Lettuce
Assortment 2018 - 2019

Hydroponic & Plant factory
High-tech

Sharing a healthy future
Intro

Hydroponics is already a very common production method for lettuce in various parts of the world, and there has been a sharp rise in recent years. Hydroponics is now ‘hot and happening’ across Europe as well as in North & South America, Southeast Asia and beyond. At Rijk Zwaan, we have been involved in hydroponics for many years and have already developed a number of successful varieties. We are continually working together with our long-term partners, the growers, to further expand our hydroponics activities.

Benefits for the whole chain
As a soil-free method of plant production, hydroponics is a very clean method; less dirt and fewer chemical residues remain on the product, enabling growers to better meet retailers’, consumers’ and processors’ quality and food safety demands. Furthermore, growers benefit from a more stable yield since the harvest is less susceptible to the natural climate conditions and they can also use artificial light to stimulate production during winter.

Hydroponics also facilitates the development of new value-added products such as Salatrio: a lettuce ‘bouquet’ of three different types. This innovative and sustainable ‘living lettuce’ concept (with its roots still attached) is popular with both retailers and consumers due to its freshness, longer shelf life and convenience.

At Rijk Zwaan, advice and support to help the whole chain get the best out of our varieties is all part of the service. We are keen to help our growing partners make the right decisions, which is why we have produced this booklet. In it we have categorised our varieties based on their suitability for different climate zones/temperate growing conditions, with and without artificial light. We have also made a distinction for whole head and multiple plants per pot (e.g. for Salatrio). Additionally, this booklet describes the differences between HPS and LED lighting for greenhouse production.
Last but not least, this booklet includes our offering for multilayered plant factories. In such ‘vertical farms’, hydroponic systems operate in a closed controlled environment without any natural light at all, resulting in a clean, eco-friendly, efficient and disease-free production method. The adoption rate of hydroponics is expected to further accelerate globally, and at Rijk Zwaan we are set to embrace the changes in this dynamic area of lettuce production –together with you.

Crop team Lettuce
Rijk Zwaan
Meet our
Lettuce Team

For more information please contact your local specialist or one of our experts below:

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<td>Artificial lighting</td>
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<td>Vertical farming</td>
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<td>For trial purposes only; not for commercial use of the variety</td>
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Crystal lettuce

Green

An innovative new lettuce type. Bred by Rijk Zwaan, Crystal lettuce is like an open iceberg, with frilled, crunchy and juicy leaves.

Lalique R (44-17 RZ)

Lalique RZ is the first Crystal lettuce variety of Rijk Zwaan. Suitable for year-round production on hydroponics and in plantfactories. Very strong against elongation of the plant. Its crisp texture and sweet taste are very close to iceberg. The leaves are well suited as sandwich leaf.

Temperate growing conditions

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<th>Winter</th>
<th>Summer</th>
<th>Plant factory</th>
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<td>Lalique RZ (44-17 RZ)</td>
<td>Whole head</td>
<td>Whole head</td>
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Crystal lettuce (44-17 RZ)
Salatrio contains three lettuce varieties per pot. Our carefully selected lettuce combinations grow well together and have unique visual appeal as a trio. We have developed 12 special mixes which include different types for different conditions.

**Summer mix | temperate**

- **Lugano RZ + Satine RZ + Rouxaï RZ**
- **Linaro RZ + Corentine RZ + Saturdaï RZ**
- **Thurinus RZ + Maximus RZ + Crunchita RZ**

**Summer mix | extreme conditions**

- **Othilie RZ + Codex RZ + Saturdaï RZ**

**Winter mix | temperate**

- **Limeira RZ + Corentine RZ + Mondaï RZ**
- **Limeira RZ + Corentine RZ + Xandra RZ**
- **Lozano RZ + Satine RZ + Saturdaï RZ**

