



INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ



**Inovace studijních programů AF a ZF MENDELU  
směřující k vytvoření mezioborové integrace  
CZ.1.07/2.2.00/28.0302**

**Tato prezentace je spolufinancovaná z Evropského sociálního fondu a státního rozpočtu České republiky**

# Root vegetables

CARROT (*Daucus carota*) Content: 88-90% water, 10-12% dry matter, 3% fibre, 1.4% protein, 8-10% carbohydrates, 0.8% ashes, provitamin A: 35 mg.1,000 g-1  
Essential oil: daukol; sesquiterpenes, rich in silion, liver and bladder diseases, diarrhea



Carrot varieties Early varieties

Shorter vegetation period: 90-110 days

Columnar shape, blunt root end (today, differences in shape are not important)

Lower yield: 30 tons

Sowing: twice a year; first sowing in March with harvest at the end of May, and sowing in June with harvest in September/October



Carrot for storage

Late varieties: long vegetation period (160-180 days)

Yield: 80-100 tons (carrot roots: up to 1 kg)

Long, conical shape with blunt root ends (today, there are basically no carrots with conical shapes and the colour does not differ either)

Sow late carrot soon; irrigate if the weather is dry

Poorly pre-treated land: carrots do not sprout immediately, but after 2 months; shorter vegetation period, lower yield

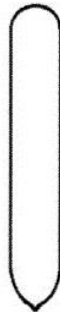
Storability of carrot: by May, 0-2°C temperature



Amsterdam and Parisian types: forced varieties, early field growing, bundles  
Amsterdam and Parisian types: forced varieties, early field growing, bundles  
Nantes: majority of carrots, direct consumption, processing Berlikum and Flakee: direct consumption, storage, dryiny, processing  
Shapes of carrot roots



Parisian shape



*Amsterdam*



*Chantenay*



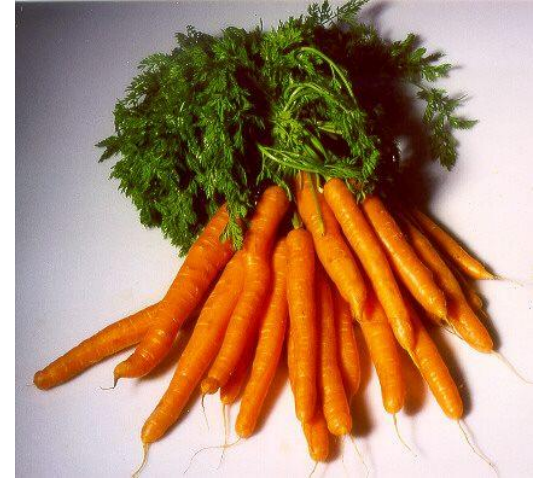
*Nantes*



*Berlikum*



*Flakee*



Seed price: Czech varieties: 800 CZK per kg  
Foreign varieties: 8,000 CZK per kg

## RONDO

Very early variety, 85 days

Parisian type

Good for leisure gardeners, bundling

Roots: high sugar and dry-matter content,  
high resistance to cracking

Root head does not turn green inside or  
outside

Sowing:

early in the spring

Repeated sowing until mid-August

Variety may be forced in hot beds or un-  
heated facilities for forcing

3-5cm root





## MARION F1

Early hybrid, 90-95 days

Nantes type

all-year growing

Columnar root, blunt end

Surface and cut of the root head do not  
turn green, no anthocyanin colouring

Nicely coloured, smooth roots

15-17cm root



ANETA F1

medium early hybrid variety, 100-105 days

Nantes type

Columnar root, blunt end

Root head does not turn green, no  
anthocyanin colouring

Growing:

early spring sowing

and subsequent crop sown by mid-July

18-20cm root



## GALAXY

medium early hybrid variety, 105-110 days

Nantes type

Columnar root, blunt end

Root head does not turn green, no  
anthocyanin colouring

High yield, stable root shape

18-20cm root



JARANA F 1 (H125/09)  
early hybrid, 115-120 days

Nantes type

Very smooth, blunt root

Good colouring inside and outside

Ideal carrot for bundling, and harvest of  
early carrots

Low but firm carrot tops are mechanically  
harvested

18-20cm root



## KRÁSKA

medium early hybrid variety, 134 days

Berlikum type

Direct consumption, industrial processing

Columnar, blunt root

Resistant to cracking and anthocyanin

head colouring

Very high yield

18-20cm root



## JITKA F1

Medium late hybrid, 135 days

Berlikum type

High yield of large, consistent roots

Carrot may also be prematurely harvested  
and bundled for sale

Columnar, smooth blunt roots

No green heads

Ideal for long-term storage and commercial  
processing

18-20cm root



## KAROLA

Medium-late variety, 135 days

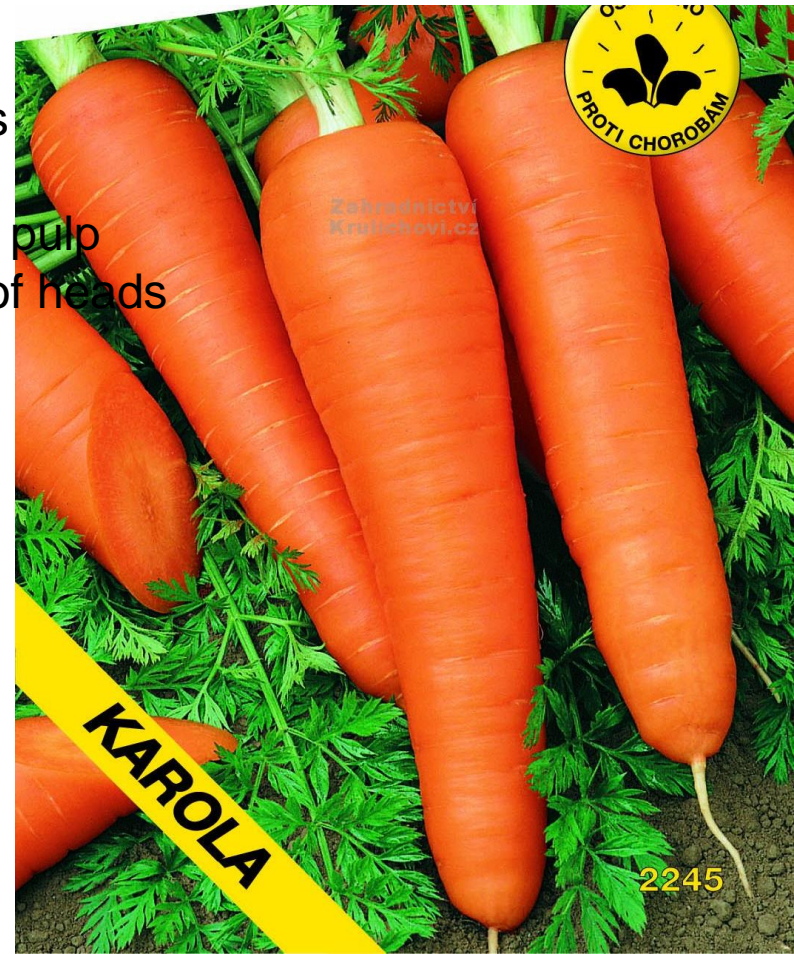
Nantes type

High yield, intensely coloured pulp

Resistant to green colouring of heads

Low waste (atypical)

