

Senate Community Affairs Committee

ANSWERS TO ESTIMATES QUESTIONS ON NOTICE

HEALTH PORTFOLIO

Supplementary Budget Estimates 2016 - 2017, 19 October 2016

Ref No: SQ16-000573

OUTCOME: 5 - Regulation, Safety and Protection

Topic: GM Categorisation

Type of Question: Written Question on Notice

Senator: Rice, Janet

Question:

a) Which of the following techniques does the OGTR consider to be gene technology at this point?

- * Pioneer Hi-Bred International's proprietary seed production technology (SPT);
- * reverse breeding;
- * Cisgenesis and intragenesis;
- * GM rootstock grafting;
- * Oligo-directed mutagenesis (ODM);
- * Zinc-finger nuclease (ZFN) technology;
- * accelerated breeding following induction of early flowering;
- *) Transcription activator-like effector nucleases (TALENs);
- * Type II clustered, regularly interspaced, short palindromic repeats (CRISPR) /Cas systems;
- * Meganucleases;
- * Triplex-forming oligonucleotides; and/or
- * Agro-infiltration.

b) Which of the following techniques does the OGTR consider result in GMOs at this point?

- * Pioneer Hi-Bred International's proprietary seed production technology (SPT);
- * reverse breeding;
- * Cisgenesis and intragenesis;
- * GM rootstock grafting;
- * Oligo-directed mutagenesis (ODM);
- * Zinc-finger nuclease (ZFN) technology;
- * accelerated breeding following induction of early flowering;
- * Transcription activator-like effector nucleases (TALENs);
- * Type II clustered, regularly interspaced, short palindromic repeats (CRISPR) /Cas systems;
- * Meganucleases;
- * Triplex-forming oligonucleotides; and/or
- * Agro-infiltration.

c) Has the OGTR issued any advice regarding whether any of these techniques are considered gene technology or not?

i. Please table this advice.

ii. if advice has been issued, does the OGTR consider that the recipient of the advice may legally act upon this advice?

iii. if yes to ii., is the OGTR aware whether any of the recipients of advice have acted upon this advice?

- iv. if yes to iii., please describe
- v. If no to iii., would the OGTR act to prevent to a recipient of advice from acting on that advice?
- vi.) Would the OGTR agree that a court is unlikely to reverse an action by a recipient based on advice received from the OGTR?
- d) Has the OGTR issued any advice regarding whether any of these techniques result in GMOs or not?
 - i. Please table this advice.
 - ii. if advice has been issued, does the OGTR consider that the recipient of the advice may legally act upon this advice?
 - iii. if yes to ii., is the OGTR aware whether any of the recipients of advice have acted upon this advice?
 - iv. if yes to iii., please describe
 - v. If no to iii., would the OGTR act to prevent to a recipient of advice from acting on that advice?
 - vi. Would the OGTR agree that a court is unlikely to reverse an action by a recipient based on advice received from the OGTR?

Answer:

- a) OGTR considers the following techniques to be gene technology:
 - Pioneer Hi-Bred International's proprietary seed production technology
 - cisgenesis and intragenesis
 - oligo-directed mutagenesis
 - agro-infiltration.

OGTR would require more detailed information on the specific technique in question to answer whether the following are gene technology:

- Zinc-finger nuclease technology
- accelerated breeding following induction of early flowering
- Transcription activator-like effector nucleases
- Type II clustered, regularly interspaced, short palindromic repeats/Cas systems
- Meganucleases
- Triplex-forming oligonucleotides.

- b) OGTR considers the following techniques to result in GMOs:
 - Pioneer Hi-Bred International's proprietary seed production technology, when genetic modifications or their resulting traits are present
 - cisgenesis and intragenesis
 - GM rootstock grafting
 - oligo-directed mutagenesis
 - agro-infiltration, when genetically modified *Agrobacterium* or a trait resulting from genetic modification is present.

OGTR would require more detailed information on the specific technique in question to answer whether the following result in GMOs:

- reverse breeding
- Zinc-finger nuclease technology;
- accelerated breeding following induction of early flowering
- Transcription activator-like effector nucleases
- Type II clustered, regularly interspaced, short palindromic repeats/Cas systems
- Meganucleases
- Triplex-forming oligonucleotides.

c) Yes.

- i. To provide this information would involve an unreasonable diversion of departmental resources.
- ii. The OGTR does not give legal advice.
- iii. Not applicable.
- iv. Not applicable.
- v. Not applicable
- vi. The OGTR cannot speculate upon the outcome of matters that may go before a court.

d) Yes.

- i. To provide this information would involve an unreasonable diversion of departmental resources.
- ii-vi. See c) ii-vi above.