**Winter mix | days <13 h**

- **Limeira RZ + Corentine RZ + Shentaï RZ**

**Salanova® mix**

- **Codex RZ + Extemp RZ + Rouxaï RZ**
- **Codex RZ + Humboldt RZ + Saturdaï RZ**
- **Codex RZ + Vicinity RZ + Xandra RZ**
- **Haflex RZ + Extemp RZ + Stefano RZ**

*(ask your local crop specialist for more information and possibilities)*
Crunchy lettuce

Crunchy lettuce represents a very interesting alternative to Cos or iceberg. This innovative lettuce offers the best of both worlds: its leaves are just as long and green as those of a normal Cos lettuce, both on the outside and the inside.

**Crunchita RZ**

Bl:16-30,32,33EU/Nr:0

Crunchita RZ is a large Green Cos lettuce. It has rather smooth, greyish green leaves with an attractive thick leaf texture. The veins are slightly broad but fairly flat. Crunchita RZ is strong against tip burn and has a sweet taste.

**Coronita RZ (41-607 RZ)**

Bl:16-30,32,33EU/Nr:0

Coronita RZ is a Crunchita RZ type. Stronger against twisting.

**Ermita RZ (41-692 RZ) (t)**

Bl:16-33EU/Nr:0

41-692 RZ is a Crunchy type with sandwich leaves. Very strong against tipburn.

**Chicarita RZ**

Bl:17,18,22,24,25,29,30,33EU/Fol:1/Nr:0 [LMV/1]

Chicarita RZ is a compact Crunchy type, very strong against twisting and tipburn.

**Tendita RZ**

Bl:16-20,22-25,29,30,33EU/Fol:1/Nr:0 [LMV/1]

Tendita RZ is a small Crunchy lettuce for outdoor production in Spring, Summer and Autumn. Its head is slightly open.
### Temperate growing conditions

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<tr>
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<tr>
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1 Only when enough light

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**Crunchy Lettuce**

by Snack
Iceberg lettuce

Iceberg is the most consumed lettuce type in the world, but not the easiest type to grow hydroponically. A successful iceberg crop grown on water heavily depends on the location, the climate, the hydroponic system, variety choice and especially the desired outcome; is the target market fresh whole head Iceberg or processed salads.

Our innovative Crunchy lettuce and Crystal lettuce are very attractive Iceberg alternatives, with a similar crispy bite and sweetness as Iceberg and high yield per m2 per year.

Please contact us for customised variety advice to grow a successful iceberg crop hydroponically.
Vibrantly coloured, the baby-sized butter leaves are sweet, tender and succulent. Our new comer in trials is 79-133 RZ a dark green Salanova® butter.

**Salanova® Descartes RZ**

Descartes RZ is a Salanova® Green Butter. Many uniform, small leaves. Lovely tender flavour. Attractive shelf-presentation. Leaves less folded.

**Salanova® Aquino RZ**

Aquino RZ is a Salanova® Green Butter. A bit larger size, very stable in hot conditions. In low light conditions the shape is more open.

**Salanova® Pascal RZ**

Pascal RZ is a dark Salanova® Green Butter. Very strong against haloing.

**Salanova® Harrington RZ**

Harrington RZ is a very large Salanova® Green Butter.

**Knox™ 79-145 RZ (t)**

New Salanova® Green Butter with Knox trait as an extra added value.

**79-155 RZ (t)**

An uprights Salanova® Green Butter variety with sturdier leaves and a brilliant colour.
Vibrantly coloured, the baby-sized butter leaves are sweet, tender and succulent.

**Salanova® Klimt RZ**

Bl:16-33EU/Nr:0

Klimt RZ is a Salanova® Red Butter. Very Strong against bolting in more extreme conditions.

**Salanova® Barlach RZ**

Bl:16-33EU/Nr:0

Barlach RZ is a Salanova® Red Butter. Stronger against bolting in more extreme conditions. Fast growing variety with a good size, a bit larger than Klimt RZ.

