



## APPLICATIONS UNDER EXAMINATION

## LETTUCE

### LETTUCE

(*Lactuca sativa*)

**Proposed denomination:** 'AAC Johral'  
**Application number:** 22-10928  
**Application date:** 2022/05/17  
**Applicant:** Agriculture & Agri-Food Canada, Saskatoon, Saskatchewan  
**Agent in Canada:** Foundation for Breeding Lettuce and Leafy Vegetables, Napierville, Quebec  
**Breeder:** Sylvie Jenni, Agriculture & Agri-Food Canada, Saint-Jean-sur-Richelieu, Quebec

**Varieties used for comparison:** 'Estival' and 'Prestige'

**Summary:** *The outer leaf of 'AAC Johral' has a transverse narrow elliptic shape whereas the outer leaf of 'Estival' is circular and that of 'Prestige' has transverse broad elliptic shape. At harvest maturity, the stem of 'AAC Johral' is shorter than that of 'Prestige'. At flowering, the plants of 'AAC Johral' are shorter than the plants of 'Estival' and 'Prestige'.*

#### Description:

**PLANT:** iceberg type, absent or weak axillary sprouting, bolting begins mid to late season under long day conditions, harvest maturity at mid-season

**SEEDLING:** no anthocyanin colouration, no division of leaf blade at 10 to 12 leaf stage

**HEAD:** closed head formation with a medium degree of overlapping of upper part of leaves, dense, circular shape in longitudinal section

**LEAF:** medium to thick, semi-erect attitude at harvest maturity, transverse narrow elliptic shape, no hue of other colour on green outer leaf, moderate to strong intensity of green colouration on outer side of outer leaf, no anthocyanin colouration, weak to medium glossiness on inner side, weak degree of blistering, medium sized blisters, weak degree of undulation of margin, flabellate (fan shaped) venation

**INCISIONS OF MARGIN ON APICAL PART OF LEAF:** sparse to medium density, shallow

**SEED:** black seed coat

**Origin and Breeding:** 'AAC Johral' (experimental designation 'QJ-11') originated as a single plant selection using the pedigree method of plant breeding. The female parent was an F6 progeny resulting from the cross between the varieties 'Valley Green' and 'Ithaca'. The male parent resulted from a cross between an F4 progeny (resulting from the cross between the varieties 'Summertime' and 'Eldorado') and an F5 progeny (resulting from a cross between the varieties 'Summertime' and 'Onondaga'). The final cross resulting in the new variety was conducted at the Agriculture and Agri-Food Canada Horticultural Research and Development Centre in Saint-Jean-sur-Richelieu, Quebec in December 2004. The variety was advanced from the F2 to the F9 generation in Sainte-Clotilde and Napierville, Quebec based on 'Vanguard' characteristics, leaf configuration, presence of rib discolouration and tipburn as well as head size, weight, firmness, ribbiness and stem length. One F9 plant was selected in 2012 with subsequent seed evaluation and multiplication conducted in San Joaquin Valley, California, USA. The variety was assessed in replicated plots from 2016 to 2019 with the new variety being designated as 'QJ-11' at the end of 2019.

**Tests and Trials:** The comparative trials for 'AAC Johral' were conducted at the JPL Guérin farm, in Sherrington, Quebec during the summers of 2022 and 2023. Both the candidate and reference varieties were sown in the greenhouse and later transplanted into fields of organic soil. Plots were arranged in a RCB design with 3 replications in 2022 and 4 replications in 2023. Each plot contained 60 plants resulting in a total of 180 and 240 plants per variety in 2022 and 2023, respectively. The plots were composed of two rows spaced 35.5 cm and planted in mounds that were 14.6 metres long and 0.91 metres wide. The plants were grown under normal conditions for cultivation with long days (photoperiod between 15 and 16 hours per day). The lettuce was harvested and evaluated at the time of optimal maturity during the last 2 weeks of July. For each trial year, measured characteristics were based on measurements on 21 to 36 plants per variety except for the plant height at

flowering which was based on a total of 20 plant measurements per variety. Mean differences were significant at the 5% probability level based on LSD values.

**Comparison table for ‘AAC Johral’**

	‘AAC Johral’	‘Estival’*	‘Prestige’*
<i>Stem length (at harvest maturity) (from base of first external leaf forming head to apical bud) (mm)</i>			
mean 2022 (LSD=4.8)	46.4	59.1	77.9
std. deviation 2022	5.8	9.2	15.9
mean 2023 (LSD=6.4)	64.5	70.1	96.2
std. deviation 2023	6.8	14.3	11.9
<i>Plant height (at flowering) (cm)</i>			
mean 2022 (LSD=2.8)	95.2	105.0	108.1
std. deviation 2022	5.9	3.0	3.6
mean 2023 (LSD=2.5)	84.1	90.9	94.9
std. deviation 2023	4.7	3.0	3.0

\*reference varieties



Lettuce: ‘AAC Johral’ (top left) with reference varieties ‘Prestige’ (top right) and ‘Estival’ (bottom)





Lettuce: 'AAC Johral' (bottom right) with reference varieties 'Estival' (bottom left) and 'Prestige' (top)

**Proposed denomination:** 'Bassari'  
**Application number:** 23-11332  
**Application date:** 2023/05/03  
**Applicant:** Nunhems B.V., Nunhem, Netherlands  
**Agent in Canada:** Aventum IP Law LLP, Ottawa, Ontario  
**Breeder:** Johan van Zee, Nunhems B.V., Nunhem, Netherlands