Taproot length: 16-18cm



## KAROTINA

Medium-late variety, 135 days

Nantes type

Short-term storage

Smooth, intensely coloured root

Red-orange root

Mild flavour

Resistant to cracking and head greening

Resistant to bolting

14-16cm root





## DARINA

Late variety, 137-142 days

Berlikum type

High yield

Smooth, columnar root, blunt end

Surface and cut of the root head do not turn green, no anthocyanin colouring

Highly resistant to alternaria leaf blight and root cracking

Good health condition and very good storability

Rich in beta-carotene

20-22cm root



## KARDILA

Late variety, high yield, 145 days

Flakkee type

Good especially for mechanized harvest  
and commercial processing

Very good for canning, freezing, and drying

Higher content of dry matter, intense red  
colour, even after processing

19-23cm



## KOLOSEUM F1

Late hybrid, 145 days

Berlicum type

Smooth, strong, consistent roots: ideal for processing industry

Firm green tops enable easy mechanized harvesting

High content of dry matter and long storability

19-24cm



## KATLEN

Very late variety, 145 days

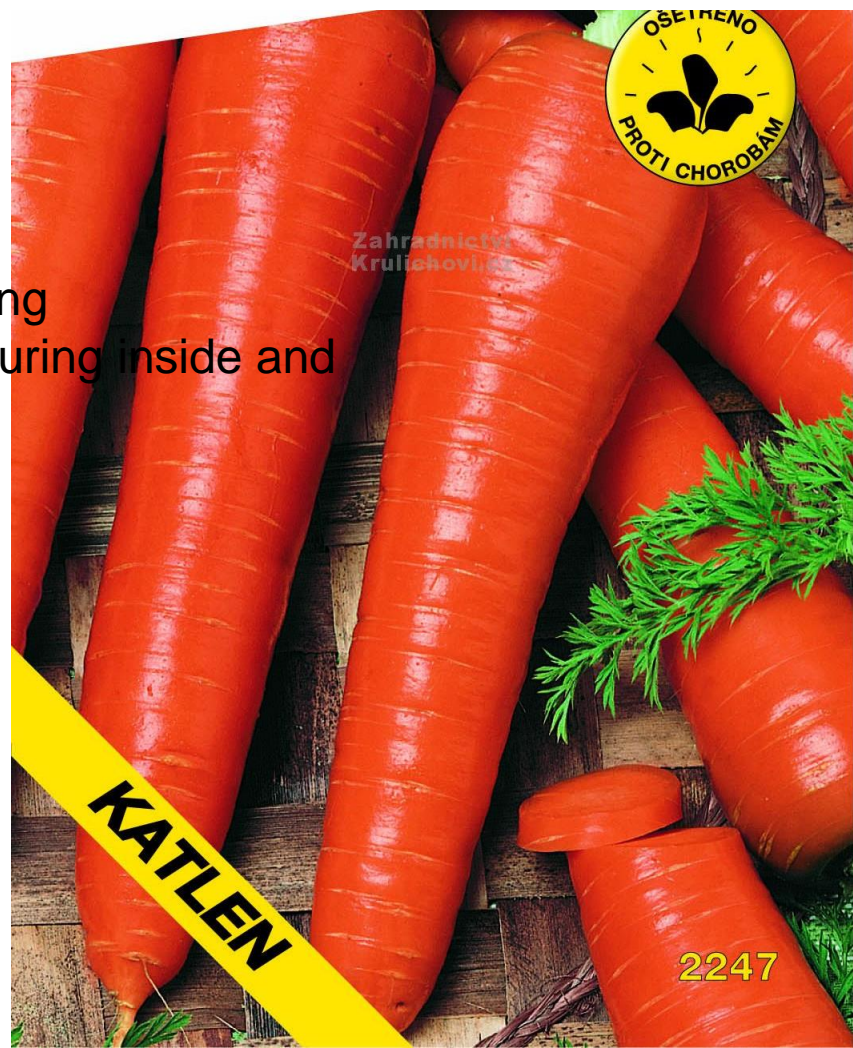
Berlicum type

Suitable for long-term storing

Long roots, very good colouring inside and outside, consistent shape

Mid-size green tops

18-22cm



## CIDERA

Very high yield, late variety, 145-155 days

Nantes type

Suitable for juice production and canning

Long, columnar root, great colouring

Root head is in soil, does not turn green

Good for mechanized harvest, grown at ridges

Sowing: spring through end of May

21-23cm root



## CORTINA F1

Late hybrid, 150-160 days

Flakkee type

Long, columnar orange-red root

Blunt pointy root end

Root head does not turn green, no  
anthocyanin colouring or deformations

Good for mechanized harvest

18-20cm root



## TINGA

Late variety, 157-162 days

Flakkee type

High yield, universal potential

Great colouring of root



Root head is in soil, does not turn green

Good for mechanized harvest, grown at ridges

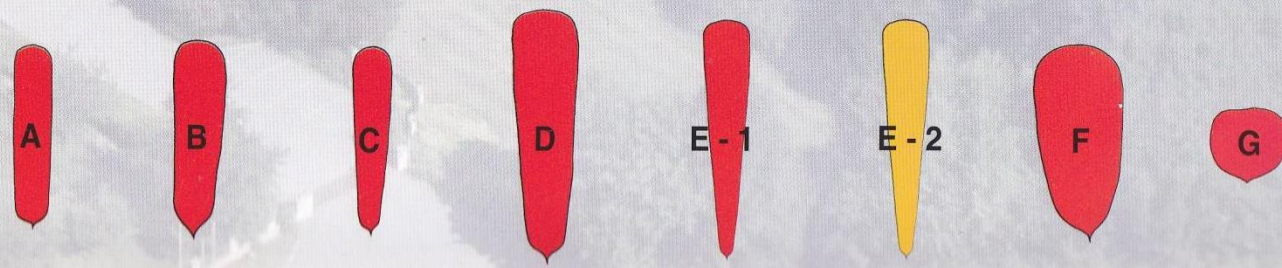
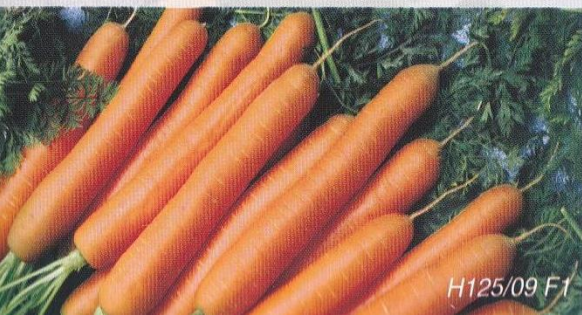
Excellent storability