**Salanova® Klee RZ**

Bl:16-32EU/Nr:0

Klee RZ is a large Salanova® Red Butter. Bigger than Barlach RZ, strong against double hearts.
Salanova® Oak

**Green**

Gently lobed, tender, succulent, smooth, supple, bright. Mature baby-sized oak leaves. Our new comer in trials is 79-374 RZ a green Salanova® Oak.

**Salanova® Cook RZ**

Bl: 16-31EU

Cook RZ is a Salanova® Green Oak. Many uniform, small leaves. Attractive, firm head. Fresh, dark green color. Nicely-lobed leaves.

**Salanova® Cousteau RZ**

Bl: 16-33EU/Nr: 0

Cousteau RZ is a Salanova® Green Oak. It is very strong and stable in more extreme conditions. Can be to slow in winter with low light conditions.

**Salanova® Humboldt RZ**

Bl: 16-33EU/Nr: 0  LMV: 1

Humboldt RZ is a Salanova® Green Oak. It has glossy leaves. It has an upright plant. In comparison with Cook RZ it has more volume and a later heart filling. The leaves are some smoother and bigger. Fits nice in Salatrio combinations.

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Salanova® Oak

**Red**

Gently lobed, tender, succulent, smooth, supple, bright. Mature baby-sized oak leaves. Our new comer in trials is 79-414 RZ a red Salanova® oak.

**Salanova® Xandra RZ**

Bl: 16-32EU/Nr: 0

Xandra RZ is a Salanova® Red Oak. It is very vigorous. Xandra RZ has a deep red colour with a nice colour contrast between red and green. Also very nice in Salatrio.

**Salanova® Stefano RZ**

Bl: 16-33EU/Nr: 0

Stefano RZ is a Salanova® Red Incised leaf. The leaf shape can be best described as in between Oak and Batavia.
Salanova® Batavia
Green

Latest addition to the Salanova range with very appealing leaves, which are very suitable for sandwiches.

Salanova® Vessel RZ
HR Bl:16-32EU/Nr:0
Vessel RZ is a Salanova® Green Batavia. Blond green and fast growing.

Salanova® Caravel RZ (79-530 RZ) HR Bl:16-32EU/Nr:0 IR LMV:1
79-530 RZ is a Salanova® Green Batavia. Bigger shape as Vessel RZ, more dark green colour, also fast growing.

Salanova® Batavia
Red

Latest addition to the Salanova range with very appealing leaves.

Salanova® Bobal RZ
HR Bl:16-32EU/Nr:0
Bobal RZ is a Salanova® Red Batavia. It is the first variety in this segment. It has thick leaves with a somewhat red-brownish color. When cut, the leaves have a nice color contrast.

Knox™ 79-554 RZ (t) HR Bl:16-33EU/Nr:0
79-554 RZ is a stable intense red colored multi leaf lettuce of the batavia type for outdoor production. 79-554 RZ grows very well on hydroponics.
## Temperate growing conditions

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<thead>
<tr>
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<th>Winter</th>
<th>Summer</th>
<th>Plant Factory</th>
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<tr>
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<td>Day &lt; 13 hrs</td>
<td>Day &gt; 13 hrs (artificial light)</td>
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<td>Whole head</td>
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<td>Salatrio</td>
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<tr>
<td>Whole head</td>
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<tr>
<td>Salatrico</td>
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<tr>
<td>2-3 pl/pot</td>
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<td>⊗</td>
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</table>

### Salanova® Butter • green

- Descartes RZ: ⊗
- Aquino RZ: ⊗
- Pascal RZ: ⊗
- Harrington RZ: ⊗
- Knox™ 79-145 RZ (t): ⊗
- 79-155 RZ (t): ⊗

