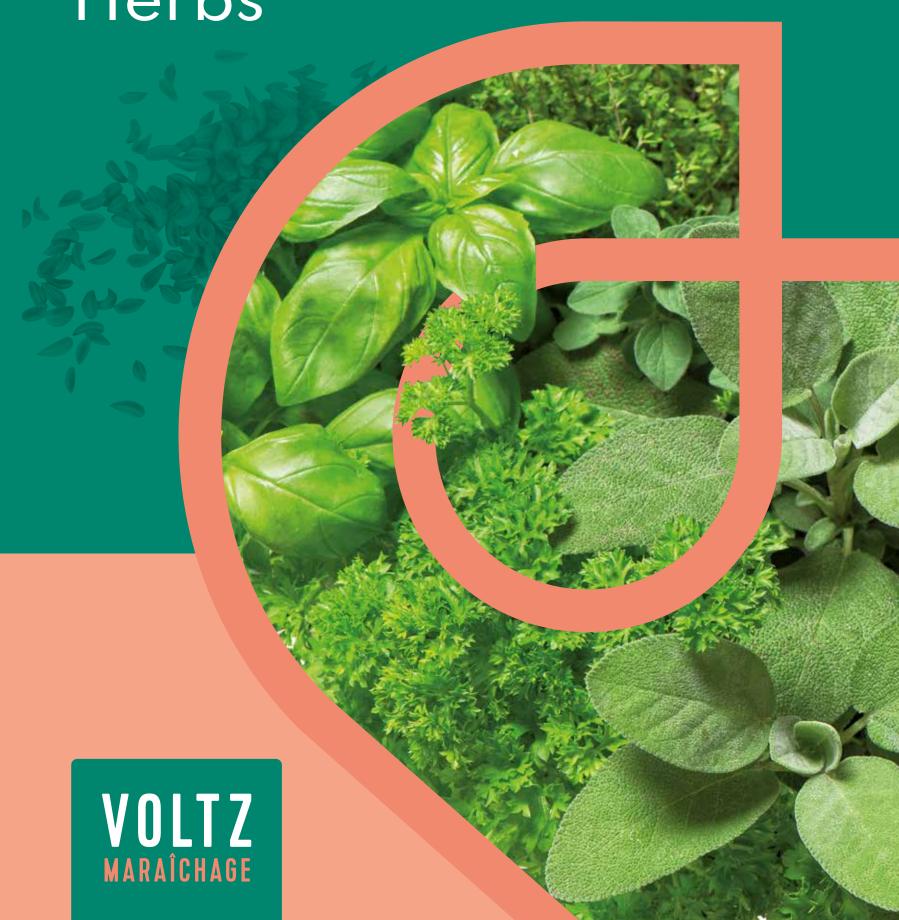
# AROMATIC Herbs



# **EDITORIAL**

# DISCOVER AROMATIC HERBS BY VOLTZ MARAÎCHAGE!

In this new catalogue, we are pleased to present our wide selection of aromatics, dedicated to our specialist growers, who are located throughout the world. You'll find all our main crops, basil, chives, parsley, dill and coriander, but also useful compliments like oregano, mint, thyme and many more. The range has also been extended to include complementary species such as rocket, cress and purslane.

#### RESEARCH, DEVELOPMENT AND PRODUCTION

This range reflects our DNA: it is a selection of the best genetics. It gathers our own material that we are pleased to offer to specialist growers. We short-listed the best of our varieties that we own and produce to offer you what you need for your productions.

#### QUALITY

Our expertise as a seed supplier is based on more than 38 years of experience from our sales and development team. This gives us confidence in our choice of varieties, to provide you with the best material and quality seeds.

Quality is our first priority. Thanks to rigorous processes, we are able to ensure the purity of our batches, their germination potential and their good sanitary condition. We adapt our work to your needs and expectations, depending on the species.

#### **PRODUCT RANGE**

On the following pages, you'll discover many things, such as basil Rubra with an intensive purple colour, the original Menuette parsley variety, with dill-like foliage and a parsley taste and also our new chives genetics Polyrex, with a very upright plant habit.

Year after year, we update our range with the aim of introducing new and exciting varieties. We also strive to introduce as many new organic varieties as possible, in order to meet the growing demand.

The VOLTZ Maraichage international team will accompany you all year round, both in the greenhouse, and in the field, and we are happy to help you at any time.

#### Abbreviations and icons



Organic seed availability



Pot cultivation

# Nomenclature of item codes

#### First letter at the end of the number:

- N Untreated
- **B** Organic



033186 B)G

#### Second letter at the end of the number:

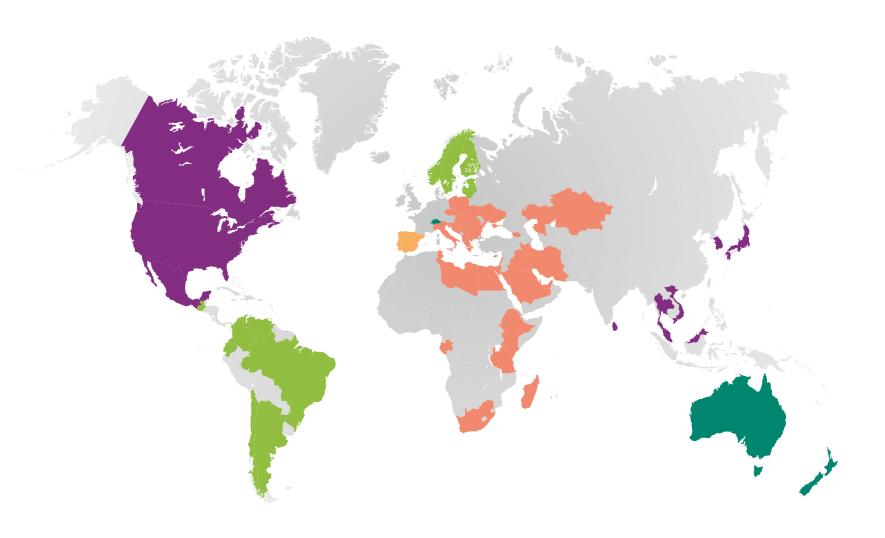
- **S** Standard seeds sold by weight
- **G** Standard seeds sold per grain
- K Precision seed sold per grain

For more general information and information about the various resistances mentioned in this catalogue, please refer to page 35.



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# Our research and production activities

At GRAINES VOLTZ, research and production are among our top priorities. We directly develop our varieties and carry out numerous production programs all over the world. These activities are managed at our location in France and the varieties are evaluated in our numerous screening stations in Europe and internationally. We follow the journey of our products throughout their life cycle, from creation to distribution.

#### **VARIETY BREEDING**

GRAINES VOLTZ is heavily involved in numerous research programs at our station.

#### Creation of new varieties

Always attentive to emerging trends such as vertical farming and urban agriculture, GRAINES VOLTZ selects the seeds that best meet new agroclimatic, regulatory and environmental constraints. This allows us to provide our customers with material that is in line with the market and the industry's expectations. We also work very closely with breeders worldwide to introduce new traits of interest, and select the most interesting individuals on genetic and phenotypic criteria, by doing experiments on dedicated plots, and studying their behaviour in real-life conditions.

Varietal selection requires many years of work. Our research focuses on species for which GRAINES VOLTZ has become an undisputed specialist:

- · Basil with improved organoleptic properties and resistances to certain diseases (Fusarium, mildew, etc.),
- · **Dill** with resistance to diseases.
- Flat and curly parsley with dark colours, uniform leaves and disease resistance,
- · Chives with upright growth and strong stems, suitable for various storage conditions,
- · Coriander suitable for all types of growing conditions
- · Climbing beans adapted to all geographical areas,
- Radishes suitable for all growing conditions, with homogenous and stable shapes and colours.



#### Preservation and propagation of basic seeds

The research team is responsible for the maintainence and multiplication of basic seeds. Basic seed serves as the input for our growers of commercial seed. It is particularly important to preserve seed quality throughout the commercial life of a variety and to avoid what is known as genetic drift. Indeed, genetic drift is when populations can evolve and mutate

over time, from generation to generation. If a variety is not preserved properly, it's characteristics will change over time, for this reason we have to carry out meticulous work on basic seeds.

# Control of varietal purity

The research team is also responsible for testing the seeds produced in the field or greenhouse. The aim of these tests is to verify that the seed is of the right variety, that the seed lot is pure and does not contain mixtures with other varieties or off-types. In this way, our customers can be sure that they are buying the best seeds that will give them complete satisfaction.



## **PRODUCTION**

GRAINES VOLTZ produces seeds from its own genetics as well as many public domain varieties. This makes us a specialist a specialist in securing varieties that are difficult or rare to supply. This enables us to manage and secure our stocks according to our needs and our customers' requirements, so that we have seeds available all year round.









# Quality seeds, our priority

For more than 38 years, GRAINES VOLTZ has developed and consolidated its specialist knowledge in the field of climatic and environmental conditions for seeds for horticulture. To this end, our entire team is constantly developing new methods to meet the quality requirements of the market and of our customers.



Seeds are a natural product. The quality and the final result also depend on changing environmental conditions. The germination capacity of our precision seeds and pelleted seeds is tested very thoroughly by us in accordance with the guidelines and tolerances of ISTA<sup>(1)</sup>.

- The stated germination capacity values for our precision seeds and pelleted seeds are the minimum values to which GRAINES VOLTZ is committed. They are determined in accordance with the guidelines and tolerances of ISTA<sup>(1)</sup> and are valid at the time of delivery.
- If the seeds supplied were not going to meet these requirements, GRAINES VOLTZ would notify you.
- Our vegetable seeds are produced using traditional methods and conform to the French and European statutory guidelines.

Seed quality is GRAINES VOLTZ's most important concern. Therefore, our quality department systematically checks physical and sanitary quality as well as germination. Strict procedures for the control of seeds and plants have therefore been introduced. These consist particularly of tests for variety identification and purity, specific purity, germination and the detection of pathogens. The majority of these analyses are carried out by our team in the GRAINES VOLTZ laboratory, in compliance with the ISTA(1) standard.