20-22cm root



Odrůda	Typ	Ranost	Vegetační doba (dny)	Kořen			Použití			Poznámky
				barva vnitřní/vnější	délka (cm)	tvar	přímý konzum	skladování	průmysl. zpracování	
H125/09 F1	Nantes	raná	115 - 120	7/8	18 - 20	A	++	++	+	vyrovnaný tvar, hladký povrch
<b>NANTES 5</b> (dříve NANTĚSKÁ)	Nantes	raná	115 - 125	5/7	16 - 18	A	++	+	-	tradiční odrůda
<b>NANTES 3</b> (dříve TIP - TOP)	Nantes	poloraná	120	6/7	16 - 20	A	++	+	+	vyrovnaný tvar kořene
<b>ANINA (SM 101/08)</b> 	Nantes	poloraná	125	7/7	20 - 22	A	++	++	+	hladký povrch a vyrovnaný tvar kořene
<b>KARKULKA</b>	Nantes	polopozdní	130	8/8	18 - 22	B	++	++	+	velmi odolná k praskání
<b>KRÁSKA</b>	Berlikum	polopozdní	134	8/8	18 - 20	B	++	++	+	velmi výnosná
<b>KAROTINA</b>	Nantes	polopozdní	135	8/8	14 - 16	C	++	+	++	tradiční odrůda
<b>KAROLA</b>	Nantes	polopozdní	135	8/8	16 - 18	B	+	++	+	vyrovnaný tvar kořene
<b>CHAMARE</b>	Chantenay	polopozdní	135	7/7	13 - 15	F	++	+	++	vhodná na výrobu džusů
<b>JITKA F1</b>	Berlikum	polopozdní	135	9/8	18 - 22	D	++	++	++	pro skladování a průmysl. zpracování, lze i podtrhnout a sklízet jako svazkovou
<b>KOLOSEUM F1</b> 	Berlikum	pozdní	145	8/8	19 - 24	D	+	++	++	velmi výnosná, pozdní, zejména ke skladování a prům. zpracování
<b>KATLEN</b>	Berlikum	pozdní	145	8/8	10 - 22	D	+	++	++	velmi výnosná, pro skladování a průmyslové zpracování
<b>RUBÍNA</b>	Berlikum	pozdní	145	7/7	18 - 22	D	+	++	++	tradiční odrůda
<b>KARDILA</b>	Flakkee	pozdní	145	8/8	19 - 23	E - 1	+	++	++	velmi výnosná, dobře vybarvená i po zpracování, ideální na sušení
<b>TÁBORSKÁ ŽLUTÁ</b>	Flakkee	pozdní	150	1/1	18 - 24	E - 2	+	++	+	žlutá, skladovatelná, výnosná
<b>RONDO</b>	Parisian	velmi raná	85	7/7	průměr 3 - 5	G	++	-	-	kulatá, vysoký obsah cukru, vynikající chuť

Barva: 1 = žlutá 10 = červená





Following varieties are not recommended for growing:

NANTÉSKÁ – heads turn green, roots crack, green tops break

STUPICKÁ – poor colouring, carrot centre is yellow

DUWICKÁ – short root, low yield



GARDEN PARSLEY (*Petroselinum crispum*) Content: water 85 % dry matter 15 % protein 3.5 % carbohydrates 6 % lipids 0.7 % vitamin C - 200 mg /1,000 g (up to 1,600 in green tops) Rich in Ca – 970 mg Mg – 516 mg P – 1,005 mg K – 5,080 mg Fe – 30 mg Apiin: diuretic effect essential oil in root and green tops: diuretic and antibacterial effect

## Root shape

Ideal: medium long root, ca. 20cm

Long roots (40-50cm) cannot be harvested,  
and may be damaged

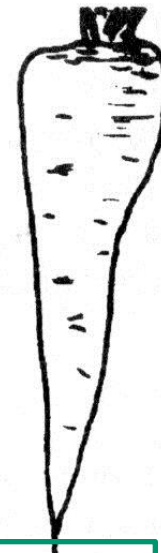
Short root: low yield, infested by rodents



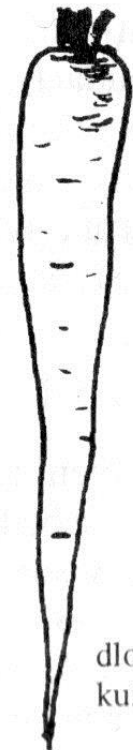
krátký



středně  
dlouhý  
kuželovitý



středně  
dlouhý  
kyjovitý



dlouze  
kuželovitý

## KONIKA

Early variety, 160-170 days

Short root (12-15cm), smooth, wide and conical

Aromatic, white pulp with marble patterns in the centre

Good for

Summer harvest with green tops

Autumn harvest without the green tops

Storage



## ATIKA

Early variety, 170 days

Fast growth of root and green tops

Very smooth, elongated root with mild creases

High resistance to mildew

Good storability

Use:

direct consumption, industrial processing

Suitable for bundling



## ALBA

Medium-late to late variety, 175-195 days

Medium-long root (15-18cm), rectangular shape, smooth white surface

High resistance to branching

Aromatic white pulp, no darkening even after processing

High resistance to rust, mildew and storage diseases

Sowing early in the spring: 30 x 7 cm spacing, ridges are recommended (especially in heavy soils)

Use:

Direct consumption

Industrial processing

Storage



## ORBIS

Medium early variety, 182 days

High yield

Smooth, medium-long white root

Very good condition

High dark green tops

Good for heavier soils

Good storability

Direct consumption and industrial processing



## JADRAN

Late variety, 193 days

Long, elongated smooth root

Long, semi-erect green tops

High resistance to mildew

Direct consumption and industrial processing; bundling thanks to fast growth in spring, excellent storability





