollination

During the cultivation of the crop admixture of the seed by GM volunteer plants

Illegal production of GM seeds or cultivation of unapproved GM crops

Main factors contributing to LLP/AP

- Carry-over during storage and transport
 - Accidental mixture during storage in, for instance, large silo's
 - Residual trace amounts of GM crops that were previously stored, transported or processed in the facilities used for the (GM) crop



AP occurrence

- GM crops may be approved for field trials, but not for commercialisation
 - Cross-pollination in the field
 - Volunteer plants
 - Illegal production
- This may have national or international dimensions

AP occurrence

- Important aspects are here:
 - Clear field trials policies and protocols
 - Effective enforcement regulations
 - Implementation of good practices
 - Sufficient monitoring

LLP occurrence

- LLP by definition refers to an international setting: the implicated crop has been assessed for its safety (food/feed and environment) and has been approved in at least one country
 - Clear field trials policies and protocols
 - Effective enforcement regulations
 - Implementation of good practices
 - Sufficient monitoring

LLP occurrence

- Asynchronicity of approvals between exporting and importing countries
 - Differences in duration of approval procedures
 - Differences in timing of application submission
- Divergence among national approval procedures that may comprise aspects of mutual recognition
- Different or no LLP-related regulations

LLP/AP occurrence

- Different inspection regimes – frequency / risk-based or not
- Different methods for detection (regulatory requirements, sampling strategy, analytical approaches and laboratory capacity)
- Differences in approaches may lead to different outcomes

Conclusions (1)

- The occurrence of AP/LLP GMO varieties is to a large extent related to
 - Current practices in plant breeding procedures (multiple GMO modifications, more events are being field-tried, only some GMOs are brought to the market)
 - Gene flow and subsequent cross-pollination in the field
 - Carry-over in increasingly complex logistic networks



Conclusions (2)

- LLP incidents in addition relate to
 - Asynchronicity in applications and approval procedures
 - Varying application of mutual recognition principle in national regulations
 - Varying strategies/capacity for the enforcement of GMO regulations, including unauthorised GMO varieties



**Thank you for your
attention!**

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