**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: CGAAATCGGTAGACGCTACGR: GGGGATAGAGGGACTTGAAC | 615 bp | Taberlet *et al*. 1991 |
| *P-nos* | P-nos-F/R | F: ACCATTATTGCGCGTTCAAAR: GATTGAGAGTGAATATGAGACTCTAATTG | 131 bp | Pansiot *et al*. 2011 |
| *T-nos* | NOS1/3 | F: GAATCCTGTTGCCGGTCTTGR: TTATCCTAGTTTGCGCGCTA | 180 bp | Hardegger *et al*. 1999 |
| *nptII* | Npt II F/R | F: CTCACCTTGCTCCTGCCGAGAR: CGCCTTGAGCCTGGCGAACAG | 215 bp | Singh *et al*. 2008 |
| *ALS* | als3F/3R | F: CAA GCC TTA ACC CGC TCT TCR: TCG TAA TCG AAC GCG TTA CC | 277 bp | Nakamura *et al*. 2010 |
| *ctp2-cp4epsps* | RR-F/R | F: GGATTTCAGCATCAGTGGCTACAR: CCGGAAAGGCCAGAGGAT | 88 bp | Hird *et al*. 2003 |