## HANÁCKÁ

Late variety, 180-200 days

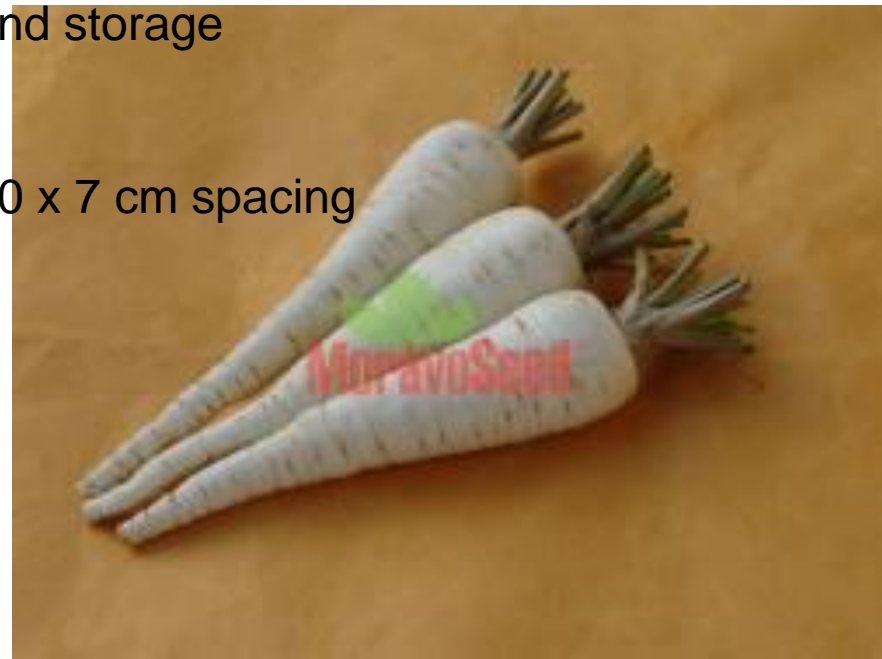
Medium-long, conical or club-shaped root  
(14-17cm), cream colour

Aromatic pulp with compact white flesh and  
mild marble patterns

Good resistance to rust and storage  
diseases

Grown for storage

Sowing: early in spring, 30 x 7 cm spacing



Not recommended: OLOMOUCKÁ DLOUHÁ – long root

DOBRA short root with strong rust

FAKIR

white, firm root; high tolerance to diseases; storage, drying

EAGLE

Direct consumption and industrial storage

Foreign varieties: Identical parameters, expensive  
seedstock

## CELERIAC (*Apium graveolens*)

Content water 89.3 % dry matter 10.7 %  
protein 1.75 % carbohydrates 9.9 % lipids  
0.3 % fibre 1.5 % vitamin C - 80 mg/kg (10  
times more in green tops) Rich in Ca – 710  
mg Mg – 330 mg P – 530 mg K – 3,750 mg  
Fe – 9.4 mg



## ASTERIX F1

Early hybrid

Planting to harvest: 90 days

Autumn harvest (for storage): 130 days

High yield

Very large, round taproot (1kg)

Root system grows only from the bottom taproot part

Resistant to bolting and highly tolerant to leaf spot disease



## NEON

Early variety, 137 days from planting

Good yield, 1kg taproots

Good health condition:

no rust

Resistant to bolting

Smooth taproot with no cavities; stays  
white even after cooking and drying

Industrial processing, direct consumption

Good storability



## ALBIN

Medium early, 140 days from planting

Very high yield

Grown for autumn harvest; large, round taproot (1kg)

Resistance to:

Bolting

Medium to high resistance to leaf spot disease

Taproot resistant to cavity formation

Great quality feature: pure white pulp, even after canning and freezing

Most of the plant is above the ground; root system grows from bottom part of the plant

Universal use



## MAXIM

Late variety, 145 days from planting

Very high yield

Smooth, large taproots (2-3kg), high  
content of dry matter

Resistant to bolting

Susceptible to cavity formation and rust

Industrial processing, direct consumption



## KOMPAKT

Late variety, 150 days from planting

1kg taproot

Good health condition:

high resistance to bolting

Resistant to leaf spot disease





Not recommended for growing: ORION  
strong rust MAXIM: highest yield, but  
withers quickly, inside is full of holes, unfit  
for storage

BRILLIANT

145 days, no cavities, tends to bolt; good  
for storage

DIAMANT

150 days, no cavities, good for storage

Foreign varieties: Sowing: 30 g per ha,  
seedstock price is irrelevant

PARSNIP (*Pastinaca sativa*) Cultivated plants, came from wild species of ruderal weed

Parsnip green tops (non-aromatic) are not valued

Robust roots, large diameter

Roots are never rusty, always white

Sweeter root, less aromatic than parsley

Ideal for potato growing regions



## KAMO

Medium-late variety, 160-180 days

Direct consumption, processing, drying,  
long-term storage

Medium-long root, conical, white; rich in  
aromatic substances

Flavour: mixture of parsley and carrot

Parsnip does not freeze out in Czech  
climate

Roots may be harvested the following  
spring



## DLOUHÝ BÍLÝ

Late variety, 180-200 days

Direct consumption, processing, drying,  
long-term storage

Long root, conical, white; rich in aromatic  
substances

Flavour: mixture of parsley and carrot

Parsnip does not freeze out in Czech  
climate

Roots may be harvested the following  
spring



## BIELAS

Compared to DLOUHÝ BÍLÝ  
earlier variety: 180 days from sowing

Shorter green tops

Smoother and white, more “beetroot-like”  
root

Good for long-term storage and industrial  
processing

Winters well



Foreign varieties

ARROW – very fast growth

JAVELIN F1 – stable, high yield, smooth  
root

GARDEN BEET (*Beta vulgaris* ssp. *vulgaris* var. *conditiva*)

Significant canning commodity

Colourant extraction: food colourant  
Rich in: vitamin B9 – folic acid: 1.5 mg/kg  
K – potassium: 3,000 mg/kg

Blood-related diseases, cancer diseases

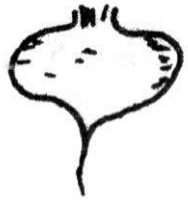
Beetroot binds radioactive substances and heavy metals, i.e. detoxicates