(1) ISTA: International Seed Technology Association.



Laboratory team

#### Indicative standards for the germination rate of our precision seeds:

These are minimum values to which GRAINES VOLTZ is committed, depending on the species and seed type.

Types	Precision seeds	Pelleted seeds
Cabbage (white cabbage, red cabbage, Savoy cabbage, cauliflower, broccoli)	90%	-
Carrot (hybrid varieties)	80%	-
Celery	90%	90%
Chicory	90%	92 %
Corn Salad	90%	-
Cucumber	92%	-
Endive (curly and smooth-leaved)	90%	-
Eggplants	90%	-
Fennel	80%	85%
Leek (free-flowering varieties)	85%	90%
Leek (hybrid varieties)	90%	90%
Lettuce	93%	95%
Melon - Charentais varieties	95%	-
Melon - other varieties	90%	-
Onion	90%	_
Parsley	80%	-
Radish	92%	_
Red Beet	90%	-
Spinach	85%	_
Sweet corn	90%	-
Sweet pepper (hybrid varieties) and hot pepper	90%	-
Tomato (hybrid varieties)	92%	-
Watermelon	90%	-
Zucchini	92%	-



Germination cabinet



NB: The above standards are set in accordance with the ISTA(1) guidelines and tolerances. They are valid at the time of delivery. (1) ISTA: International Seed Technology Association.

# **Product types**

**STANDARD SEEDS:** This is seed that generally does not undergo any special processing and is sold by weight and/or per unit, depending on the product.

**PRECISION SEEDS:** Precision seeds undergo additional processing. The seeds are of a uniform size and show high germinability. The seeds are sold per grain.

**FILM-COATED SEEDS:** The film coating is a total application, usually a coloured layer, covering the entire surface of the grain. The original shape of the grain is preserved. Additional constituents can also be included. Film-coating can be identified by the seeds' colour.

**PELLETED SEEDS:** Pelleting changes the shape of the seeds. The grains are coated with a base material. The aim is to give the grains a uniform shape and size to facilitate sowing. Other elements can be added. Pelleted seeds are sold per grain.

**PRE-GERMINATED SEEDS:** Pre-germination is the activation of the germination process in order to obtain faster, more even germination. Pre-germinated seeds are sold per grain. This process is also known as 'priming'.

**Germination:** the germination specifications refer to ISTA processes and are valid at the time of delivery.

**Varietal purity:** the degree of purity of the variety defines the percentage of plants of the respective variety.

Our products are intended for professional vegetable production and comply with EU standards.





Seed treatment machine



Standard seeds and film-coated/pelleted seeds of basil

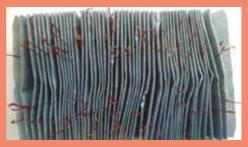


Standard seeds and film-coated seeds of parsley

#### TESTS



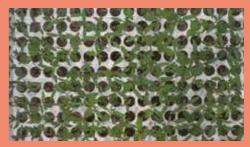
Germination on a Jacobsen table



Germination on folded paper



Germination on smooth paper



Germination

# The product at the heart of our work

## Seeds: a passion

**VOLTZ** MARAICHAGE is a team driven by a passion for the product. Our development department is constantly listening to market trends and, above all, to the new needs of vegetable farmers in terms of disease tolerance and unique products.

Our development team looks for the best varieties and most innovative products worldwide, working together with numerous partners and growers.

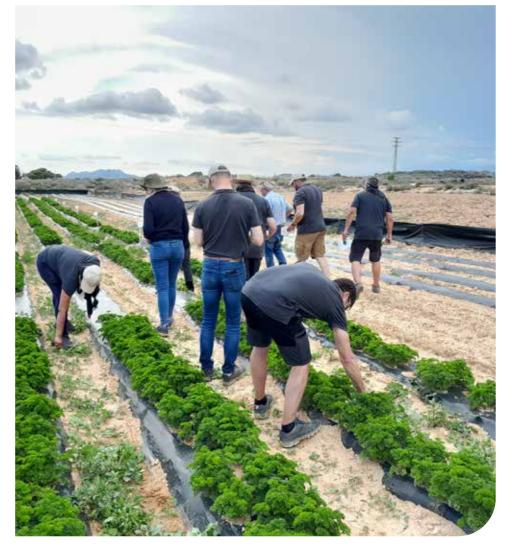


# A team of specialists

At **VOLTZ** MARAICHAGE the set-up and support of the field trials is mostly carried out by your technical and commercial experts. Each of them is responsible for one or more species of which they have good technical and market-related knowledge.









# Varieties that have been tested and approved prior to inclusion in our catalogues

The varieties are added to the **VOLTZ MARAICHAGE** catalogue after they have undergone a series of validation procedures, which are determined by the species. For this purpose, the varieties are tested in our network of partner vegetable farmers in many European countries.











# VOLTZ VERTICAL FARMING a new range to discover



VOLTZ Maraîchage strongly believes that Indoor farming will be part and parcel of future of food production. Building a more sustainable food system with less pesticides, transportation, and water should be a shared purpose. That's how VOLTZ Maraîchage created the brand VOLTZ VERTICAL FARMING, which is dedicated to find the best seeds for Vertical Farmers. Being part of the answer to the world's food security issues is a priority for our family-owned company.













SELECTION

TRANSPARENCY

GERMINATION

COMPLIANCE

HEALTH

**AVAILABILITY** 



# Find us on our e-commerce website\*

Easy and intuitive. With just a few clicks, you can reach our best seed varieties.



Real time stock inventory



Easy and quick purchase



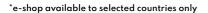
Online tracking orders



Quote and sample request



www.voltz-vertical-farming.com



# BASIL Ocimum basilicum

	_
TSW	1.5 - 1.8 g
SOIL	Loose, quickly warming soils; pH 6.5 to 7.2; <b>cultivation break</b> : at least 3 years
GERMINATION TEMPERATURE	20 °C - 25 °C; minimum 12 °C
CULTIVATION TEMPERATURE	> 20° C
CLIMATE	Growth stops below 12 °C; sensitive to frost; needs warm temperatures
SOWING TIME	May - June (except. for pot all year round)
SOWING DEPTH	Light germinator
SOWING DENSITY: 10 – 12 CM POTS	40 plants per pot
SOWING DENSITY : FIELDS	Open fields: 4 kg/ha (2.5 million to 3 million plants per ha); row spacing: 28 cm, about 100 plants per running metre
SEEDERS	Single grain seeder (Miniair, Gaspardo); sowing in rows (Sembdner); seed bed (Ortomec); drum seeder (Fliersystems)
FERTILISATION	<b>Plant mass</b> : 18 dt/ha first cut, 12dt/ha second cut; <b>setpoint</b> : 100 kg N/ha, 80 kg P2O5/ha; K2O/ha 120 kg
GROWING GUIDE	Requires warm, but susceptible to water logging; irrigation is necessary for germination
CULTIVATION	Open fields: 80 days; greenhouse/pots: 45 days; additional lighting in winter
PESTS	Aphids (Aphidina), snails
DISEASES	Downy mildew, Septoria petroselini, Fusarium, Botrytis
HARVEST	Three cuts in a season are possible; yield: 1kg per m²; harvesting is done by hand or with special machines. Storage temperature for pot cultivation should not be below 12 °C (leaf spot)





## **GENOVESE**



#### **GRAND VERT**

- very homogeneous selection
- good behaviour after cutting large, slightly blistered green leaf fresh cut / industry

Item No.: 058042BS



#### **PLENTY**

- Genovese type with a pleasant anise taste
- high yields, also after multiple harvestsrobust also under difficult cultivation and
- weather conditions
- robust against Fusarium suitable for processing and fresh market

Item No.: 058261NS



#### **ADRIANA**

- compact growing basil for year-round pot cultivation adark green variety, easy to wrap up due

to horizontal leaf position

Item No.: 058256NS



#### LOKI

- new generation Genovese type with tolerance to Peronospora (downy,
- homogeneous product with good behaviour in cold conditions
- good for pot production as well as for fresh cut in tunnel or open field

Item No.: 058253NS Item No.: 058253BS



# **BONAZZA**

- Genovese type with shiny, dark green leaves
- very robust against Fusarium and Botrytis
- long shelf life after cutting, very good handling and transport capabilities
- suitable for processing and fresh market

Item No.: 058257NS



#### **GUSTOSA**

- Genovese type, especially suitable for pot cultivation
- very uniform variety with dark green, dome-shaped leaves
- suitable for year-round cultivation

Item No.: 058079NS Item No.: 058079BS



#### **LUNA**

- very insusceptible to cold
- robust against Fusarium
- high yield and a good shelf life after harvest
- high regeneration capacity, also suitable for multi cuttings

  for fresh market and industry

Item No.: 058260NS



#### **LUCIA**



- for year-round pot cultivation
- flat, slightly dome-shaped leaves
- horizontal leaf position, easy to pack
- very robust and upright
  good post-harvest performance

Item No.: 058259NS



#### **CHIARA**



- slightly dome shaped Genovese type for pot and fresh cut
- attractive dark green colourhorizontal leaf position adapted for cutting and packing
  high yields, also after multiple harvests
  strong against Downy Mildew

Item No.: 058650NG

#### PRODUCTION CALENDAR - For northwest European climatic conditions

VARIETY		Open field	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
GRAND VERT		X												
LOKI		X												
LUNA		Х												
PLENTY		Х												
BONAZZA		Х												
LUCIA	90													
ADRIANA	90													
GUSTOSA	90													
CHIARA	90													

#### PRODUCTION CALENDAR - For southwest European climatic conditions

VARIETY		Open field	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
GRAND VERT		X												
LOKI		X												
LUNA		X												
PLENTY		Х												
BONAZZA		Х												
LUCIA	90													
ADRIANA	90													
GUSTOSA	30													
CHIARA	90													

