Animal Science Papers and Reports

Safety assessment of biotechnology used in animal production, including genetically modified (GM) feed and GM animals – a review

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Abstarc :

Since the beginning of the large-scale commercial cultivation of genetically modified (GM) crops in the mid-nineties, it has continuously increased. This has occurred in particular in non-European countries from which these crops may be exported as commodities to Europe and other markets. Before genetically modified organisms (GMO) are allowed onto the market as animal feed and/or food, they have to undergo a regulatory safety assessment as required by the law in many nations, including that of European Union (EU) nations under EU regulations. This safety assessment is based on an internationally harmonized approach of comparative safety assessment, in which the differences identified during the extensive comparison between a GMO and a conventional counterpart serve as basis for a further safety assessment. The GMOs that have been notified for regulatory approval and assessed for their safety as feed and food in the EU have so far been derived from crops and microorganisms. It is expected that in the near future, also several genetically modified (GM) animals may initially reach the market outside the EU. International activities to harmonize the safety assessment of GM animals have already started and have resulted in the issuance of specific guidelines by Codex alimentarius. Moreover, PEGASUS, an EU-funded project, will consider the perceptions, advantages and disadvantages of GM animals, including perspectives from the social- and life-sciences.

Key Word :
biotechnology, genetic modification, animal feed, food-producing animals, feed safety, food safety, risk assessment, comparative approach, international harmonization

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