Anti-sclerotic and anti-rheumatic effect, reduces cholesterol levels

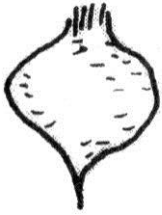
Supports appetite



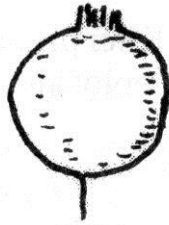
Tvar bulvy:  
plochý



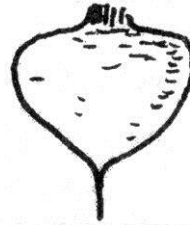
ploše kulovitý



kulovitý



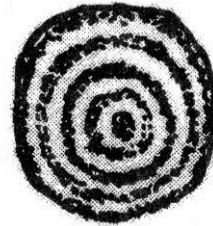
široce kuželovitý



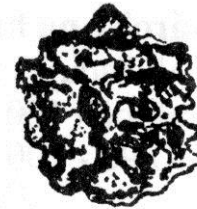
válcovitý



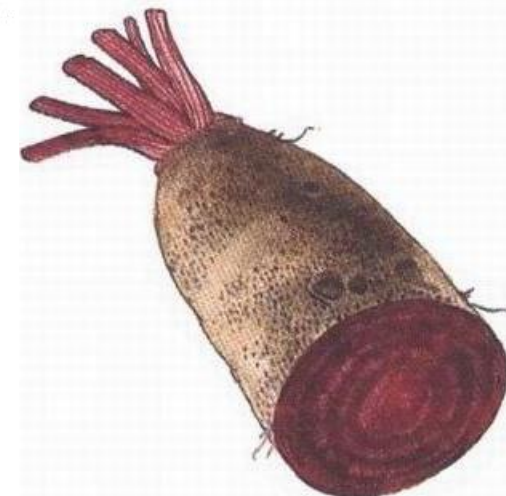
dlouze kuželovitý



vada vybarvení - kroužkovitost



klubíčko  
řepy



Columnar beetroots are easier for harvest as half of the taproot is above the ground; however, canning plants do not want these, bad transport on conveyers  
Defects in colouring: white and red circles which make the taproot less attractive; fully red varieties are favoured



## MONOPOLY

Medium early hybrid, 110 days

High yield, consistent and good quality

Round, medium-large, smooth taproots with dark-red pulp

Genetically monogerm seeds: no need to thin out the plants

Universal use:

Premature harvest (3-5cm taproots): direct consumption, canning

Canning



## KAHIRA

Very early variety, 110 days

Few leaves

Flat taproots

Direct consumption

For leisure gardeners, low yield



## MONIKA

Medium early variety, 115 days

Medium-large, round, crimson taproot

Red pulp

Resistant to bolting

Poor pulp fibrousness after cooking

Genetically monogerm seeds: no need to thin out the plants

Summer and autumn harvest



## BETINA

Medium-late variety, 120 days

High yield

Resistant to leaf diseases

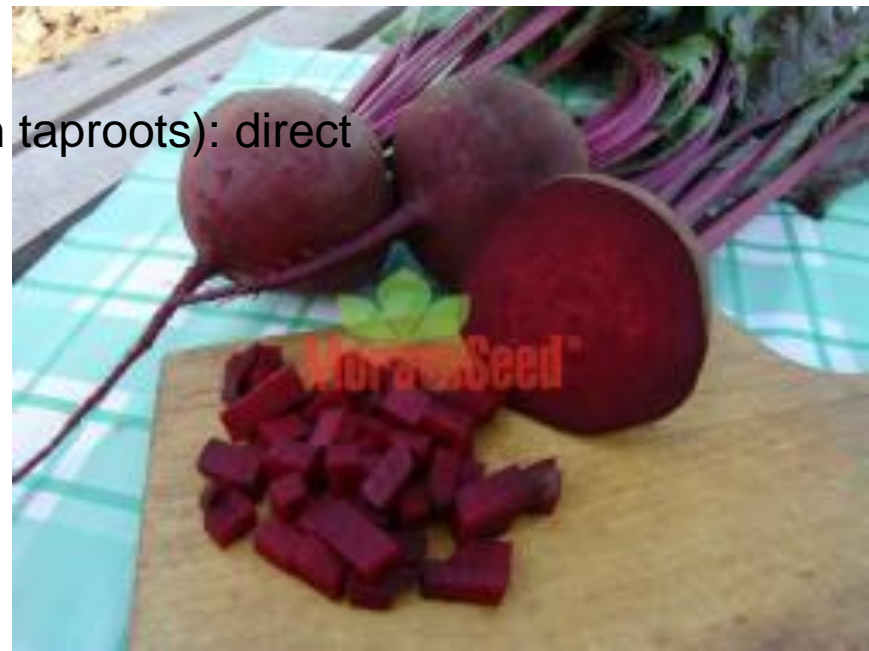
Flat round taproot, red to brown-red surface

Intense red pulp, mild flavour, no distinct light stripes

Universal use:

Premature harvest (3-5cm taproots): direct consumption, canning

Canning



## BONA

Medium-late variety, 120 days

Very high yield, good quality

Medium-high plant

Round taproot with smooth surface

Intense red pulp, no circles

Sowing:

April to June (harvest of normal-size taproots)

mid-June to mid-July (harvest of small taproots for canning)



## BETINA

Medium-late variety, 120 days

Excellent fine pulp

Medium-high plant

Round taproot, fine pulp, no distinct light circles

Good resistance to diseases

Sowing:

April to June (harvest of normal-size taproots)

mid-June to mid-July (harvest of small taproots for canning)



## ČERVENÁ KULATÁ

Medium-late variety, 125 days

Erect leaves, high yield

Good resistance to diseases

Round taproot with wide, lighter circles  
which disappear after cooking

Fine pulp: excellent flavour

Universal use:

Premature harvest (3-5cm taproots): direct  
consumption, canning

Canning (autumn, 10cm taproot)



## ALEXIS

Late variety, 130 days

Elongated taproot, 21-26cm

Pulp: good colour, no lighter circles

Sowing:

April (direct consumption)

May to June (canning)

Few leaves

Growth spacing: 20 x 30cm





## MONORUBRA

Medium-late to late variety, 130 days

Medium-high plant

Columnar taproots

Red pulp, no distinctly lighter circles

Genetically monogerm seeds: no need to  
thin out the plants

Sowing:

April (direct consumption)

May to June (canning)



## RENOVA

Medium-late to late variety, 130 days

Medium to low height

Columnar taproots, red pulp with no lighter circles, mild flavour

Good resistance to diseases and bolting

Sowing:

April (direct consumption)

May to June (canning)