VARIETY	Organic	Colour	Speed	Leaf habits	Leaf position	Comments	Resistances
GRAND VERT	22	Green	+	Flat	Hanging	Flexible , rustic	-
LOKI	27	Dark green	+	Round	Hanging	Year-round	Peronospora belbahrii (Pbb) HR: Pbb 1, Pbb 3 / IR: Pbb 2, Pbb 4
LUNA		Dark green	+	Flat	Horizontal	Robust	IR: Fusarium
PLENTY		Dark green	++	Flat	Horizontal	Intensive and aromatic / anis flavour	IR: Fusarium
BONAZZA		Dark green	+	Flat / round	Hanging	Shelf life	IR: Fusarium, IR: Botritis
LUCIA		Dark green	+	Flat / round	Horizontal	New type	-
ADRIANA		Dark green	+	Round	Horizontal	Easy to pack	-
GUSTOSA	27	Intense dark green	0	Round	Hanging	Year-round	-
CHIARA		Intensive green	+	Flat / round	Horizontal	New variety	IR: <i>Peronospora belbahrii</i> (Pbb)

## **DIVERSIFICATION**



## **RUBRA**

- compact growth combined with upright plant habit
- flat to slightly dome shaped leaves
- intensive purple colour for fresh market and pot production

Item No.: 058263NS



## **HELIOS**







- lemon basil with fine leaves
- basil and lemon flavour
- fast growing
- for fresh market and pot production

Item No.: 058258NS

- strong, upright plant habithigh uniformity
- attractive deep purple colour
- easy to cut
- for pot production and fresh cut in greenhouse or open field

Item No.: 058654NG Item No.: 058654BG



#### THAI BASIL SITA

- authentic Thai basil, sweet aromatic flavor
- pleasant exotic fragrance for fresh market and pot production

Item No.: 058264NS



#### **ARGOS**



- small leaved basil with remarkable aromatic flavour
- compact, uniform growth
- grows well in pots

Item No.: 058144NS

#### PRODUCTION CALENDAR - For northwest European climatic conditions

VARIETY		Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
RUBRA	90												
HELIOS	90												
PURPLE RAIN	90												
THAI BASIL SITA	90												
ARRGOS													

#### PRODUCTION CALENDAR - For southwest European climatic conditions

VARIETY		Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
RUBRA	90												
HELIOS	90												
PURPLE RAIN	90												
THAI BASIL SITA	90												
ARGOS	90												

VARIETY	Organic	Open field	Colour	Speed	Leaf habits	Leaf position	Comments
RUBRA			Deep purple	0	Slightly dome shaped	Horizontal	Good to blent with green types for pot production
HELIOS		X	Medium green	+	Flat	Horizontal	Combines lemon with basil taste
PURPLE RAIN	227	Х	Shiny deep purple	0	Flat	Horizontal	Attractive eye catcher
THAI BASIL SITA		Х	Dark green with purple stems	0	Flat	Horizontal, open	Aromatic thai basil taste
ARGOS			Medium to dark green	+	Flat	Horizontal, bushy	Bushy, compact type

# CHIVES Allium schoenoprasum

TSW	1.0 - 1.5 g
SOIL	Almost all soils are possible; in very light soils, the root stability is not strong enough; pH 6.0 to 7.5; cultivation break: at least 5 years
GERMINATION TEMPERATURE	18 °C – 25 °C; minimum 5 °C
CULTIVATION TEMPERATURE	17 °C - 24 °C
CLIMATE	Germination time : 10 - 18 days; good growing conditions in Central Europe
SOWING TIME	Open field : March – July Pot : Year round
SOWING DEPTH	2 cm to 2.5 cm; dark germination
SOWING DENSITY: 10 – 12 CM POTS	80 - 100 plants per pot
SOWING DENSITY : FIELDS	8 – 10 kg per ha (7 million to 8 million plants per ha); <b>row spacing</b> : about 25 cm, 200 plants per running metre
YOUNG PLANTS	30 seeds per 4 cm pot
SEEDERS	Single grain seeder (Miniair, Gaspardo); sowing in rows (Sembdner); drum seeder (Fliersystems)
FERTILISATION	Plant mass : 100 dt/ha; setpoint : 180 kg N/ha, 100kg N/ha per cut; 45 kg P2O5/ha; 180 kg K2O/ha
GROWING GUIDE	Irrigation is necessary, but sensitive to water logging; control weeds after each cut; a constant water supply ensures strong roots
CULTIVATION	Open fields : about 80 days; direct sowing in pots : 55 days; forcing: I week
FORCING	Additional lighting for chlorophyll formation; perfect temp. : 22 °C; harvesting the bulbs from November on; store bulbs at -4 °C
PESTS	Onion fly, leek moth
DISEASES	Rust (Puccinia mixta)
HARVEST	Up to three cuts in a season are possible; harvesting is done by hand or special machines









#### DIVONNE

- good regenerative capability
- stable, very vigorous varietywell suited for forcing
- fresh / industry

Item No.: 058102NS



#### **POLYSTAR**

- fast growing, dark green selection
- does not tend to get yellow leaf tips
- very suitable for pot cultivation
- upright, compact growth pot/fresh/industry

Item No.: 058097NS



#### **FITLAU**

- very robust, dark green variety
- ideal for forcing
- performs well in warm Southern Europe/North African conditions
- fresh / industry

Item No.: 058092NS



#### **POLYUP**

- dark green variety, extremely upright and stable
- very high yield, also in the second and third year
- does not tend to get yellow leaf tips
- for fresh market and industry

Item No.: 058267NS



#### **MARLAU F1**

- uniform hybrid with intense dark green colour
- very robust against rust
- suitable for the fresh market and industry
- very high yield
- good for multiple year production

Item No.: 058266NS



#### **POLYREX** (HI 15 110)

- medium-fine, sturdy and very homogeneous
- outstanding new type for pot production, grows strong and upright
- for direct sowing in pots, no recut needed
- strong against yellow tips

fresh / pot production

Item No.: 058275NS



# **POLYVERT**

- attractive dark green colour, very upright growth with a thick stem
- variety multi-purpose
- remains uniform even after several cuts
- ideal for forcing

Item No.: 058095NS Item No.: 058095BS



#### **POLYVIT**

- fine green stem
- suitable for pot and open-field production
- fast growth

Item No.: 058103NS



#### **DOLORES**

- a leading variety, very vigorous and stable variety
- uniform, upright growth
- best medium coarse quality for pots

Item No.: 058213NS



#### PRODUCTION CALENDAR - For northwest European climatic conditions

VARIETY	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
DIVONNE 🚆												
FITLAU												
MARLAU FI												
POLYSTAR 🚆												
POLYUP												
POLYREX 💍												
POLYVERT												
POLYVIT 👸												
DOLORES 👸												

#### PRODUCTION CALENDAR - For southwest European climatic conditions

VARIETY	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
DIVONNE												
FITLAU												
MARLAU FI												
POLYSTAR 👸												
POLYUP												
POLYREX 👸												
POLYVERT												
POLYVIT												
DOLORES												

VARIETY	Organic	Colour	Speed	Leaf thickness	Leaf position	Comments	Resistances
DIVONNE		Medium green	+	Medium	Upright	Good quality for forcing	-
FITLAU		Medium dark green	+	Medium	Upright	Excellent quality for transport	-
MARLAU FI		Intense dark green	++	Medium	Extremely upright	-	Robust against Allium Rust
POLYSTAR		Dark green	++	Medium	Upright	Strong against yellow tips	-
POLYUP		Dark green	++	Coarse	Extremely upright	Highest yield, big leaves	Robust against Allium Rust
POLYREX		Dark green	++	Medium	Extremely upright	New type for pot production	-
POLYVERT	227	Green	+	Medium	Upright	All-rounder	-
POLYVIT		Green	++	Fine	Upright	Fast, early in pots	-
DOLORES		Intense dark green	+	Medium	Upright	Best medium coarse quality for pots	Very robust against yellow leaf tips



# CORIANDER Coriandrum sativum

TSW	3 - 4 g
SOIL	Loose, heat retaining soils, pH 6.5 to 7.2; cultivation break : at least 3 years
GERMINATION TEMPERATURE	20 °C; minimum 10 °C
CULTIVATION TEMPERATURE	16 °C - 20 °C
CLIMATE	Growth stops below 10 °C; sensitive to frost, bolting in the summer
SOWING DEPTH	1 cm; dark germination
SOWING DENSITY: 10 – 12 CM POTS	35 plants per pot
SOWING DENSITY : FIELDS	6 kg per ha (2.5 million to 3 million plants per ha); <b>row spacing</b> : 25 cm, 100 plants per running metre
SEEDERS	Single grain seeder (F.e., Miniair, Gaspardo); sowing in rows (Sembdner); seed bed (Ortomec); drum seeder (Fliersystems)
FERTILISATION	Plant mass : 18 dt/ha; setpoint : 80 - 100 kg N/ha; 80 kg P2O5/ha; 180 kg K2O/ha
GROWING GUIDE	Requires warm conditions, drought stress causes flower induction, but sensitive to water logging; irrigation is necessary for germination
CULTIVATION	Open fields: 85 days; greenhouse/pots: 40 days; additional lighting in the winter
PESTS	Aphids (Aphidina), snails
DISEASES	Pseudomonas, Alternaria dauci
HARVEST	Yield: 1.5 kg/m²; harvesting is done by hand or special machines







# **ATLAS®**

- very dark green variety, upright and robust with high-yield
- slow bolting
  for greenhouse and open field cultivation

Item No.: 058254NS



#### **EAGLE®**

- slow bolting type
- fairly compact plant
- small, dark-green leaves fresh / industry

Item No.: 058112NS



#### **SHANGHAI**



- very compact, remarkable upright type for pot cultivation from August until March
- excellent tastesuitable for fresh cut in hydroponic systems - makes exceptional high yields
- less recommended for open field production

