**Assessment of risk of GM contamination in flaxseed accessions imported from Canada: A case study to restrict the unauthorized GM events from entering India**

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**Table S1.** List of 123 imported flaxseed accessions (Source: PGRC, Canada) and summary of test results

**Table S2.** Primers employed in the study

**Figure S3.** PCR profile for checking *T-nos* terminator in flaxseed accessions

**Figure S4.** PCR profile for checking *nptII* marker gene in flaxseed accessions

**Figure S5.** PCR profile for checking *ALS* transgene in flaxseed accessions

**Figure S6.** PCR profile for checking *cp4-epsps* gene (commonly employed herbicide tolerant gene in GM crops) in flaxseed accessions

**Table S1.** List of 123 imported flaxseed accessions (Source: PGRC, Canada) and summary of test results

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Accession No.** | **Endogenous gene** | ***Nos* promoter (*P-nos*)** | ***Nos* terminator (*T-nos*)** | ***ALS* transgene**  **(HT gene in GM flax)** | ***nptII* marker gene** | ***ctp2-cp4-epsps*  (HT construct in other GM crops)** | **GM Status** |
|  | EC1074577 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074578 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074579 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074580 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074581 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074582 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074583 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074584 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074585 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074586 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074587 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074588 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074589 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074590 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074591 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074592 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074593 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074594 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074595 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074596 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074597 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074598 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074599 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074600 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074601 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074602 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074603 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074604 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074605 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074606 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074607 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074608 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074609 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074610 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074611 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074612 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074613 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074614 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074615 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074616 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074617 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074618 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074619 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074620 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074621 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074622 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074623 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074624 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074625 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074626 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074627 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074628 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074629 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074630 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074631 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074632 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074633 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074634 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074635 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074636 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074637 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074638 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074639 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074640 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074641 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074642 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074643 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074644 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074645 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074646 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074647 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074648 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074649 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074650 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074651 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074652 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074653 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074654 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074655 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074656 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074657 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074658 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074659 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074660 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074661 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074662 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074663 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074664 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074665 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074666 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074667 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074668 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074669 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074670 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074671 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074672 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074673 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074674 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074675 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074676 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074677 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074678 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074679 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074680 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074681 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074682 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074683 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074684 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074685 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074686 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074687 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074688 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074689 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074690 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074691 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074692 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074693 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074694 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074695 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074696 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074697 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074698 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |
|  | EC1074699 | Present | Absent | Absent | Absent | Absent | Absent | Non-GM |

HT: Herbicide tolerant

**Table S2.** Primers employed in the study

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Target | Primer Code | Sequence | Product Size (bp) | Reference |
| *cp-tRNA* | PlantA1/A2 | F: CGAAATCGGTAGACGCTACG  R: GGGGATAGAGGGACTTGAAC | 615 bp | Taberlet *et al*. 1991 |
| *P-nos* | P-nos-F/R | F: ACCATTATTGCGCGTTCAAA  R: GATTGAGAGTGAATATGAGACTCTAATTG | 131 bp | Pansiot *et al*. 2011 |
| *T-nos* | NOS1/3 | F: GAATCCTGTTGCCGGTCTTG  R: TTATCCTAGTTTGCGCGCTA | 180 bp | Hardegger *et al*. 1999 |
| *nptII* | Npt II F/R | F: CTCACCTTGCTCCTGCCGAGA  R: CGCCTTGAGCCTGGCGAACAG | 215 bp | Singh *et al*. 2008 |
| *ALS* | als3F/3R | F: CAA GCC TTA ACC CGC TCT TC  R: TCG TAA TCG AAC GCG TTA CC | 277 bp | Nakamura *et al*. 2010 |
| *ctp2-cp4epsps* | RR-F/R | F: GGATTTCAGCATCAGTGGCTACA  R: CCGGAAAGGCCAGAGGAT | 88 bp | Hird *et al*. 2003 |