### Salanova® Butter • red

- Klimt RZ: ⊗
- Barlach RZ: ⊗
- Klee RZ: ⊗

### Salanova® Oak • green

- Cousteau RZ: ⊗
- Cook RZ: ⊗
- Humboldt RZ: ⊗

### Salanova® Oak • red

- Xandra RZ: ⊗
- Stefano RZ: ⊗

### Salanova® Batavia • green

- Vessel RZ: ⊗
- Caravel RZ (79-530 RZ): ⊗

### Salanova® Batavoa • red

- Bobal RZ: ⊗
- Knox™ 79-554 RZ (t): ⊗

### Salanova® Cos • red

- 79-688 RZ (t): ⊗

1 Only when enough light
Salanova® Crispy

Crisp, flexible narrow leaf, vibrant, glossy, frilly at the top, sweet. Mature baby-sized incised leaves. Slight variations in leaf colour.

Salanova® Anguilla RZ

Bl:16-33EU/Nr:0
Anguilla RZ is a Salanova® Crispy Green. Deeply-incised leaves.

Salanova® Trinidad RZ

Bl:16-33EU/Nr:0
LMV:1
79-29 RZ is a darker green Salanova® Crispy.

Salanova® Exact RZ

Bl:16-27,30-32EU
LMV:1

Salanova® Extemp RZ (79-36 RZ)

Bl:16-32EU/Nr:0
LMV:1
79-36 RZ is a Salanova® Crispy Green comparable with Exact. Very strong against elongation and bolting.

Salanova® Expertise RZ

Bl:16-33EU/Nr:0/Pb
LMV:1
Expertise RZ is a Salanova® Crispy Green, very strong against tip burn and bolting.

Salanova® Exaudio RZ (79-43 RZ)

Bl:16-32EU/Nr:0
LMV:1
79-43 RZ is a Salanova® Crispy Green, the shape comparable with Exact, but very dark green. Very strong against elongation.
**Salanova® Crispy Red**

Crisp, flexible narrow leaf, vibrant, glossy, frilly at the top, sweet. Mature baby-sized incised leaves. Slight variations in leaf colour.

**Salanova® Blastex RZ**


**Salanova® Frostex RZ**

Frostex RZ is a Salanova® Crispy Red. A faster Triplex type for the shorter days.

**Salanova® Codex RZ**

Codex RZ is a Salanova® Crispy Red. Strong against bolting and more vigorous. The colour of Codex is very dark red. Also good in Salatrio, good following the mix.

**Salanova® Haflex RZ**

Haflex RZ is a Salanova® Crispy Red, very strong against elongation. Faster growing than Codex RZ, less dark red.

**Salanova® Lollo Green and Red**


**Knox™ Salanova® 79-824 RZ (t)**

79-824 RZ is a Salanova® Lollo with a blond green colour with Knox trait as an extra added value. Stronger against elongation.

**Salanova® Jargon RZ (79-81 RZ)**

### Temperate growing conditions

<table>
<thead>
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<th>Summer</th>
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<td>2-3 pl p/pot</td>
<td>Salario</td>
<td>2-3 pl p/pot</td>
<td>Whole head</td>
</tr>
</tbody>
</table>

**Salanova® Crispy • green**
- Salanova® Anguilla RZ
- Salanova® Trinidad RZ
- Salanova® Exact RZ
- Salanova® Extemp RZ
- Salanova® Exaudio RZ
- Salanova® 79-791 RZ (t)

**Salanova® Crispy • red**
- Salanova® Blastex RZ
- Salanova® Frostex RZ
- Salanova® Codex RZ
- Salanova® Haflex RZ

**Salanova® Lollo • green**
- Knox™ Salanova® 79-824 RZ

**Salanova® Lollo • red**
- Salanova® Jargon RZ

*Only when enough light*
Cos lettuces have well filled heads, crisp leaves of an even length, dark green outer leaves and blanched internal leaves. Typically packed whole as a single sleeved head, as heart twin packs or processed in bagged salads.