Item No.: 058268NS

VARIETY	Colour	Speed	Leaf thickness	Leaf position	Comments	Resistances
ATLAS®	Intense dark green	++	Large	Upright	Best yield	IR: Pseudomonas
EAGLE®	Dark green	+	Medium	Upright	Compact plant	Slow bolting
SHANGHAI	Intense dark green	-	Fine	Upright	Ideal for pots, upright growing	-

#### PRODUCTION CALENDAR - For northwest European climatic conditions

VARIETY	1	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
ATLAS®													
EAGLE®													
SHANGHAI	90												

#### PRODUCTION CALENDAR - For southwest European climatic conditions

VARIETY	1	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
ATLAS®													
EAGLE®													
SHANGHAI	90												



®registered trademark

#### **DILL** Anethum graveolens

TSW	1-2g
SOIL	Medium heavy soils with high humus levels, pH 6.0 to 7.0; cultivation break: at least 4 years
GERMINATION TEMPERATURE	18 °C – 24 °C; minimum 6 °C
CULTIVATION TEMPERATURE	17 °C - 20 °C
CLIMATE	Growth stops below 10 °C; sensitive to frost
SOWING TIME	March - July
SOWING DEPTH	2 cm; dark germination
SOWING DENSITY : 10 – 12 CM POTS	45 plants per pot
YOUNG PLANTS	7 seeds per 4 cm pot
SOWING DENSITY : FIELDS	8 kg per ha (5 million plants per ha); row spacing : 30 cm
SEEDERS	F.e. Single grain seeder (Miniair, Gaspardo); sowing in rows (Sembdner); seed bed (Ortomec); drum seeder (Fliersystems)
FERTILISATION	<b>Plant mass</b> : 300 dt/ha; <b>setpoint</b> : 80 kg N/ha; 30 kg P2O5/ha; 200 kg K2O/ha; 10 kg Mg/ha
GROWING GUIDE	Irrigation is necessary, starts to bolt quickly during dry conditions; continuous water supply supports leaf growth
CULTIVATION	Open field: 9 weeks; pots: 7 weeks
PESTS	Aphids, nematodes, bugs
DISEASES	Powdery mildew, Rust fungi, Pseudomonas, Fusarium, Itersonilia
HARVEST	Up to four cuts in a season are possible; yield: about 15 - 20 t/ha per cut; harvesting is done by hand or with special machines. Minimal distance of about 6 cm to the bottom must be kept. Storage temperature: 0 - 4 °C with high humidity





# **DIANA**

- a very upright and stable selection
   dark, blue green colour and very leafy
   compact growth habit, especially robust against bolting
- fresh / industry

Item No.: 058613NS



## **DUKAT**

- dark green, late bolting variety which can be harvested over an extended
- suitable for year-round cultivation
   excellent for open field production
   fresh / industry

Item No.: 058013NS



# **HERA**

- very late bolting, upright growth habit with much leaf mass
- suitable for the fresh market and industry performs well in Southern European climates for autumn winter production

Item No.: 058024NS Item No.: 058024BS





# **THALIA**

- all-round variety for all sectors of cultivation
- very dark green, late bolting with high yields
- flexible, uniform and robust fresh / industry

Item No.: 058023NS Item No.: 058023BS



# **LENA**



- very dark green, upright variety suitable for pot cultivation as well as for cutting in spring and autumn roughly feathered

Item No.: 058255NS

#### PRODUCTION CALENDAR - For northwest European climatic conditions

VARIETY	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
DIANA												
DUKAT												
HERA												
THALIA												
LENA 造												

#### PRODUCTION CALENDAR - For southwest European climatic conditions

VARIETY	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
THALIA												
DIANA												
HERA												
DUKAT												
LENA 造												



VARIETY	Organic	Colour	Speed	Uniformity	Leaf thickness	Leaf position	Comments	Resistances
DIANA		Dark green	+	+	Normal	Fine	Robus againt bolting	IR: Itersonilia
DUKAT		Green	0	0	Normal	Fine	Flexible	-
HERA	22	Dark green	++	+	Upright	Fine	Good for autumn production	IR: Itersonilia
THALIA	727	Intense dark green	+	++	Compact	Fine	Good alrounder	-
LENA		Dark green	++	++	Coarse	Extremely upright	Outstanding in pot production	-

sowing I

# PARSLEY Petroselinum crispum (Miller) Nyman ex A. W.

TSW	1-1.5 g
SOIL	Clay and silty sand, pH 6.0 to 7.0; cultivation break : at least 3 years
GERMINATION TEMPERATURE	18 °C – 25 °C; minimum 3 °C
CULTIVATION TEMPERATURE	17 °C - 20 °C
CLIMATE	Avoid high temperatures (>29 °C) that affect the germination; robust against frost
SOWING TIME	February - June
SOWING DEPTH	2 cm; dark germination
SOWING DENSITY: 10 – 12 CM POTS	40 plants per pot
YOUNG PLANTS	10 seeds per 4 cm pot
SOWING DENSITY : FIELDS	4 kg (fresh market) to 9 kg (industry) to per ha; row spacing : 30 cm, about 100 plants per running metre
SEEDERS	Single grain seeder (Miniair, Gaspardo), sowing in rows (Sembdner); seed bed (Ortomec); drum seeder (Fliersystems)
FERTILISATION	<b>Plant mass</b> : 350 dt/ha; <b>setpoint</b> : 150 kg N/ha; 30 kg P2O5/ha; 170 kg K2O/ha; 10 kg Mg/ha
GROWING GUIDE	Irrigation urgently needed to avoid crusting of the soil (primed seed shortens the critical germination phase of 8 days), after germination mech. weeding is necessary
CULTIVATION	Spring: 110 days, second cut: 40 days; summer: 85 days, second cut: 30 days; overwintering: 260 days (drilling in August); greenhouse/pots: 50 days
PESTS	Carrot fly, aphids, caterpillars
DISEASES	Downy mildew, Septoria, Powdery mildew, Pythium, Fusarium, Botrytis
HARVEST	Up to four cuts in a season are possible; yield: about 20 t/ha per cut; harvesting is done by hand or with special machines. Storage temperature: 4 °C with high humidity



Pre-germinated seeds are the result of technological progress that facilitates germination and germinative capacity. This process ensures faster, more uniform emergence, particularly in difficult periods at the start of the season and in summer for direct sowing and in all seasons for clod sowing. As a dry process, these seeds can be kept for around 3 months at 5°C.



# CURLED



#### **AFRODITE**

- dark variety with quick development ideal for year-round pot cultivation
- strong, upright, homogeneous in colour and leaf shape
- long keeping quality in pots because of compact growth

Item No.: 047014NS Item No.: 047014BS



#### LISETTE

- selection of type 'Moss Curled', finely curled, fresh green colour
   very rapid growth in milder climates
   very good results in overwintering
- robust against bolting, very suitable for pot cultivation

Item No.: 047022NS



#### **DARKI**

- very dark selection of type \*Moss Curled\*
- easy to harvest due to the extremely upright leaves, excellent shipper
- suitable for cultivation in pots, for the fresh market and industry
  remarkable for autumn / winter
- production in Southern European climates

Item No.: 047017NS



# **GRÜNE PERLE**

- all-round variety for open field and pot cultivation
- very suitable for overwintering in early spring because of its low tendency to bolt

Item No.: 047003NS Item No.: 047003BS



## **STARLETT**

- excellent suitability for open field and pot cultivation
- heavy, densely filled leaf cushions on strong stems
- robust 'Moss Curled' type with medium rough, curled leaves

  very good shelf life after harvest

Item No.: 047015NS

VARIETY	Organic	Curled / Smooth	Colour	Curliness or leaf size	Yield / Speed	Bolting resistance	Comments
AFRODITE	<i>121</i>	Curled	Dark green	Fine	0		Fast and nicely curled in pots
DARKI		Curled	Intense dark green	Medium	+		Perfect colour, stays compact in pots
GRÜNE PERLE	22	Curled	Green	Medium	+	++	All-rounder
LISETTE		Curled	Green	Medium	++	++	All-rounder
STARLETT		Curled	Dark green	Medium	0	+	Best combination of colour and speed

#### PRODUCTION CALENDAR - For northwest European climatic conditions

VARIETY		Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
AFRODITE	90												
DARKI	90												
GRÜNE PERLE	90												
LISETTE	90												
STARLETT													

#### PRODUCTION CALENDAR - For southwest European climatic conditions

VARIETY	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
AFRODITE												
DARKI												
GRÜNE PERLE												
LISETTE												
STARLETT												

# FLAT



#### GIGANTE D'ITALIA HILMAR **LAICA**

- robust, dark green parsley for cutting intensely aromatic
- large and smooth-leaved, on strong stems
- high yield

Item No.: 047040NS Item No.: 047040BS



- Gigante d'Italia type with large dark green leaves
- for the fresh market and industry
- for highest yields
- good regeneration capacity
- remains homogeneous after several cuts
- IR: Sp. Intermediate resistance to septoria

Item No.: 047042NS Item No.: 047042BS



#### **LAURA**

- excellent selection, flat-leaved variety: very dark green colour, smooth, fine, small leaves
- upright growthsuitable for cutting and pot cultivation
- possible for overwintering in open field in milder climates

Item No.: 047008NS



#### **GIGANTE D'ITALIA**

- standard selection
- uniform productive

Item No.: 047002BS



## GIGANTE D'ITALIA SPLENDID

- for the fresh market and industry
- very homogeneous selection
- medium height and great colour
- very productive

Item No.: 047010BS

# DIVERSIFICATION





## LION

- Gigante d'Italia' type with good durability in fields an ideal combination of large leaves with compact, very stable and upright stems
- suitable for the fresh market and industry
- good field performance.