**Variety used for comparison:** 'Anizel'

**Summary:** *At harvest maturity, the plant of 'Bassari' has a medium to large diameter whereas the plant of 'Anizel' has a medium diameter. The degree of undulation of the leaf margin of 'Bassari' is medium whereas it is medium to strong for that of 'Anizel'.*

**Description:**

**PLANT:** Batavia type, open culture type, medium to large diameter, absent or weak degree of overlapping of upper part of leaves, medium number of leaves, no head formation, absent or weak axillary sprouting, bolting begins very late under long day conditions, strong intensity of fasciation at flowering stage

**LEAF:** medium thickness, semi-erect attitude at harvest maturity, absent or very few divisions, medium oblate shape, rounded tip, flat in longitudinal section, absent or very weak intensity of anthocyanin colouration, green leaf, medium intensity of green colouration, weak glossiness on upper side, weak to medium degree of blistering, small blisters, medium degree of undulation of margin, flabellate (fan shaped) venation

**INCISIONS OF MARGIN ON APICAL PART OF LEAF:** shallow, medium to dense, irregularly dentate type, very shallow to shallow secondary incisions of margin

**SEED:** black seed coat

**DISEASE REACTIONS:** resistance to *Bremia lactucae* isolates BI: 16EU, BI: 17EU, BI: 20EU, BI: 21EU, BI: 22EU, BI: 23EU, BI: 24EU, BI: 25EU, BI: 26EU, BI: 27EU, BI: 29EU, BI: 30EU, BI: 31EU, BI: 33EU, BI: 35EU present; resistance to Lettuce mosaic virus (LMV) pathotype II present; resistance to *Nasonovia ribisnigri* biotype Nr: 0 present

**Origin and Breeding:** ‘Bassari’ (experimental designation NUN 08224 LTL) was developed from an initial cross and successive controlled self-pollinations. The initial cross between two proprietary varieties was conducted in Gravenzande, Netherlands in 2013. The variety was advanced by continuous selfing from the F1 to the F7 generation in Gravenzande, Netherlands and selection was based on plant shape, bolting resistance, and disease resistance. In 2019, NUN 08224 LTL was selected and designated as ‘Bassari’.

**Tests and Trials:** The detailed description of ‘Bassari’ is based on the UPOV report of Technical Examination, application number SLA4336, purchased from the Naktuinbouw in Roelofarendsveen, Netherlands. The trial was conducted by the Naktuinbouw in Roelofarendsveen, Netherlands in 2020.



Lettuce: ‘Bassari’





Lettuce: Reference variety 'Anizel'

**Proposed denomination:** 'Limambo'  
**Application number:** 23-11347  
**Application date:** 2023/05/11  
**Applicant:** Rijk Zwaan Zaadteelt en Zaadhandel B.V., De Lier, Netherlands  
**Agent in Canada:** Rijk Zwaan Canada Ltd., Leamington, Ontario  
**Breeder:** Rijk Zwaan Zaadteelt en Zaadhandel B.V., De Lier, Netherlands

**Variety used for comparison:** 'Limassol'

**Summary:** *At harvest maturity, the plant of 'Limambo' has a small diameter whereas the plant of 'Limassol' has a medium sized diameter. The degree of undulation of the leaf margin of 'Limambo' is strong whereas it is strong to very strong for 'Limassol'. The plants of 'Limambo' are not resistant to Bremia lactucae isolates Bl:33EU and Bl:35EU whereas the plants of 'Limassol' are resistant to Bremia lactucae isolates Bl:33EU and Bl:35EU.*

**Description:**

**PLANT:** Lollo type, glass house and open culture type, small diameter, absent or weak degree of overlapping of upper part of leaves, few to medium number of leaves, no head formation, medium degree of axillary sprouting, bolting begins very late under long day conditions, absent or very weak intensity of fasciation at flowering stage

**LEAF:** medium thickness, semi-erect attitude at harvest maturity, absent or very few divisions, medium oblate to broad obtrullate shape, rounded tip, flat in longitudinal section, absent or very weak anthocyanin colouration, yellowish green leaf, light to medium intensity of green colouration, weak glossiness on upper side, medium degree of blistering, very small to small blisters, strong undulation of margin, flabellate (fan shaped) venation

**INCISIONS OF MARGIN ON APICAL PART OF LEAF:** shallow, dense to very dense, bidentate type, very shallow secondary incisions of margin

**SEED:** white seed coat

DISEASE REACTIONS: resistance to *Bremia lactucae* isolates BI: 16EU, BI: 17EU, BI: 20EU, BI: 21EU, BI: 22EU, BI: 23EU, BI: 24EU, BI: 25EU, BI: 26EU, BI: 27EU, BI: 29EU, BI: 30EU, BI: 31EU present; resistance to Lettuce mosaic virus (LMV) pathotype II present; resistance to *Nasonovia ribisnigri* biotype Nr: 0 present; resistance to *Bremia lactucae* isolates BI: 33EU and BL: 35EU absent

**Origin and Breeding:** ‘Limambo’ (breeder’s reference 86-LE2741 RZ) was developed from an initial cross between proprietary parent lines conducted in the Netherlands in 2015. Selection criteria included disease resistance, pest resistance as well as leaf characteristics. The variety was stable after six generations of pedigree selection. In August 2019, 86-LE2741 RZ was selected in Dinteloord, Netherlands, and designated as ‘Limambo’.

**Tests and Trials:** The detailed description of ‘Limambo’ is based on the UPOV report of Technical Examination, application number SLA4699, purchased from the Naktuinbouw in Roelofarendsveen, Netherlands. The trial was conducted by the Naktuinbouw in Roelofarendsveen, Netherlands in 2022.



Lettuce: ‘Limambo’



Lettuce: Reference variety ‘Limassol’