



**APPLICATIONS UNDER EXAMINATION**

**FENUGREEK**

**FENUGREEK**  
*(Trigonella foenum-graecum)*

**Proposed denomination:** 'Tristar'  
**Application number:** 04-4215  
**Application date:** 2004/05/31  
**Applicant:** Agriculture & Agri-Food Canada, Lethbridge, Alberta  
**Agent in Canada:** Agriculture & Agri-Food Canada, Lacombe, Alberta  
**Breeder:** Dr. Surya Acharya, Agriculture & Agri-Food Canada, Lethbridge, Alberta

**Variety used for comparison:** 'Amber'

**Summary:** *'Tristar' differs from the reference variety, 'Amber' mainly in plant height, stem length, days to flowering, seed weight and seed colour. The plants of 'Tristar' are taller than those of 'Amber'. The stems of 'Tristar' are longer than those of 'Amber'. 'Tristar' flowers later than 'Amber'. The seed weight of 'Tristar' is lighter than that of 'Amber'.*

**Description:**

PLOIDY: diploid

GROWTH HABIT: erect

STEM: thick, slight pubescence

LEAVES: dark green, 100% ovate shaped leaflet, 100% trifoliate leaf expression

FLOWER: cream on 100% of the plants

ROOT: tap root, narrow, shallow depth

POD: sickle shape, slight pubescence

SEED: late maturing

TOLERANCE TO DROUGHT: good

TOLERANCE TO FLOODING: poor

QUALITY CHARACTERISTICS: Neutral Detergent Fibre (NDF) superior, Acid Detergent Fibre (ADF) inferior

**Origin and Breeding:** 'Tristar', tested as L3314, was selected out of the Plant Gene Resources of Canada (PGRC) accession number CN19118, originally collected from the Shiraz area of Iran in 1940. A few seeds of this accession, along with other lines, was acquired in 1998. In 1999, seed was increased at Lethbridge, Alberta with field testing starting in 2000. L3314 was selected based on its ability to yield high biomass. In 2002, single plants exhibiting good vigour were selected and bulked to produce 'Tristar'.

**Tests and Trials:** The tests and trials for 'Tristar' were conducted at the Agriculture and Agri-Food Canada Lethbridge Research Centre, Lethbridge, Alberta during the summers of 2005-2008. Trials were arranged using a randomized complete block design (RCBD) with 4-5 replicates per variety. Each replicate consisted of 10 rows measuring approximately 2 metres wide and 6 metres in length. Row spacing was 20 cm under irrigated conditions and 40 cm under rainfed conditions. The plots were seeded at 15 kg/ha for irrigated conditions and 10 kg/ha for rainfed conditions.

**Comparison table for 'Tristar'**

	'Tristar'	'Amber'*
<i>Early spring growth, plant height (cm)</i>		
mean	40	35
std. deviation	2.51	2.15

*Days to flowering*

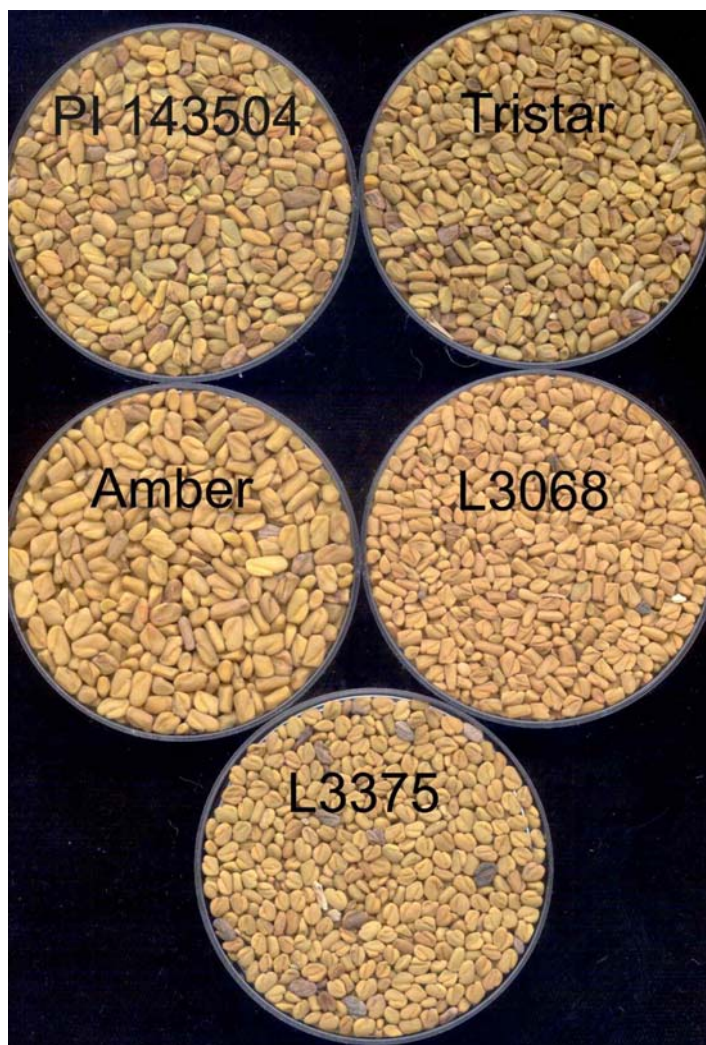
mean	55	52
std. deviation	0.95	0.95

*Seed weight (grams per 1000 mature seeds)*

mean	14.3	15.6
std. deviation	0.08	0.12

\*reference variety

---



Fenugreek: 'Tristar' (top row, right) with reference variety 'Amber' (middle row, left)

---