  HR: Pp. Mildew resistant

Item No.: 047043NS

# **MENUETTE**

- unique variety shape with a parsley taste can be grown in field or in pot leaves like dill

- strong in autumn, long harvest winner of culinary contests

Item No.: 047041NS

VARIETY	Organic	Curled / Smooth	Colour	Curliness or leaf size	Yield / Speed	Bolting resistance	Comments	Resistances
GIGANTE D'ITALIA HILMAR	27	Smooth	Green	Medium	-		All-rounder	-
LAICA	22	Smooth	Dark green	Large	+		Highest yield with large leaves	IR: Septoria
LAURA		Smooth	Intense dark green	Small	++	++	Fast	HR: Downy Mildew
GIGANTE D'ITALIA	<i>22</i>	Smooth	Green	Medium	-		All-rounder	-
SPLENDID	27	Smooth	Green	Medium	+	+	Homogeneous	-
LION		Smooth	Intense dark green	Large	++	0	Perfect combination between yield and self life	HR: Downy Mildew
MENUETTE		Curled	Dark green	Fine	0		Leaves like dill	-

#### PRODUCTION CALENDAR - For northwest European climatic conditions

VADIETY				A -1					c .	0.	N	_
VARIETY	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
GIGANTE D'ITALIA HILMAR												
LAICA												
LAURA	re T											
GIGANTE D'ITALIA												
SPLENDID												
LION												
MENUETTE	Ne -											

#### PRODUCTION CALENDAR - For southwest European climatic conditions

TRODUCTION CALENDAR - For southwest European climatic conditions												
VARIETY	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
GIGANTE D'ITALIA HILMAR												
LAICA												
LAURA												
GIGANTE D'ITALIA												
SPLENDID												
LION												
MENUETTE												

for Northwest European climatic conditions sowing harvesting





# **ROCKET**

TSW	0,5 - 1 g
SOIL	Loamy, rich, well drained soil, pH 6 - 7
GERMINATION TEMPERATURE	15 - 25°C
CULTIVATION TEMPERATURE	15 - 20° C
CLIMATE	Full sun, part shade
SOWING TIME	All year round in greenhouses open field from March till End August
SOWING DEPTH	5 mm
SOWING DENSITY: 10 – 12 CM POTS	20 - 30 plants
SOWING DENSITY : FIELDS	Row spacing approx 25 cm between rows, 100 plants per running meter
FERTILISATION	Approx 125kg N 150 kg P2O5, 100 kg K2O per ha
GROWING GUIDE	Irrigation recommended, too much stress accelerate bolting
CULTIVATION	Harvesting about 4 -7 weeks after sowing, 2 cuts are possible
PESTS	Cabbage looper, flea beetles, aphids
DISEASES	Powdery mildew, bacterial leaf spot
HARVEST	Approx 3 -5 weeks after harvest, depending on needed product

#### **TECHNICAL NOTE**

We are working on the rocket species to bring you greater yield, tolerance to bolting and mildew. Good behavior with regard to these three elements is essential to the success of our varieties.

#### **MONTANA**

- robust, dark green variety with finely feathered leaves
- intense flavour

Item No.: 054620NS

# ROCKET (Eruca vesicaria subsp sativa)



#### **VENETIA**

- selection of type "Eruca sativa" with the serrated leaf shape of wild rocket very quick growth
- especially recommended for late autumn, winter and spring cultivation

Item No.: 054621NS

# WILD ROCKET (Diplotaxis tenuifolia)



## **IRIS**

- quick growing Wild Rocket type attractive green leaves, with high yield
- for all year production
- strong against Mildew

Item No.: 054631NG Item No.: 054631BG



## **TOSCANA**

- predestined for summer cultivation due to its late flowering
- considerably longer keeping quality on the field with uniform growth dark green, serrated leaf with a
- slightly broader blade and therefore a higher yield per unit area

Item No.: 054619NS



#### **ROMA**

robust, dark green type with strongly toothed leaves

Item No.: 054641BS

# GARDEN CRESS Lepidium sativum

TSW	1.5 - 2.5 g
SOIL	Sown on paper or coconut mats, or substrate
GERMINATION TEMPERATURE	>20°C
CULTIVATION TEMPERATURE	18 - 23°C
SOWING TIME	All year
SOWING DEPTH	Uncovered
SOWING DENSITY: 10 – 12 CM POTS	Very dense
SOWING DENSITY : FIELDS	60 - 80 g / m²
FERTILISATION	Not needed
GROWING GUIDE	Cultivation time approx l - 2 weeks
CULTIVATION	In pots or small bowls in greenhouses/tunnels
PESTS	Alternaria, Botrytis
DISEASES	Botrytis, Alternaria
HARVEST	Product sold directly in pots, or hand cut

# CRESSON SIMPLE LEAVED



#### **CRESSO**

- common cress, germinates very fast and uniformbest for production in cress trays
- all year-round production

Item No.: 029003NS Item No.: 029003BS

# CRESSO BROAD LEAVED CRESS



# **PRESTO**

- quick, uniform growing cress with broad leaves
   suitable for cut, keeps longer fresh
   fresh, slightly spicy taste
   all year-round production

- stable and upright

Item No.: 029006NS



# **ADDITIONAL HERBS**

BORAGE BLU	BORAGE BLUE Borago officinalis				
TSW	15 - 30 g				
Germination temperature	>22°C				
Cultivation temperature	20°C				
Sowing	Open field: April - June Seed rate (g/100m²): 500 150 g per 1000 pots				
Density	Row/plant Spacing (cm): 30/20 - 25 Plant per pot (10-12 cm): 20				
Advice	Half-shade or full sun exposure				
Harvest	Flowers and leaves. May to October				
Use	In salads, cooked like spinach, as an infusion, nice as edible flower				

- public	
7	
	****

# **BORAGE BLUE**

height: 30 - 50cm fleshy and oval leaves blue-violet flowers

best for sunny, open exposure

annual

Item No.: 058071NS Item No.: 058071BS



#### CHERVIL Anthriscus cerefolium (L.) Hoffm. TSW 2 - 2.5 g Germination 18-22°C - Light germinator temperature Cultivation 20°C temperature Open field: March - April Seed rate (g/100m²): 150 50 g per 1000 plants Direct sowing: 5 kg per ha, 2 - 3 Sowing $2\,\mathrm{cm}$ in a row/plant Spacing (cm): $20\,$ Density Plant per pot (10-12 cm): 35-40 Advice Half-shade exposure Harvest Leaves before flowering Aromatic, herb, for soups and Use



#### **CHERVIL FRISE FIN**

height: 20 - 40 cm green curly foliage very fragrant

good for pod production as well as

for open field annual

Item No.: 058081NS Item No.: 058081BS



#### **CHERVIL MASSA**

height: 30-40 cm

flat and dark leaves, intense flavour

robust against bolting winter type, good behaviour in cold

conditions

uniform, high yield

annual

Item No.: 058080NS

CHINESE CHIVES Allium tuberosum				
TSW	3 g			
Germination temperature	15 - 25° C			
Cultivation temperature	17 - 24°C			
Sowing	Possible all year round. 40 to 60 g per 1000 cups 6 - 8 kg / ha are for direct seeding.			
Density	10-15 x 25-35 cm.			
Advice	Sunny exposure, tolerates some shade.			
Harvest	Leaves. Be sure to cut regularly before flowering, to encourage regrowth.			
Use	Aromatic			



#### **SHIVA**

mild garlic taste

flat, dark-green leaves about 30 cm long good resistance to rust, mildew and yellow tips

can be forced in winter, biennial

Item No.: 058265NS

FENNEL Foeniculum vulgare Miller					
TSW	4-6 g				
Germination temperature	20-22°C				
Sowing	Seed rate (g/100m²): 40 - 60 g Open field: March - June Direct sowing: 40g / 100m² 10g for 1000 plants 20g for 1000 pots				
Density	Row/plant Spacing (cm): 40 Plant per Pot (10-12 cm): 25				
Harvest	Yellow stems and leaves, seeds.				
Use	Cooking, decoration, infusion				



# FENNEL COMMON (BITTER)

- height: 80 150 cmround, hairy green leavesintense flavour
- annual

Item No.: 058125NS Item No.: 058125BS

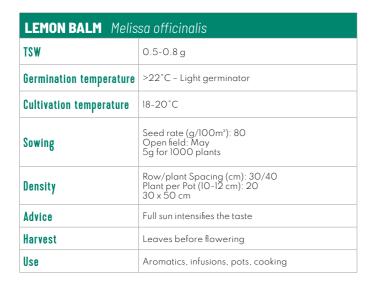
HYSSOP Hysopus officinalis				
TSW	0.9 - 1.2 g			
Germination temperature	18-22°C - Light germinator			
Cultivation temperature	16°C			
Sowing	Seed rate (g/100m²): 80 Open field: March-April			
Density	Row/plant Spacing (cm): 50 - 30 cm Plant per pot (10-12 cm): 25			
Advice	Good for sunny places. Flowers attract bees and insects			
Harvest	Harvest leaves, before blooming starts			
Use	Infusion, syrup, essential oil			



# **HYSSOP**

- height: 60 100 cm
- small, dark green leaves
- biennial

Item No.: 058128NS Item No.: 058128BS





#### **LEMON BALM**

- height: 40-60 cmoval green leaf, toothed and hairy
- lemon flavour
- very melliferous plant
- biennial

Item No.: 058145NS Item No.: 058145BS



LOVAGE Levisticum	LOVAGE Levisticum officinalis				
TSW	2-5 g				
Germination temperature	20°C				
Cultivation temperature	18°C				
Sowing	Seed rate (g/100m²): 80 Open field: April-May direct sowing 50 g for 1000 pots				
Density	Row/plant spacing (cm): 50/4 - 50 Plant per Pot (10-12 cm): 20				
Advice	Half shade or full sun exposure.				
Harvest	Leaves, stems.				
Use	Aromatics, in salads, infusions.				