Foreign varieties: RED CLOUDE F1

Medium-early, 118 days

Round taproot, high yield

Dry areas: sandy soils

Not recommended for growing: CYLINDRA

– defective circles in taproot, columnar

EGYPTSKÁ PLOCHÁ – defective circles

RUBÍN – incorrect colours



Grow in soils where N concentrations had been analysed before

Beetroot strongly accumulates nitrates

Standard: 3,000mg; thermal treatment reduces N concentrations by 10% only

Certain beetroots contain more than 10,000mg of NO<sub>3</sub>

Canning plants require nitrate attestation from a certified laboratory

If beetroots overgrow, colourant may be extracted and dried, and later used as a food colourant

RADISH (*Raphanus sativus* var. *major*)

Spring

Summer

Autumn

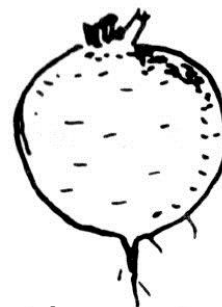
Rich in: K – 3,200 mg/kg S - 380 mg/kg

Diuretic effect

Cleanses liver



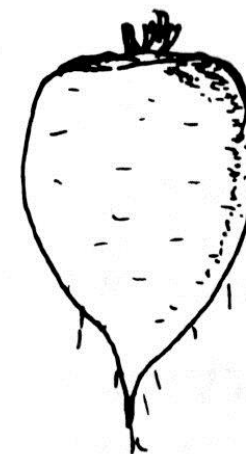
## TAPROOT SHAPES



Round



Columnar



Spindle-like

Spring radish

Up to 20cm

Various colours: red, yellow, white

White pulp

Sown in March, harvested in June

Yield: 20-30t

Storability: 14 days

After 14 days, radishes wither

Radishes used to be part of pickled

“čalamáda”



## KARMINA

Early radish, vegetation period: 40-45 days

Direct consumption

Taproots: elongated, crimson red surface

White pulp, mild radish-like flavour

Sowing: March through April, harvest: from the end of May

Recommended spacing: 20 x 8 cm



## POLODLOUHÁ BÍLÁ

Early to medium-early variety, 40-50 days

Direct consumption

Taproots: elongated, white surface

White pulp, juicy, mildly spicy flavour

Sowing: March through April (latest term)

Harvest: from the end of May

Recommended spacing: 20 x 8 cm





## JANTAR

Early to medium-early variety, 40-50 days

Elongated shape

Yellow plant

Direct consumption

Pulp is not spongy

Sowing: March through April (latest term)

Recommended spacing: 20 x 6 cm



## Summer radish

Long (30-35cm), white plants, high yield  
Soil must be processed 40cm deep,  
otherwise the plants branch - not for sale  
Sowing: early July; harvest: October  
Yield: 60-80 t  
Stored by March  
Unless infested by radish fly  
Root: a little dot, 1mm puncture with red  
circle around – radish fly!



## ACORD

Very early summer radish, 55-65 days

Direct consumption, short-term storage

Round, mildly elliptic white taproot, light green around a head; no cracking

White pulp

Sowing:

mid-July to mid-August



## ALABASTER F1

Hybrid summer radish, 75-85 days

Direct consumption, mid-term storage

Very long taproot (40-45 cm), columnar shape, white surface

White pulp, mild radish flavour

Above-ground plant part does not turn green

Resistant to bolting

Sowing: mid-July to mid-August

Row spacing: 30 x 15 cm

Grown at ridges (due to taproot length)



## ASTOR

Summer radish, 75-85 days

Direct consumption, mid-term storage

Very long taproot (35-40 cm), columnar shape

White pulp and surface, mild radish flavour

Sowing: mid-July to mid-August

Spacing: 30 x 15 cm

Grown at ridges (due to taproot length)



## JAROLA F1

Summer radish, 85 days

Good for spring sowing, no bolting

Elongated, conical roots with greenish  
neck, 25-30 cm

Mild, juicy pulp

Pulp has no tendency to be spongy



## JAPANA F1

Summer radish, 85 days

Intense growth

White, columnar roots with blunt pointy ends

Length: 35cm; good conditions + ridges: even longer

Mild, juicy, compact pulp

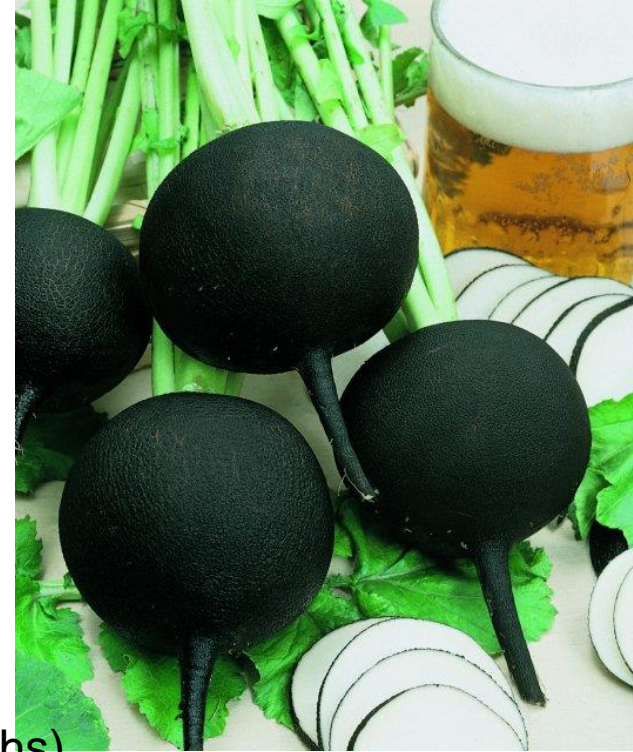
Pulp has no tendency to be spongy

Sown from July to August

Soil must be light and well-processed due to taproot length



Late radish  
Black radish  
Sown from May to early June  
Harvest: October / November  
Yield: 30-40 t  
Stored until next season (10-12 months)  
Excellent characteristics:  
Raw juice dissolves kidney stones after  
min. 2 months  
Juice dissolves a 5-cm stone in a bowl





## PANTER

Late early radish, 75 days

Round taproots, 6-10 cm in diameter, fine roots

Long-term storage

Compared to KULATÁ ČERNÁ: More uniform in shape and maturity



## KULATÁ ČERNÁ

Late late radish, 90-110 days

Direct consumption and storage, good for juice production

Round to flat round taproot, black surface

White pulp

Strong radish flavour

Excellent storability

Commonly until January

In coolers: until new harvest

Sowing: mid-July to mid-August

Recommended spacing: 30 x 10 cm



SMALL RADISH (*Raphanus sativus* L. var. *radicula* Pers.)