**Rafael RZ**

Bl:16-20,22-25,29,30,33EU/Fol:1/Nr:0

Rafael RZ is a small Cos variety, strong against tip burn, slow bolting. Wonderful sweet taste. Open type, Very harvest sure.

**Maximus RZ**

Bl:16-30,32,33EU Ss(Rs)

Maximus RZ is standard large Cos, robust variety. Strong against tip burn and bolting.

**41-139 RZ**

Bl:16-33EU/Nr:0 LMV:1/Ss(Rs)/Fol:1

Midi cos, stronger against tip burn.
Thurinus RZ

Thurinus RZ is a dark Red Cos lettuce. For better coloration of the leaves, more plants per pot have a deeper penetration of the light at the same weight than a single plant. When heading starts with a single plant, no more light can touch the heart.

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<th>Températe growing conditions</th>
<th>Winter</th>
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<tr>
<td><strong>Cos • green</strong></td>
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<tr>
<td>Rafael RZ</td>
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<td><strong>Cos • red</strong></td>
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<td>Thurinus RZ</td>
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Temperate growing conditions

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<td>Whole head</td>
<td>Salatio</td>
<td>23 pl/pot</td>
<td>Whole head</td>
</tr>
<tr>
<td>Gem • green</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>41-436 RZ (t)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Benidorm RZ</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Archivel RZ (41-428 RZ)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Gem • red</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alaine RZ (41-454 RZ)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

1. Only when enough light
2. Only white LED, no HPS as artificial light
3. Only in more stable climate zones
(t) Test Variety
Gem lettuce

Gem lettuce on hydroponic is not so easy to grow. A stable climate and in winter enough light are needed for good results. LED is recommended over HPS.

41-436 RZ (t)

41-436 RZ is a fast growing little Gem. It is a very slow bolting variety, strong against tipburn.

Benidorm RZ (41-413 RZ)

Benidorm RZ is a fast growing Gem. It is some bigger than 41-436 RZ.

Archivel RZ (41-428 RZ)

41-428 RZ is a very nice gem for indoor hydroponic production, some bigger as 41-436 RZ, almost similar size like Benidorm RZ.

Gem lettuce

Alaine RZ (41-454 RZ)

Alaine RZ is a dark red little Gem. It is a very slow bolting variety and very strong against tipburn. Very reliable variety. It is growing slightly open so that the inside also can have a nice red coloration.
## Batavia lettuce

### Green

Large sweet crisp leaves, attractive blistered texture, good for single leaf use on burgers or in sandwiches.

<table>
<thead>
<tr>
<th>Variety</th>
<th>Bl:</th>
<th>Nr:</th>
<th>Pb</th>
<th>LMV:</th>
<th>Fol:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Othilie RZ</strong></td>
<td>16-32EU</td>
<td>0</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Aficion RZ</strong></td>
<td>16,21,23,32EU</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Tourbillon RZ</strong></td>
<td>16-27,30-32EU</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Partition RZ</strong></td>
<td>16-32EU</td>
<td>0</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Salanova® Vessel RZ</strong></td>
<td>16-32EU</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Othilie RZ** is a very harvest-sure Green Batavia. This variety is strong against elongation under extreme conditions. Othilie RZ can be grown with and without artificial lights.

**Aficion RZ** is an open Batavia type. Blond colour, fast growing.

**Tourbillon RZ** is a bigger Othilie. Strong against tip burn, slow bolting. High yielding.

**Partition RZ** is a slightly darker Aficion type.

**Salanova® Vessel RZ** is a Salanova® Green Batavia. Nice shape, blond green, fast growing.
Batavia lettuce

Red

Louxal RZ

<table>
<thead>
<tr>
<th>HR</th>
<th>Bl:16-32EU/Nr:0</th>
<th>LMV:1</th>
</tr>
</thead>
</table>

Vigorous Red Batavia.

Salanova® Bobal RZ

| HR | Bl:16-32EU/Nr:0 |

Babal RZ is a Salanova® Red Batavia. It has thick leaves with a nice color contrast. Very strong against tipburn and bolting.

