

# TASSEN

## Intermediate Day Red Onion

### OUTSTANDING QUALITIES

- ◆ DARK PURPLE-RED BULB COLOUR
- ◆ VERY EARLY TO EARLY MATURING
- ◆ HIGH QUALITY UNIFORM BULBS
- ◆ VERY GOOD STORAGE ABILITY

**Tassen** is a very early to early maturing intermediate day red onion that was bred in the Southern hemisphere. The bulbs are uniform, very firm with a globe shape and with attractive dark purple-red outer scales. **Tassen** is unique in that it enables growers from intermediate day length areas to be up to a month earlier on the market with high quality onions. **Tassen** is very adaptable, very slow to bolt and suitable to most soil types. **Tassen** falls in the same maturity slot as Hamlotte.




### SPECIAL VARIETAL REQUIREMENTS

- **Tassen** is suited for direct sowing and transplanting in the Northern and Western Cape only
- Contact area representative for a sowing guide

CHARACTERISTIC*	TASSEN
KIND	Onion ( <i>Allium cepa</i> L.)
TYPE	Intermediate day red onion
MATURITY	Very early to early
BULB SHAPE	High globe
BULB SIZE	Medium to large (influenced by plant population)
BULB UNIFORMITY	Very good
NECK SIZE	Very thin
FIRMNESS	Very firm
BULB COLOUR	Dark purple-red
FLESH COLOUR	Dark red
SCALE RETENTION	Excellent
FLAVOUR	Slightly pungent
LEAF GROWTH HABIT	Upright
LEAF COLOUR	Dark green
BOLTING REACTION	Very slow (with due regard to planting date)
DISEASE REACTION (SCIENTIFIC)	-
AVERAGE SEED COUNT	250 - 350 seeds per gram
POPULATION GUIDE	Final stand of 750 000 – 950 000 plants per ha
SEED REQUIREMENT	Direct sowing: 3.5 – 4.0 kg seed per ha Transplanting: 5.0 – 5.5 kg seed per ha
STORAGE	Good
MARKETS / END USE	Export and fresh market
SPECIAL FEATURES	Outstanding quality, excellent yield potential, storage ability

\* Characteristics given are affected by production methods such as soil type, nutrition, planting population, planting date and climatic conditions. Please read disclaimer.

 WARNING: VARIETY PROTECTED UNDER PLANT BREEDERS RIGHTS. UNAUTHORIZED MULTIPLICATION AND/OR MARKETING OF SEED PROHIBITED.

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**Resistance:** is the ability of a plant variety to restrict the growth and development of a specified pest or pathogen and/or the damage they cause when compared to susceptible plant varieties under similar environmental conditions and pest or pathogen pressure. Resistant varieties may exhibit some disease symptoms or damage under heavy pest or pathogen pressure (HR = High resistance, IR = Intermediate resistance).

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## GENERAL TIPS FOR INTERMEDIATE DAY RED ONION PRODUCTION

### Day length

All intermediate day onion varieties require an optimal day length of 12 - 14 h for bulb initiation. If a variety is exposed to less than the required day length, there will be a high percentage non-bulbing plants with thick necks. If a variety is exposed to a longer photo period than is required, even a few days, the young plants will prematurely bulb, leading to reduced bulb size and yield.

### Temperature

Day length is the primary factor in bulb initiation, but is influenced by temperature. Onions need soil temperatures between 15 – 25°C to germinate properly. Vegetative growth is acceptable at 18 – 22°C, but bulbing will be slower. Faster and proper bulbing requires temperatures between 25 – 28°C. Temperatures below 10°C are detrimental and cold damage will occur, especially if the nitrogen availability in the soil is low. When temperatures are below 8 – 13°C near the bulbing stage, the growth is retarded and the plants will bolt.

### Plant population

Plant population influences the bulb size and therefore the final yield. The consumer generally prefers a medium sized bulb (50 – 70 mm). The optimum plant population depends on the cost of the planting material, labour, climate, soil and planting date. The optimum plant population should be between 750 000 – 950 000 plants per hectare.

**Direct sowing:** The suggestion is to sow approximately 3.5 - 4.0 kg seed per hectare, depending on the seed size and germination.

**Transplanting and sets:** The suggestion is to sow approximately 5.0 kg seed for 1 hectare seedlings, depending of the seed quality.

### Nutrition

Onions need well drained soils of 20 cm deep. Onions are sensitive to water-logging. Onions need a pH of 5.5 - 6.5. It lowers the risk of aluminium toxicity and/or boron deficiency is high. Low soil pH also increases the occurrence of certain disease such as *Sclerotium cepivorum* (White rot).

The ratio between nitrogen (N) and potash (K) is very important. Potassium and sulphur play an important role in the keeping ability (storage and shelf life) and health of onions. It is important to keep the ratio between the nitrogen and the potassium at 1 : 1.5. Thick necks in onions is not only an indication of excess nitrogen, it is more likely an imbalance between the nitrogen and the potassium. All the phosphorus (P) and most of the potassium should be broadcasted before planting. The nitrogen component of the fertiliser program should contain a 45 – 50 % ammonium nitrate (N-NH<sub>4</sub>), which should be applied in the beginning of the growth phase. Only nitrate-nitrogen (N-NO<sub>3</sub>) should be applied in the final

growth stage to prevent “green shouldering” on onions and maintain continued growth in the cooler season. On alkaline soils ammonium sulphate nitrate (ASN) should be used. Onions have a very limited root system, therefore it is important to apply nitrogen on a regular basis **before** the bulbing starts.

Sulphur, boron, zinc, magnesium and potassium should always be available in sufficient quantities. Onions are sensitive to high levels of chloride.

**As soon as onions tops start to “fall over”, all fertiliser applications should be stopped.**

### Onion curing

Adequate curing may require 2 - 4 weeks, depending on the weather. The best skin develops at 24 - 32°C. Curing can also be done by forced ventilation in the storage by blowing heated air through the bottom of the onion pile to the top, at 9 - 15 cubic metres per minute per ton. Initial heating (1 day) can be as high as 40°C to heal wounds and then reduce to approximately 32°C.

Onions are considered cured when the neck is tight and the outer scales are dry and make a rustling sound when handled. This condition is reached when onions have lost 3 - 5 % of their weight. If not adequately cured, onions are likely to decay in storage.

### Disease reaction definitions:

**Resistance:** is the ability of a plant variety to restrict the growth and development of a specified pest or pathogen and/or the damage they cause when compared to susceptible plant varieties under similar environmental conditions and pest or pathogen pressure. Resistant varieties may exhibit some disease symptoms or damage under heavy pest or pathogen pressure. Two levels of resistance are defined:

**High/standard resistance (HR):** plant varieties that highly restrict the growth and development of the specified pest or pathogen under normal pest or pathogen pressure when compared to susceptible varieties. These plant varieties may, however, exhibit some symptoms or damage under heavy pest or pathogen pressure.

**Moderate/intermediate resistance (IR):** plant varieties that restrict the growth and development of the specified pest or pathogen, but may exhibit a greater range of symptoms or damage compared to resistant varieties. Moderately/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 or pathogen pressure.

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