Short vegetation period

Shape: round, flat round, spindle-like, columnar

Colour: red, yellow, white, red-white, purple, tricoloured (not attractive for customers)

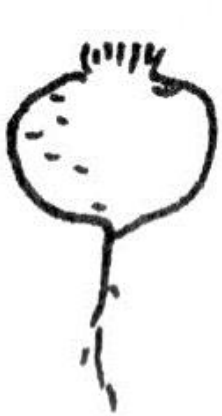
Varieties:

Early growing: spring, autumn harvest

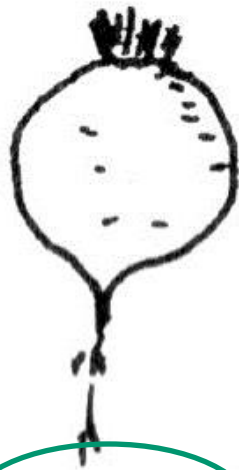
Summer growing: summer harvest



# TAPROOT SHAPES



Flat



Round



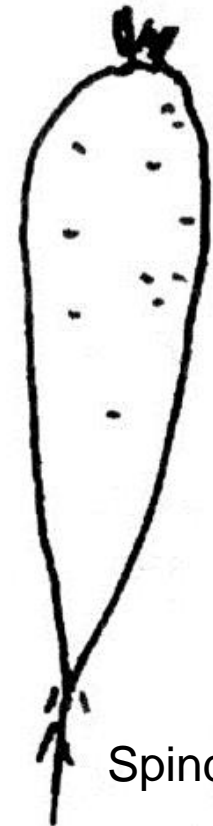
Elongated  
round



Oval



Columnar



Spindle-like

Customers want only fully red, round radishes

Number of columnar radishes in a bundle:  
6 pcs (according to a standard)

Round radishes in a bundle: 10 pcs (CZK 8  
per bundle)

200 radishes per 1m<sup>2</sup>

## FARAON

Very early variety, 28-32 days

Forcing, spring and autumn growing

Medium to large, round, scarlet taproots

Resistant to bolting and taproot cracking



## FORTUNA F1

Very early hybrid, 29-32 days

Good for forcing in heated and unheated premises (greenhouses, plastic greenhouses) and also for spring and autumn growing

Large, round, deep red taproot

Resistant to cracking



## POLONEZA

Early variety, 29-33 days

Good for forcing and outdoor growing

Red, round taproots

White tip at the bottom

White, slightly pink, mild pulp

Highly resistant to bolting

Sowing:

Under foil sheet:

February through March

Outdoors:

March through mid-April

from end of July to end of August



## ESTER

Early variety, 31-34 days

Good for forcing and all-year outdoor growing

Larger, round, scarlet taproots with fine roots

High resistance to:

Bolting

Taproot cracking

Pulp is spongy





## FORUM

Early variety, 31-34 days

Good for forcing, and spring and autumn outdoor growing

Columnar, cinnabar taproots with blunt ends and fine roots

Resistant to cracking

Sowing:

Forcing: end of January

Outdoor growing: March through April, mid-July through end of August



## STELA

Medium-early variety, 32-35 days

Good for forcing in unheated premises,  
and for spring and autumn outdoor growing  
(freely or covered with unwoven fabric)

Round, red, subtle taproots with fine roots

Taproots do not go spongy

Sowing:

Forcing: from mid-February

Outdoor growing: March



## SLOVANA

Early variety, 32-35 days

Good for forcing in unheated premises,  
and early outdoor growing

Double-coloured, red, long columnar  
taproots with white tip at the bottom

White, compact pulp

Overgrown radishes become spongy

Sowing:

Forcing: end of February

Outdoor growing: March and April



## LADA

Medium-early variety, 33-37 days

Good for ALL-YEAR OUTDOOR  
GROWING, NO BOLTING

Medium to large size

Round to flat round, dark red, large  
taproots with white pulp

Highly resistant to bolting even during  
summer season

Roots are highly resistant to cracking and  
becoming spongy

Sowing: from March



## LIDKA

Medium-early variety, 33-37 days

Spring, early summer and autumn outdoor growing

Large, crimson, round taproot

Taproots are highly resistant to cracking and becoming spongy

Medium resistance to bolting

Sowing: from March



## ALBENA

Early variety, 30-34 days

Good for forcing under foil sheets, spring outdoor growing, and also for autumn harvest

White, medium-large, round taproot with white pulp

Resistant to cracking

Highly resistant to bolting

Sowing:

Under the foil sheet: in March

Outdoor, no cover: from March till the end of April, and from 20th July till the end of August



## ZLATA

Medium-late variety, 34-38 days

Yellow radish with great flavour

Good for spring and autumn outdoor growing

Round, light yellow taproot with thin peel, and distinctly less spicy pulp

Resistant to cracking, bolting, and becoming spongy

Sowing:

Under foil sheet: from March

Outdoor, no cover: from April till the end of May, and from 20th July till the end of August



## VIOLA

Late variety, 36-40 days

Good for all-year growing

Round, purple, large taproot with white,  
fine pulp

Resistant to taproot cracking and pulp  
becoming spongy

Highly resistant to bolting

Sowing: from March till the end of August





Variety	Earliness	Recommended cultivation			Taproot			Green tops	Notes
		Plastic greenho use	Field (summer sowing)	Field (spring sowing)	Shape	Colour	Diameter (cm)		
<b>PRIMARA F1</b>	VVE	++	++	++	Round	5	2-3	Low to medium	<b>Uniform shape of taproots, good for late sowing</b>
<b>VINARA F1</b>	VE	++	++	+	Round	5	2-3	Low	<b>Uniform taproot shape</b>
<b>TEKO</b>	VE	++	++	-	Round	5	2-3	Low	<b>No bolting</b>
<b>PRIMA</b>	VE	++	++	+	Round	5	2 – 2.5	Medium	<b>No bolting</b>
<b>KVARTA</b>	VE	+	++	++	Round	7	2.5 – 3.5	Medium	<b>Tetraploid, tolerates low temperatures</b>
<b>SAXA 2</b>	E	++	++	-	Round	5	2 – 2.5	Medium	<b>Traditional variety</b>
<b>GRANÁT</b>	E	++	++	-	Round	7	2-3	Medium	<b>Traditional variety</b>
<b>KVINTA</b>	E	-	++	++	Round	3	2-3	Medium	<b>Bight red</b>
<b>TERCIA</b>	LE	-	++	+	Round	6	2-3	Medium	<b>No cracking</b>
<b>SEXTA</b>	LL	-	++	++	Round	3	2-3	High	<b>No cracking</b>