Temperate growing conditions

<table>
<thead>
<tr>
<th>Batavia • green</th>
<th>Winter</th>
<th>Summer</th>
<th>Plant factory</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Day &lt; 13 hrs</td>
<td>Day &gt; 13 hrs (artificial light)</td>
<td>Day &gt; 13 hrs</td>
</tr>
<tr>
<td>Batavia • green</td>
<td>Whole head</td>
<td>Whole Head</td>
<td>Whole head</td>
</tr>
<tr>
<td>Othlie RZ</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Aficion RZ</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Tourbillon RZ</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Partition RZ</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Salanova® 79-577 RZ</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Batavia • red</th>
<th>Winter</th>
<th>Summer</th>
<th>Plant factory</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Day &lt; 13 hrs</td>
<td>Day &gt; 13 hrs</td>
<td>Day &gt; 13 hrs</td>
</tr>
<tr>
<td>Louxal RZ</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Salanova® Bobal RZ</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>
Butterhead lettuce
Green

Large leaves with a mild flavour and tender texture. Hearts full of buttery coloured sweet leaves. Both green and red varieties are adored by the French for their eating qualities. Predominantly sold as a whole head.

Nuria RZ

Nuria RZ is a very compact, very slow-bolting variety for summer production, with a very strong Bremia resistance.

Cecilia RZ

Cecilia RZ is a bit larger than Nuria RZ.

Flandria RZ

Flandria RZ is a medium sized variety. Larger than Cecilia.

Sintia RZ

Sintia RZ is very strong for tip burn and bolting. The size from Sintia RZ is some bigger than Flandria.

Mahonia RZ

Mahonia is a summer variety more adapted for processing, more yellow hearth.

Lucrecia RZ

Lucrecia RZ is the main variety for large frame Butterhead for high weights. This variety is bigger than Flandria RZ. Used for weights between 400 and 550 gram.

Sandalina RZ

Very vigourous variety, Less heading, for more extreme summer conditions.
**Wangen RZ**

Bl:16-32EU

Wangen RZ is a compact variety for shorter days. It has got a very strong bottom. Possible to make long days with low levels of artificial lights.

**Presteria RZ**

Bl:16-33EU/Pb

Presteria RZ is a large blond indoor Butterhead lettuce for early autumn until spring. Possible to make long days with low levels of artificial lights.

**Salanova® Aquino RZ**

Bl:16-32EU/Nr:0

Aquino RZ is a Salanova® Green Butter. A bit larger size, very stable in hot conditions. In low light conditions the shape is more open.

**Salanova® Harrington RZ**

Bl:16-33EU

Harrington RZ is a very large Salanova® Green Butter. This varieties is for short days.
Temperate growing conditions

<table>
<thead>
<tr>
<th>Variety</th>
<th>Winter</th>
<th>Summer</th>
<th>Plant factory</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Day &lt; 13 hrs</td>
<td>Day &gt; 13 hrs</td>
<td>Day 16-20 hrs</td>
</tr>
<tr>
<td>Whole head</td>
<td>Whole head</td>
<td>Whole head</td>
<td>Whole head</td>
</tr>
<tr>
<td>Salatino</td>
<td>Salatino</td>
<td>Salatino</td>
<td>Salatino</td>
</tr>
<tr>
<td>2-3 pl p/pot</td>
<td>2.3 pl p/pot</td>
<td>2.3 pl p/pot</td>
<td>2.3 pl p/pot</td>
</tr>
</tbody>
</table>

1. Only when grown under a lot of artificial lights (> 50 µmol) or with enough natural light
2. Only when grown with not so much artificial light (< 50 µmol)

Butterhead lettuce

Large leaves with a mild flavour and tender texture. Hearts full of buttery coloured sweet leaves. Both green and red varieties are adored by the French for their eating qualities. Predominantly sold as a whole head.