## **LOVAGE**

- aromatic herb used in salads, infusions and culinary preparations
- height: approx. 150 cm
- fine leaves
- biennial

Item No.: 058005NS Item No.: 058005BS

MARJORAM Origanum majorana			
WZT	0,2 - 0,3 g		
Germination temperature	15 - 20 °C		
Cultivation temperature	17 - 20°C		
Sowing	April to May for direct sowing in open field, avoid frost Light germinator 6 - 10 kg seeds/ ha 50 g / are for direct sowing, pH 6 - 7 Fertilizer: 98 kg N, 26 kg P2O5, 109 kg K2O, 5,5 kg MgO		
Density	20 x 30 cm		
Advice	Full sun exposure. Dry, alkaline soil.		
Harvest	1-3 harvests, cut 5 cm above soil, to push regrowth. For essential oil production, harvest plants when fully blooming.		
Use	Aromatics, infusions, essential oils. leaves		



# **MARJORAM MARCELKA**

- medium strong growth medium green stems
- oval leaves, medium grey green
- white flowering
   high content of essential oil- and cis-Sabinenhydrat

Item No.: 058127NS

MINT Mentha		
TSW	0.05 g	
Germination temperature	20-22°C – Light germinator	
Cultivation temperature	20°C	
Sowing	Seed rate (g/100m²): 50 Open field: May 1g for 1000 plants	
Density	Row/plant spacing (cm): 30/30 Plant per pot (10-12 cm): 35	
Advice	Medium sun exposure. Moist, well-drained soil	
Harvest	Leaves	
Use	Aromatic, syrup, salad, drink, decoration, infusion	



# **MINT SPICATA**

- Mentha spicata L.a refreshing fragrance with a spicy aftertaste
- height: 30-50 cm
- perennial

Item No.: 058151NS Item No.: 058151BS



#### MINT PEPPERMINT

- Mentha piperataa bergamot-scented varietyheight: 40 cm
- perennial

Item No.: 058150NS

OREGANO (	<b>D</b> Origanum vulgare		
W2T	0.1 g		
Germination temperature	20°C - Light germinator		
Cultivation temperature	20°C		
Sowing	Seed rate (g/100m²): 40 Open field: April 1g for 1000 plants 3g for 1000 pots		
Density	Row/plant spacing (cm): 25/25 Plant per pot (10-12 cm): 30		
Advice	Full sun exposure. Rich, dry, alkaline soil.		
Harvest	Young leaves before flowering.		
Use	Aromatics, infusions, essential oils		



#### **OREGANO GREEK**

- oval, green leaveswhite floweringbiennial, but sensitive to frost

Item No.: 058156NS Item No.: 058156BS



## **OREGANO**

- height: 30 40 cm
- very aromatic
- good winter hardiness
  purple flowering
- biennial

Item No.: 058155NS Item No.: 058155BS

WINTER PURSLANE	Claytonia perfolata		
W2T	0.5 g		
Germination temperature	10 - 15°C		
Cultivation temperature	10 - 20°C		
Sowing	Sowing density in greenhouses approx. 6 cm between the rows, 1cm in rows. Planting: 4 cm pots in 10 x 15 cm distance		
Density	10 to 15 cm x 25 to 30 cm		
Advice	Cut leaves before blooming		
Harvest	40 to 90 days after sowing		
Use	Raw in salads or cooked like spinach		



# **CLAYTONE DE CUBA**

- salad vegetable, harvest in winter for cultivation in open fields, boxes or unheated greenhouse
   greenhouse, similar to corn salad

grows again after the first cut

Item No.: 025500NS

SUMMER PURSLANE Portulaca oleracea sativa			
TSW	0.5 - 0.7 g		
Germination temperature	18 - 25°C pH 6 - 7		
Cultivation temperature	15 - 25°C		
Sowing	From January, in the greenhouse until August 5 kg/ha 25-50 kg/ha as baby leaves Light germinator		
Density	12 to 15 cm x 20 to 25 cm		
Advice	Store harvested plants at 0 - 1°C with high humidity.		
Use	Salad, in omelet, as a condiment		



# **PURSLANE**

attractive selection with dark green leaves

Item No.: 052502NS

ROSEMARY Rosmarinus officinalis			
TSW	0.7 - 1.3 g		
Germination temperature	18-22°C		
Cultivation temperature	18°C		
Sowing	Seed rate (g/100m²): Open field: May 10g for 1000 plants		
Density	Row/plant spacing (cm): 40/30		
Advice	Protect plants in extreme cold. Pinch the plant once or twice for better branching		
Harvest	Preferably leaves and twigs before flowering		
Use	Aromatics, essential oils, infusions		



#### **ROSEMARY**

- fairly fine green foliage
- blooms rather late
- height: 60 100 cm biennial

Item No.: 058175NS Item No.: 058175BS

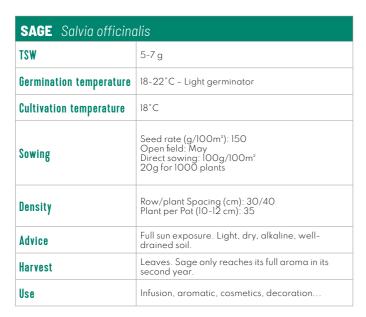
RUSSIAN TARRAGON Artemisa dracunulus			
TSW	0.2 g		
Germination temperature	18-20°C - Light germinator		
Cultivation temperature	18°C		
Sowing	Seed rate (g/100m²): 50 Open field: March-April		
Density	Row/plant spacing (cm): 50/50 Plant per pot (10-12 cm): 20		
Advice	Sunny exposure, perennial, but sensitive to frost.		
Harvest	Pinch the plant 1 or 2 times for better branching and later flowering. Pick young leaves.		
Use	Aromatic, vinegar, infusion		



#### **RUSSIAN TARRAGON**

- more productive, robust and vigorous, but less aromatic than French tarragon
- height: 90 cm
- biennial

Item No.: 058124NS Item No.: 058124BS





# **SAGE CERES**

- thick avant green
- very fragrant height: 30-35 cm
- good for fresh cut and pot production hairy leaves, 5 cm long, 1.5 cm wide, high content of essential oils
- biennial

**Item No.:** 058271NS Item No.: 058271BS



SORREL		
TSW	0.8 - 1 g	
Germination temperature	16-22°C	
Cultivation temperature	8-15°C	
Sowing	Seed rate (g/100m²): 200 Open field: March-May 25g for 1000 plants	
Density	Row/plant spacing (cm): 25/10 Plant per pot (10-12 cm): 25 30 x 50 cm	
Advice	Moist, well-drained soil. Rich in iron.	
Harvest	Young leaves	
Use	Salad, cataplasm, culinary preparation, infusion	



## **SORREL DE BELLEVILLE**

- Rumex acetosa var. hortensis

- slow to bolt
  height: 20 40 cm
  fresh and aromatic flavour
- biennial

Item No.: 058160NS



# **SORREL RED SCARLET**

- Rumex sanguineus
  optimal harvest 4 weeks after sowing
  good for microgreen and babyleaf production
  height: 20 30 cm
  green leaves with deep red veins
  fast growth
  hiennial

- biennial

Item No.: 039527BS



SUMMER SAVORY Satureja hortensis			
TSW	0.5 - 0.8 g		
Germination temperature	20-25°C - Light germinator		
Cultivation temperature	18°C		
Sowing	Seed rate (g/100m²): 100 Open field: April-June 5 g per 1000 plants		
Density	Row/plant spacing (cm): 20 - 30/25 Plant per pot (10-12 cm): 30 25 x 50 cm		
Advice	Full sun exposure		
Harvest	Leaves when flower buds appear and flowering tops		
Use	Aromatic, infusion, antiseptic		



#### SUMMER SAVORY COMPACT

remarkable, compact growth, ideal for pot cultivation annual

Item No.: 058270NS



#### **SUMMER SAVORY**

- compact plant
- white-mauve flowers in summer
- less bitter flavour than perennial savory
- height: 30-50 cm
- annual

Item No.: 058185NS Item No.: 058185BS



#### WINTER SAVORY VIVACE (SATUREJA MONTANA)

- very compact growth, well-scented plant
- good for pot production and fresh market height: 25 35 cm
- cut before plants start flowering
- excellent taste, good for seasoning beans, pickling cucumbers our soups
- biannual

Item No.: 058186NS Item No.: 058186BS





#### **THYME WINTER**

- Thymus vulgaris
- height: 30 cm
- very strong taste
- ideal variety for the fresh market medium-green colour, late flowering
- red underside of leaves, compact
- biennial

Item No.: 058195NS Item No.: 058195BS



## **THYME SERPOLET**

- height: approx. 20 cm
- strong aroma
- wilder than Thymus Vulgaris
- tolerant to cold conditions
- biennial

Item No.: 058196NS

# RESISTANCES

The relationship between a plant and a pest is very complex. The terms that describe the reaction of a plant variety to a pest are determined by tests with known and characterized biotypes, pathotypes, races or strains of the pest in question. In practice however, the ability of a pest to cause disease in or damage to a plant depends on environmental conditions, the properties of the organism itself and the capacity of the plant to defend itself. Plant varieties within a species can differ in their ability to defend themselves. Under different conditions, such as age of the plant, pest pressure and degree of virulence or adverse environmental conditions, the interaction between the same plant variety and pest may have different outcomes. Pests are known to develop and form new biotypes, pathotypes, races or strains that can cause disease in or damage to plants that remain unaffected by the original form of the pest.

**IMMUNITY** is when a plant is not subject to attack or infection by a specified pest.

**RESISTANCE** is the ability of a plant variety to restrict the growth and/or development of a specified pest and/or the damage it causes when compared to susceptible plant varieties under similar environmental conditions and pest pressure. Resistant varieties may exhibit some disease symptoms or damage under heavy pest pressure.

Two levels of resistance are defined.

**HIGH RESISTANCE (HR)** plant varieties that highly restrict the growth and/or development of the specified pest and/or the damage it causes under normal pest pressure when compared to susceptible varieties. These plant varieties may, however, exhibit some symptoms or damage under heavy pest pressure.

