



APPLICATIONS UNDER EXAMINATION

CARROT

CARROT (*Daucus carota*)

Proposed denomination: 'Betaking'
Application number: 03-3470
Application date: 2003/02/13
Applicant: Texas Agricultural Experiment Station, College Station, Texas, United States of America
Breeder: Leonard Pike, Texas A & M University System, College Station, Texas, United States of America

Variety used for comparison: 'Purple Haze'

Summary: 'BetaKing' has strong ridging of the surface whereas it is absent or very weak on 'Purple Haze'.

Description:

FOLIAGE: narrow to medium width of crown

LEAF: medium division, medium to dark green, no anthocyanin colouration of petiole

ROOT: medium length/width ratio, narrow obtriangular to narrow oblong shape, slightly pointed tip, purple external colour, strong ridging of surface, purple cortex, absent or very small extent of green colouration of interior in longitudinal section

SHOULDER: flat to rounded shape, absent or very small green colour of skin

CORE: small diameter relative to total diameter, orange

Origin and Breeding: 'BetaKing' was developed in 1990 from three roots exhibiting maroon coloured blotches growing in an evaluation planting of the variety, 'Brasilia' in 1990. As this type of colouration had never been observed before in this variety, it is suspected that they possibly arose due to a previous outcross to a wild type or mutation. The three roots were self-pollinated producing several S1 lines that segregated further for various degrees of maroon root colour. Roots were selected for a uniform, dark maroon to near purple exterior colour using selfing and sib-mating for eight generations. Selected roots were further evaluated for terpenoids, Beta-carotene, sugar and texture.

Tests and Trials: Trials for 'BetaKing' were conducted during the 2009 growing season near the Muck Crops Research Station, Holland Marsh, Ontario. The trial consisted of 16 raised carrot hills, (8 hills/cultivar) containing 2 rows/hill measuring 30 meters in length and spaced approximately 0.76 metres apart between hills. Root length and width were based on 50 measurements with all other measured characteristics based on 40 measurements. The 2009 results were supported by the official technical examination report purchased from the Plant Variety Protection Office in the U.S.A.



Carrot: 'Betaking'



Carrot: Reference variety 'Purple Haze'