

GM Crop Database

Database Product Description

PHY36

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|---------------------------|--|
| Host Organism | <i>Brassica napus</i> (Argentine Canola) |
| Trait | Glufosinate ammonium herbicide tolerance and fertility restored. |
| Trait Introduction | Agrobacterium tumefaciens-mediated plant transformation. |
| Proposed Use | Production for human consumption and livestock feed. |
| Product Developer | Aventis CropScience (formerly Plant Genetic Systems) |



Summary of Regulatory Approvals

| Country | Food | Feed | Env | Notes |
|---------|------|------|------|-------|
| Japan | 1997 | 1997 | 1997 | |

Summary of Introduced Genetic Elements

| Code | Name | Type | Promoter, other | Terminator Copies | Form |
|---------|--------------------------------------|------|---|-------------------|------|
| bar | phosphinothricin N-acetyltransferase | HT | PSSuAra from <i>Arabidopsis thaliana</i> | | |
| barnase | barnase ribonuclease | MS | pTa 29 pollen specific promoter from <i>Nicotiana tabacum</i> | | |
| barstar | barnase ribonuclease inhibitor | RF | anther-specific promoter | | |

Characteristics of *Brassica napus* L. (Argentine Canola)

| Center of Origin | Reproduction | Toxins | Allergenicity |
|------------------|--------------|--------|---------------|
|------------------|--------------|--------|---------------|

The species is native to India.

Canola flowers can self-pollinate, and they can also be cross-pollinated by insects and by wind.-

Brassica species can contain erucic acid and various glucosinolates, which can be toxic. However, commercial canola varieties have been bred to reduce the levels of these substances. Canola may contain elevated levels of tannins, which reduce the digestibility of seed protein, and sinapine, which is a bitter substance that can reduce the palatability of feeds made from canola meal.

Occupational exposure to pollen and seed flour have been associated with allergic reactions in humans. There are no known allergic reactions to canola oil.

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Donor Organism Characteristics

Latin Name

Streptomyces hygroscopicus

Gene

bar

Pathogenicity

S. hygroscopicus is ubiquitous in the soil and there have been no reports of adverse affects on humans, animals, or plants.