INTERMEDIATE RESISTANCE (IR) plant varieties that restrict the growth and/or development of the specified pest and/or the damage it causes but may exhibit a greater range of symptoms or damage compared to high resistant varieties. Intermediate resistant plant varieties will still show less severe symptoms or damage than susceptible plant varieties when grown under similar environmental conditions and/or pest pressure.

**SUSCEPTIBILITY** Is the inability of a plant variety to restrict the growth and/or development of a specified pest.

#### Note

The resistances specified in the catalogue are based on the current level of knowledge at the time of printing. A break of resistances by the respective plant pathogens, however, cannot be excluded.

#### BASIL

Pbb Peronospora Belbahrii Fob Fusarium oxysporum

#### **PARSLEY**

Pp Plasmopara petroselini Sp Septoria petroselini

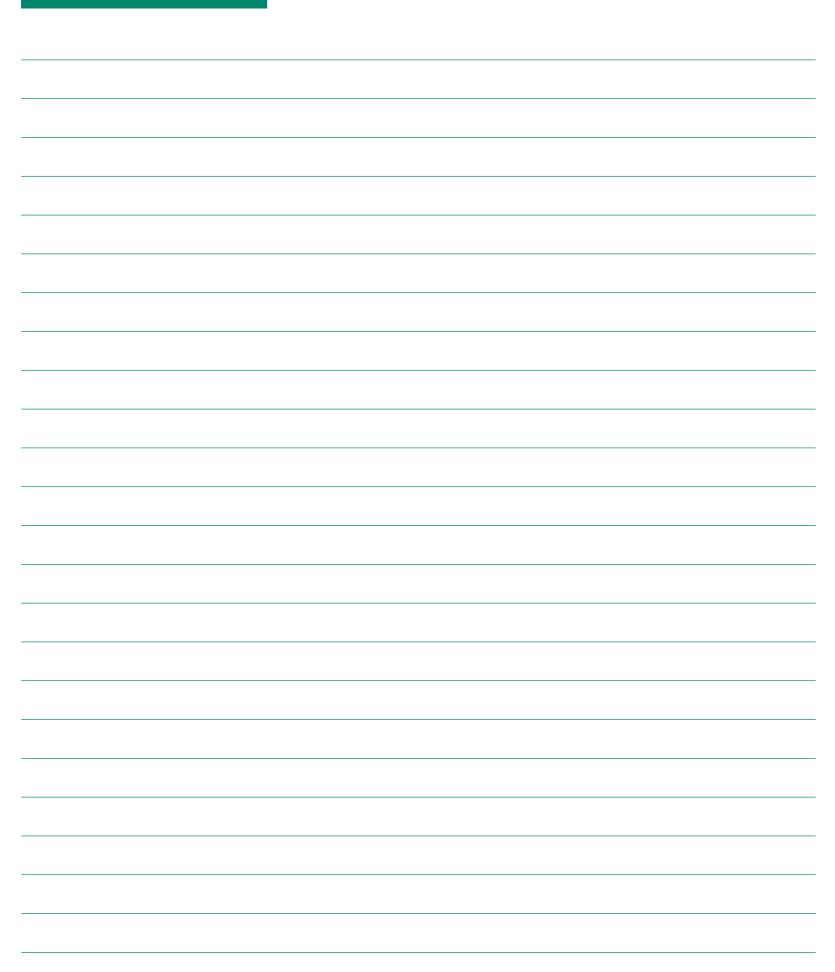
#### DILL

IP Itersonilia perplexans

Abbreviation	Pathogen	English name	Scientific name	Species affected
IP	Fungus	ltersonilia	Itersonilia perplexans	Dill
Fob	Fungus	Fusarium	Fusarium oxysporum basilici	Basil
Pbb	Fungus	Downy mildew	Peronopsora Belbahrii	Basil
Рр	Fungus	Downy mildew	Plasmopara petroselini	Parsley
Sp	Fungus	Septoria	Septoria petroselini	Parsley



# NOTES





#### 1. Preamble

These terms of sale, in accordance with professional regulations and national and international practices, explicitly apply, unless there are specific agreements, to all our sales, and in particular to sales made to horticulturists, market gardeners, vegetable growers, seedling growers, nurserymen, conservationists, processors, local authorities, groups, dealers, landscape architects, golf courses, etc. The act of placing an order implies the acceptance of the terms of sale shown in our catalogue or in any other commercial document from our Company.
Prior information regarding possible risks of certain vegetables for your

health.

In accordance with article L. 1338-3 of the Erench Public Health Code, all In accordance with article L. 1338-3 of the French Public Health Code, all distributors or vendors of vegetables likely to harm human health are obliged to inform the purchaser, prior to all sales, of any risks to human health and, if necessary, means of prevention. Certain vegetables, explicitly listed in the annex of the decree from 4 September 2020, may potentially cause food poisoning when consumed, respiratory allergies, mucocutaneous reactions or unusual skin irritations when exposed to the sun. These risks, precautions and/or measures to be taken if needed, are presented in the following document: https://www.legifrance.govv.fr/jorf/id/JORFTEXT000042325453.

By accepting the present sales terms, the purchaser acknowledges having been duly informed, prior to the sales, of any health risks possibly linked to the purchasing of the aforementioned vegetables.

#### 2. Prices

The prices are those which are determined by our price lists valid on the date of the order. They are understood to be exclusive of tax and of packaging and transport costs.

and transport costs.

They may be amended without prior notification at any time and are established subject to any major changes in the economic conditions.

The prices given for the various products apply when these are ordered in one individual order and per delivery.

The price given in a column applies as from the quantity shown at the top

of that column.

of that column.
The minimum value per order line is 5.-€. In case of a lower value than 5.-€ caused by ordering a small quantity, the minimum fee of 5.-€ will be

charged. We deliver in the most economical packaging available at the time of

delivery.

In the event of an order in specific packaging, an additional charge may be agreed per packaging for its manufacture.

#### 3. Transport and packaging costs

For every order, we will invoice, in addition to the goods, a fixed sum corresponding to the costs of preparation and shipment of the seeds, in accordance with our valid price lists.

#### 4. Orders

Orders are carried out as far as it is possible to do so.

Deliveries will be made depending on supplies and availabilities. They may

bein full or in port.

In the event of an insufficient crop or no crop at all, due to weather disruptions and any kind of cultivation incidents, a partial or total reduction will be applied to the order

applied to the order.

No compensation may be claimed by the purchaser as a result.

The transactions which our Sales Force deals with do not commit us until after confirmation by our Company via an order acknowledgement (ARC

We can only make the delivery if the purchaser is up to date in terms of all his/ her debts to the Company, whatever the cause of these may be. The lead time is given for information purposes and without any guarantee.

#### 5. Order cancellation

Any cancellation, in full or in part, of an order for seedlings on the part of the customer less than 6 weeks before delivery leads ipso jure to a compensation payment set at 50% of the value of the cancelled order, without Graines VOLTZ needing to provide proof that it has suffered a loss due to this cancellation. However, if the products involved in the cancelled order cannot be sold, Graines VOLTZ reserves the right to the option of demanding full compensation for the loss suffered.

#### 6. Shipment / delivery and risks

Our goods are transported at the recipient's own risk, whatever mode of transport is invoiced. They are carefully examined before being packed and handed over to the haulier, who will have issued us with a receipt for the shipment.

We ask our customers to:

unpack and check the contents of the shipment before confirming accep-- unpack and check the contents of the snipment before confirming acceptance from the haulier, especially when this involves young seedlings. We remind them that they must only accept their parcels after making sure that they are in good condition, that their weight corresponds properly to the one notified and that the seals are completely intact.

- write any justified reservations on the delivery note, transport damage, loss, anything missing or delays, etc. These reservations must be confirmed within 48 hours to the haulier, with Acknowledgement of Receipt, in order to get compensation, and a copy must be sent to aux Company.

within 48 hours to the haulier, with Acknowledgement of Receipt, in order to get compensation, and a copy must be sent to our Company. The purchaser must specify and justify the nature of his/her complaint, reservation or challenge, and also describe the products which were the subject of this complaint, reservation or challenge, in terms of quantity, quality and price. The purchaser must provide all evidence as to the actual existence of the defects observed. Graines VOLTZ reserves the right to carry out any investigation or verification on site, either directly or through an authorised agent. As a result, the purchaser is obliged to keep the products involved and must give Graines VOLTZ or its authorised agent every assistance in carrying out the above-mentioned investigations and verifications.

#### 7. Payments

All payments are to be sent to the head office in Colmar. No discount is given for advance payment. Our payment terms are normally 30 days. The due that advance payment. Our payment terms are infamiliary so days. The state date is shown on every invoice. In the event of the due date being exceeded, delay penalties are due, without any reminder being needed, at the ECB interest rate with a 10 point increase. Moreover, for any late payment, as of right, and with no prior notification required, an indemnity will be imposed for collection charges at a flat rate amount of  $40 \in$ . This indemnity may be increased if the collection charges exceed the flat rate, upon presentation of decumentary proof

documentary proof. Customers who do not adhere to the scheduled payment terms, or who have in the past been the subject of collection proceedings, will only receive deliveries, after their account has been settled, against payment at the time of the order of 50% or of the total amount.

Failure to pay after the due date, regardless of whether it is total or partial,

will result in a penalty, as of right, with the application of a fixed indemnity of 15% on the amount of the unpaid sum.

The bank and debt collection costs arising from an extension of the due date shall be borne by the customer. Non-payment of our invoices shall itself lead to formal notice being given.