Variety	Earliness	Recommended cultivation			Taproot			Green tops	Notes
		Plastic greenhouse use	Field (summer sowing)	Field (spring sowing)	Shape	Colour	Diameter (cm)		
<b>DUO</b>	E	+	++	+	Round	Red-white	2.5 – 3.5	Medium	<b>Red-white taproots</b>
<b>SLAVIA</b>	VE	+	++	-	Short, columnar	Red-white	3.5 - 4	Medium	<b>Red-white, elongated taproots</b>
<b>VIOLA</b>	E	+	++	+	Elongated, round	Purple	2-3	High	<b>Attractive purple taproots</b>
<b>BLANKA</b>	E	+	++	+	Elongated, round	White	2-3	High	<b>White round taproot, autumn cultivation</b>
<b>RAMPOUCH</b>	LE	-	++	+	Long, columnar	White	6-10	Medium	<b>White, columnar taproots</b>

## Czech varieties:



Variety	Veg. Period	Earliness	Term	Characteristics
TEKO	28-32	VE	S	No bolting
PRIMA	29-33	VE	S	No bolting or cracking
KVARTA	30-33	VE	S, A	No bolting, low temp.
SLÁVIA	32-34	VE	S	<b>Columnar, red-white</b>
RIA	28-32	VE	S	Light-red, round
POLONEZA	28-33	VE	U, S	Red-white, round, white
ALBENA	30-34			
SLOVANA	32-35	E	S, A	<b>Columnar, white tip</b>
STELA	32-35	E	S, A	Round, red
<b>GRANÁT</b>	33-35	VE	S	Red, round
KVINTA	32-37	E	S, A	Round, red
<b>DUO</b>	33-35	E	U	Flat round, red-white

**U** – universal, sow throughout veget. period

Variety	Veg. Period	Earliness	Term	Characteristic
TERCIA	33-37	LE	S, A	No cracking
RAMPOUCH	36-38	LE	S	<b>Long conical, white, 6-10 cm</b>
LADA	33-37	LE	U	Dark red
<b>VIOLA</b>	35-38	LE	U	Large purple taproot
LIDKA	35-39	LE	U	Red, round
SEXTA	35-39	LL	S, A	Flat round, no cracking
<b>ZLATA</b>	36-40	LL	S, A	<b>Yellow, no spongyness or bolting</b>



TURNIP (*Brassica rapa* var. *rapa*)  
“Harvest-field beetroot”, harvested 3 times  
per year, matures within 2 months  
Grown for: petioles and leaves (spicy)  
Taproot: thermal processing, or in salads  
Low requirements, tolerates  $-7^{\circ}\text{C}$   
Taproot size: 5-8cm Nutritional value

- Ca: 480 mg
- P: 410 mg
- S: 220 mg

Vitamin C: 170 mg



## ALBÍNA

Early variety, 70-80 days

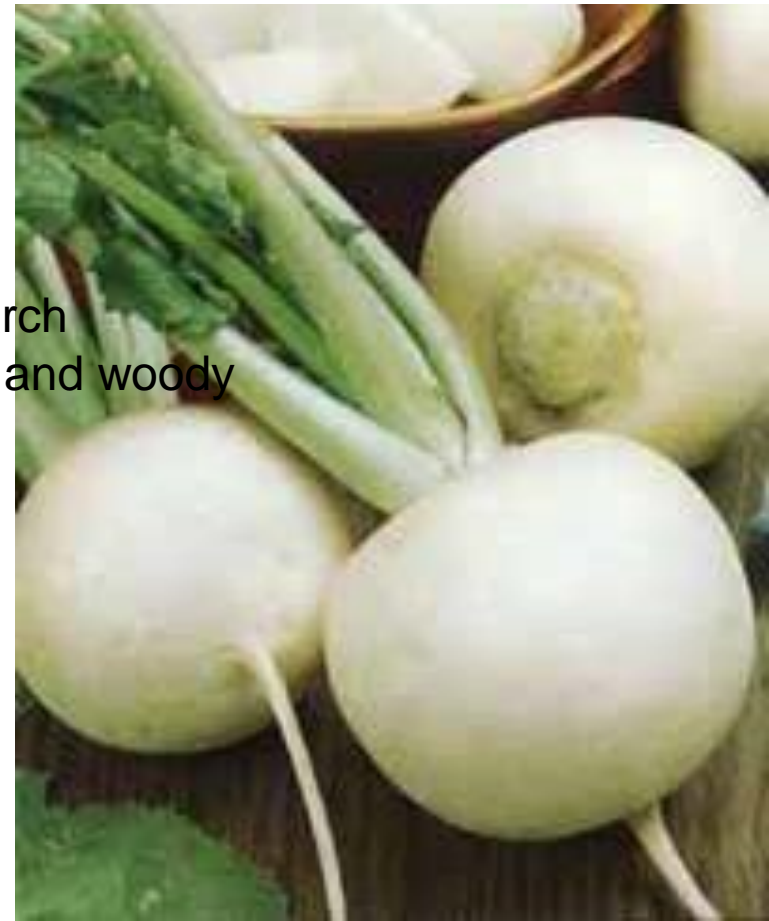
High yield

White, sweetish pulp

Direct consumption

August sowing: stored until March

Resistant to becoming spongy and woody



SWEDISH TURNIP (OR SWEDE) *Brassica napus* var. *napobrassica*  
Taproots have spicy flavour  
Low requirements, tolerates  $-10^{\circ}\text{C}$   
Moist regions (potato growing region)  
Long vegetation period Nutritional value similar to turnip, more aromatic  
Vitamin C: 340 mg/kg



## DALIBOR

Czech variety, veget. period: 145-160 days

Round taproot, red at the top, yellow pulp

Direct consumption, storage

Resistant to tobacco mosaic virus

Sown in April

Recommended spacing: 40 x 30 cm





Foreign varieties

BRORA

Red-blue head

Yellow pulp

Consistent shape MAGRES

Read head

Yellow pulp

BLACK SALSIFY *Scorzonera hispanica*  
Root is too long; if it was shorter (20-25 cm), the plant would be grown much more  
Vegetable for diabetics: contains inulin (diabetics tolerate this starch)  
Cooked, for salads, etc.  
Winters, stays in the field until spring  
Thin roots, wither quickly

- LIBOCHOVICKÝ - ČR
- MERES
- SCHWARZER PETER