Teodore RZ

HR Bl:16-32EU
Teodore RZ is a very dark Red Butterhead lettuce. This variety is very harvest-sure if days are shorter than 13 hours.

Salanova® Klee RZ

HR Bl:16-32EU/Nr:0
Klee RZ is a large Salanova® Red Butter, strong against double hearts.
Oak leaf lettuce
Green

Tender, tasty leaves ideal for attractive salads.

Kitonia RZ

Kitonia RZ is a harvest-sure compact Green Oak leaf. This variety is very strong against elongation in extreme conditions.

Kikerino RZ

Kikerino RZ is strong against tipburn in warm conditions. Very vigorous variety.

Salanova® Humboldt RZ

Humboldt RZ is a Salanova® Green Oak with glossy leaves. Upright growing and also nice in Salatrio combinations for weights lower than 200 gr.
**Oak leaf lettuce**

**Red**

Tender, tasty leaves ideal for attractive salads.

**Soupiraï RZ**

Bl:16-30,32,33EU/Nr:0

Soupiraï RZ is a for indoor production in autumn, winter and spring for the short day. It is possible to grow this variety in a Salatrio with artificial lights but then the harvest weight is limited.

**Shentaï RZ (82-589 RZ)**

Bl:16-33EU/Nr:0

Shentaï RZ is fast growing for short day production. The leaves are thicker and more dark red than Soupiraï RZ. Strong against tipburn with a strong bottom.

**Rouxaï RZ**

Bl:16-30,32,33EU/Nr:0

Rouxaï RZ is a very dark (quatro) Red Oak leaf. Nice upright growing and strong against tipburn.

**Saturdaï RZ**

Bl:16-33EU/Nr:0

Saturdaï is a faster and larger Rouxaï-type. This variety is very strong against tipburn.

**83-575 RZ (t)**

Bl:16-33EU/Nr:0

Dark Red oak leaf for both whole head and as Salatrio ingredient.

**Salanova® Xandra RZ**

Bl:16-32EU/Nr:0

Xandra RZ is a vigorous Salanova® Red Oak with a deep red colour and with a nice colour contrast between red and green. Also very nice in Salatrio.
Temperate growing conditions

<table>
<thead>
<tr>
<th></th>
<th>Winter</th>
<th>Summer</th>
<th>Plant factory</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Day &lt; 13 hrs</td>
<td>Day &gt; 13 hrs</td>
<td>Day 16-20 hrs</td>
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<tr>
<td>Whole head</td>
<td>Salatrio</td>
<td>Whole head</td>
<td>Whole head</td>
</tr>
<tr>
<td>Day &gt; 13 hrs</td>
<td>(artificial light)</td>
<td>Salatrio</td>
<td>Salatrio</td>
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<tr>
<td>23 pl pot</td>
<td>Salatrio</td>
<td>23 pl pot</td>
<td>23 pl pot</td>
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<tr>
<td>Whole head</td>
<td></td>
<td>Whole head</td>
<td>Whole head</td>
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</tbody>
</table>

**Oakleaf • green**

- **Kitonia RZ**
- **Kikerino RZ**
- **Salanova® Humboldt RZ**

**Oakleaf • red**

- **Soupirai RZ**
- **Shentai RZ (82-589 RZ)**
- **Rouxai RZ**
- **Saturdaï RZ**
- **83-575 RZ (t)**
- **Salanova® Xandra RZ**

1. Only when young plants grown under artificial lights or with enough natural light
2. Only total weight lower than 200 gram
3. Only beginning and end of summer
4. Only trial seeds available
Lollo Bionda

Large robust leaves with a mild flavour, vibrant colours and decorative frilled edges.

Lozano RZ

Bl:16-33EU/Nr:0
Lozano RZ has a low crop height and is adapted for autumn and winter production with and without artificial lights. Upright growing.