In the event of staggered payment which our departments have accepted in advance, the failure to settle one due payment immediately makes the whole debt due for payment. Finally, in the event of delay in payment, we shall be authorised to cancel ongoing contracts and orders without prejudicing any other course of action. This shall mean that we are released from all our undertakings. undertakings

#### 8. New customers

People with whom we do not have any commercial relationship are requested to accompany their first order with their Siret or VAT number and payment equal to the amount of its value or to authorise us to make the shipment under cash on delivery terms or else to sign a direct debit payment form

#### 9. Repackaging by the purchaser

If our customer intends to replace the original packaging of the goods we delivered to him/her, by dint of law no. 64-1360 of 31 December 1964 on trademarks, he/she does not have the right to use our trademark for the repackaged products. This repackaging results in complete release from any liability as far as Graines VOLTZ is concerned.

#### 10. Conditions of use of the products / liability

Use, by the purchaser, of the products is restricted to the production of a sin-ale commercial crop. Production excludes any reproduction of seeds and any vegetative propagation. Unless there is any contrary legislative provision, any use of the products – including that of parental lines which may fortuitously be present amongst the latter – for research, selection or molecular or genetic characterisation purposes is strictly forbidden. In the event of resale of the products to a third party, the purchaser shall be obliged to inform the third parties of the obligations described above. Any failure to abide by the above-mentioned restrictions of use shall be the subject of legal proceedings against the purchaser.
Graines VOLTZ restricts the use of all products solely to the uses and cate

gories of uses for which they have been authorised. In other words, it forbids any use which is not explicitly indicated on the label; the Company does not accept any lability in the event of a product being used outside the regulatory framework of the law and that for approval.

Our products may not be sold on for export without the seller's explicit authorisation.

#### 11. Protected varieties or products

Some varieties which we sell have been the subject of a patent, brand or Some varieties which we sell have been the subject of a patent, brand or trademark registration, one which is regularly renewed, and the purchaser cannot acquire any property rights on these varieties by usage or by making a claim. He/she undertakes to inform Graines VOLTZ immediately, by any means possible, of any infringement of its property rights on the patents or trademarks, as soon as he/she becomes aware of this, and in this respect must fully cooperate in the defence of the rights of Graines VOLTZ against anv infrinaements.

The reproduction of protected varieties or the use of registered commercial trade names or trademarks is forbidden, unless there is written authorisation by Graines VOLTZ.

The purchaser shall authorise and cooperate with any inspections by Graines VOLTZ with the aim of checking any hindrances to the rights of Graines VOLTZ. To this end, he/she authorises Graines VOLTZ, or any person appointed by the latter, to have direct access to his/her own infrastructures that is in particular to greenhouses, administration buildings, etc., along with those of third parties used under the responsibility of the purchaser.

The purchaser must ensure that any person handling or receiving the products complies with the obligations laid down above, so that the rights of Graines VOLTZ are respected in every way.

#### 12. Claim periods / product conformity / warranties

Any claim, other than one which is specific to young seedlings, which involves external appearance and species purity must be made within 15 days of the receipt of the goods.

No warranty claim in respect of these provisions can be made by the purchaser for defects which appear:

- 50 days after delivery of the products to the purchaser when the defects in the purchaser when the defects which appears.

involve germination capacity.

- within the normal sowing and inspection timescales immediately subsequent to delivery, when the defects involve the authenticity of the seed, its varietal purity and its species purity.

Varietia printy and its species purity.

For young seedlings, the goods may be approved on receipt and claims are to be made to us within 48 hours. Once these timescales have been exceeded, the shipments shall be deemed to have been accepted.

If the conditions defined above are not adhered to, acceptance will be deemed to have been without reservations and the liability of Graines VOLTZ for any defect of conformity of the products may no longer be

Considering the nature of the products sold, the seller's liability, in the event of errors or defects which are acknowledged or established, may not under any circumstances, and in particular in terms of authenticity, varietal purity, any circumstances, and in particular in terms of authenticity, varietal purity, species purity or germination capacity, of resistance conformity, of resistance to strains or races, of diseases unknown as of now and of notified tolerances, exceed the amount of the supply of the delivered item, including the proven costs arising from returning the goods. In order to guarantee the quality as indicated above, the purchaser is forbidden to grade, calibrate, coat or treat the products supplied in whatever way himself, or to have this carried out they this portly.

treat the products supplied in whatever way himself, or to nave this carried out by a third party.

We will carefully examine any claim which might be made against us as a result of an error on our part and, if applicable, we will not refuse to replace or reimburse all or part of the offending goods.

The purchaser is also aware that the illustrations, catalogues or other descriptions of Graines VOLTZ relating to the quality, weight and measurements of the products are as far as possible in accordance with the tests and experience of Graines VOLTZ. However, these documents cannot under any

circumstances involve liability in the event of different results.

The purchaser is also aware that the products are not suitable for human or animal consumption.

#### 13. Terms for return

Any product return must be the subject of a formal agreement between the seller and the purchaser. Any return request must be made within a period of eight days after shipment and the physical return of the goods made within 8 days ofter this request. Only goods returned with their original packaging intact shall be the subject of a credit note, which however shall not exceed 60% of the initial value. Any product returned without this agreement shall be kept at the disposal of the purchaser and shall not give rise to the issue

of any credit note. The costs and risks of the return are always borne by the purchaser. No return of young seedlings is accepted

#### 14. Growing trays

Growing trays and "rigid" seedling containers are and remain at all times the property of Graines VOLTZ and cannot be used by third parties without the prior written agreement of Graines VOLTZ. Customers must store the trays in a clean place and keep them available for Graines VOLTZ who will provide for their return to the production centre. A penalty of 5.00 euros per tray shall be applied if they are not returned.

A penalty of 10.00 euros per tray shall be applied in the event of use by

a third party without the written agreement of Graines VOLTZ and the boxes will have to be returned to the Graines VOLTZ logistics centres at the customer's expense.

#### 15. Colour illustrations

The colour photos shown in our catalogues were taken in favourable growing conditions and identical results cannot necessarily be guaranteed. In some cases, they cannot give a 100% accurate reproduction of the plant due

bonne cases, may cannot give a 100 to accorde reproduction of the plant due to printing conditions. Plant colours, shades and cycles are given for information purposes and are not contractual.

#### 16. Cases of force majeure

Orders will be carried out except for cases of force majeure. The following are deemed to be cases of force majeure, but this is not an exhaustive list: acts of war, strikes, fires and accidents in any of the companies involved in the production and distribution of the products and seedlings.

#### 17. Hidden defects

Hidden defects for which the warranty may be implemented must exist at

Induced defects of which the warrainty lady be implemented misst exist at the time of the transfer of risks. The purchaser must provide any evidence as to the actual truth and existence of the defects observed prior to the transfer of risks.

Graines VOLTZ reserves the right to carry out any investigation or verification on site, either directly or through an authorised agent. From that point on, the purchaser must give Graines VOLTZ or its authorised agent every assistance in carrying out the above-mentioned investigations and/ or verifications

or verifications.

No warranty action in respect of these provisions may be undertaken by the purchaser for defects which appear after the planting of the products, if the purchaser is not able to prove that he/she acquired the products involved in a proper manner by providing the invoices and/or certificates issued by Graines VOLTZ at the time of the sale.

If these conditions are not adhered to, it will no longer be possible to implement the warranty due as a result of the hidden defects in the products. If it is established that the products supplied are defective, they may be the subject of a return or reimbursement, with the agreement of Graines VOLTZ. In any case, Graines VOLTZ can only accept liability under the terms of the warranty for hidden defects under the conditions defined above, if the purchaser has used the products in a normal way, has not modified them in any way whotsoever and has stored, conserved and handled them so as to ensure they are kept in a good state of preservation.

#### 18. Reservation of title clause

We reserve title to the goods supplied until the full price has been paid. In this respect, the handover of bills of exchange or of any bond which creates an obligation to pay do not constitute payments under the terms of this

provision.

With the permission of the supplier, within the framework of the normal running of his/her business, the purchaser is authorised to resell the goods supplied. However, he/she may not pledge them or transfer his/her ownership as a guarantee. In the event of resale, in doing so he/she transfers to us all the accounts receivable arising from his/her profit from the resale to the third party purchaser. The authorisation to resell is automatically withdrawn in the event of regret heir a storned. In the event of rayment heirs at sonned in the event of rayment heirs at sonned in the event of rayment heirs at sonned in the event of rayment heirs. event of payment being stopped. In the event of a seizure or any other action by a third party, the purchaser is obliged to inform us about this immediately. In spite of the application of this reservation of title clause, the purchaser shall bear the cost of the risks in the event of loss or destruction of the goods as from the time of their delivery. He/she shall also bear the costs of insurance

#### 19. Results

As the results obtained do not just depend on the product and its quality, but also on factors which are difficult or impossible to evaluate or foresee and which may vary, in particular depending on the regions, environment, agronomic and atmospheric conditions, on the technicians and on the operations involved in cultivation, the advice and suggestions are only given purely for information purposes and cannot as a result entail a crop guarantee.

#### 20. Personal Data Protection

Customer-specific personal data which is gathered and kept as part of orders made, is solely used for managing orders, deliveries and billing. Graines Voltz reserves the possibility of using the customer-provided data for commercial means, only if the latter accepted when initially giving these

details. However, it may, subject to stricter confidentiality rules hereto applicable, be shared within our group, with our contractual partners, service providers and sub-contractors for the same usage, as well as legally-authorised administrative and judicial authorities. This information can be transferred towards a country outside the European Union with an equivalent protection level. In compliance with the law N°78/17 from January 6, 1978 relating to information, you are informed that you have the right to question, access, rectify and a right to oppose, for a legitimate reason relating to your personal data, by writing to the following address: Graines Voltz SA, 1 rue Edouard Branly 68000 Colmar to the attention of the delegate for data protection.

#### 21. Assignment of jurisdiction

the event of any dispute, French law alone shall apply.

All our sales are made under the conditions laid down above and the act of placing an order with us implies their acceptance. Any difficulty, whatever the cause may be, shall be judged by the competent Courts of COLMAR, who shall have sole jurisdiction over determining the liabilities, even in interim proceedings.