Limeira RZ

Bl:16-33EU
Limeira is for autumn and winter production. Very strong bottom and very strong against tip burn. Fast growing.

Lugano RZ

Bl:16,21,23,32EU
Lugano RZ is suitable for spring and summer production. Upright growing, slow-bolting. Nice blond colour.

Linaro RZ

Bl:16-30,32,33EU/Nr:0 (LMV:1)
Linaro is fast growing with firm leaves for spring and summer, strong against bolting and tipburn.
Lollo Rossa

Large robust leaves with a mild flavour, vibrant colours and decorative frilled edges.

Satine RZ

Satine RZ is a compact variety for year-round production. Upright growing, dark wine red colour.

Corentine RZ

Corentine RZ is a bigger Satine with thicker leaves. Corentine is suitable for autumn, winter and spring.

Carmolí RZ

Carmolí RZ is a triple-red, relatively vigorous Lollo Rossa. Carmolí RZ is an open type, so that the light can reach the heart. This gives vigour as well as red colouration.

Carmesi RZ

Carmesi is a slightly faster Carmoli type, less dark red in the hearth.
## Temperate growing conditions

<table>
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</tbody>
</table>

### Lollo Bionda • green
- Lozano RZ • • • •
- Limeira RZ • • • •
- Lugano RZ • • • •
- Linaro RZ • • • •

### Lollo Rossa • red
- Satine RZ • • • • • • • •
- Corentine RZ • • • • • •
- Carmoli RZ • • • • • •
- Carmesi RZ • • • • • •
1. Introduction

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 under controlled environmental conditions 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 a plant depends on environmental conditions, the properties of the organism itself and the capacity of the plant to defend itself. Varieties within a plant species can differ in their ability to defend themselves. Under different conditions, such as age of the plant, pest pressure and virulence or adverse environmental conditions, the interaction between the same plant and pest may have different outcomes. Pests are known to develop and form new biotypes, pathotypes, races or strains that can cause damage to plants that remain unaffected by the original form of the pest. To promote consistency in the terms used to describe the reaction of a plant to a pest, ISF Vegetable and Ornamental Crops Section has defined the following terms.

2. Definitions

Susceptibility is the inability of a plant variety to restrict the growth and development of a specified pest.

Resistance is the ability of a plant variety to restrict the growth and development of a specified pest and/or the damage they cause 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 development of the specified pest 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 development of the specified pest but may exhibit a greater range of symptoms or damage compared to high resistant varieties. Intermediately 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.

It is to be noted that if a resistance is claimed in a plant variety it is limited to the specified biotypes, pathotypes, races or strains of the pest.

If no biotypes, pathotypes, races or strains are specified in the resistance claim for the variety, it is because no generally accepted classification of the cited pest by biotype, pathotype, race or strain exists. New biotypes, pathotypes, races or strains that may emerge are not covered by the original resistance claim. Immunity is when a plant is not subject to attack or infection by a specified pest.
Disclaimer
Rijk Zwaan’s descriptions, illustrations, growing advices and any other information in whatever form for example on expiry, sowing, planting and harvesting dates are based as precisely as possible on experiences in trials and in practice. However, Rijk Zwaan does not accept in any case liability for damages resulting from the use of such descriptions, illustrations, growing advices and information. The buyer/user itself is responsible for proper storage of the seeds and will be deemed to determine whether the products and growing advices are suitable to be used for the intended cultivations and under the local conditions.

For more information, please contact Rijk Zwaan (www.rijkzwaan.com).

Abbreviations
LMV  Lettuce Mosaic Virus | Lettuce mosaic
Bl  Bremia lactucae | Downy mildew
Nr  Nasonovia ribisnigri | Lettuce leaf aphid
Pb  Pemphigus bursarius | Lettuce root aphid
Ss (Rs)  Sphingomonas suberifaciens | Corky root
Fol  Fusarium oxysporum f.sp.Lactucae | Fusarium wilt