

# River Indigo Shrub

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Source: *Indigofera jucunda* | Plantbook

## Part I: General aspects

### 1. Classification

Family: Fabaceae

Scientific name: *Indigofera jucunda*

Common names (including names used by different communities in South Africa): river indigo, showy indigo (Eng.), rivierverbos, pronkverbos (Afr.), umsipane (Xhosa), umnukambiba (Zulu)

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### 2. Origin and distribution

The plant was formerly known as *Indigofera cylindrica*. Scientific investigation in the 1990s has proven that the name *Indigofera cylindrica* had been incorrectly applied to

this species and that the name was synonymous with *Indigofera frutescens*, which is a quite different plant from the Cedarberg fynbos with bright-pink-purple flowers in a lax racemes. The confusion arose because the Cedarberg plant with the purple flowers was named both *Indigofera frutescens* and *I. cylindrica* by different botanists. The name *I. cylindrica* was misapplied to our plant by another botanists. When this was found out, i.e. both *I. frutescens* and *I. cylindrica* rightfully apply to the Cedarberg plant (*I. frutescens* being the current valid name), the plant was given a new name called *Indigofera jucunda*. Confusion still occurs over the name of this plant and you may find it incorrectly labelled in the nursery trade, as well as in some botanical gardens.

The name *Indigofera* means 'bearing indigo', Indigo referring to the dye and the Latin word *fero* meaning 'to bear'. Indigo is one of the oldest colouring agents known to man. It is *Indigofera tinctoria*, a species from the East Indies that yields the dye "Indigo", and has a long history in trade. The species name *jucunda* is a Latin word and it means 'pleasing'. The misapplied name *cylindrica* means 'cylindrical' referring to the shape of the seed pods, while *frutescens* means 'shrubby' or 'bushy'. *Indigofera jucunda* prefers to grow on rock outcrops and rocky hill slopes, often with other trees. It is originated from South Africa.

*Indigofera* is a large genus of over 800 species, mostly herbs and undershrubs, with two tree-like species.

### **3. Production levels and areas**

#### **3.1 Internationally**

*Indigofera jucunda* shrubs are found in all tropical and subtropical countries of the world, with 232 species occurring in South Africa.

#### **3.2 South Africa**

*Indigofera jucunda* shrub production level is not well documented in South Africa. The shrubs are scattered around the KwaZulu-Natal Midlands.

#### **4. Major production areas in South Africa**

It grows wild in the Eastern Cape and southern coastal areas of Kwa-Zulu Natal occurring in bushveld, riverine forest and on sandstones outcrops.

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#### **4. Description of the plant**

*Indigofera jucunda* is a hardy, small evergreen tree (about 3 m) which blooms with sprays of showy pink flowers for an exceptionally long time in summer.

##### **4.1 Stem**

The main stem is greyish brown.

##### **4.2 Leaves**

The leaves are dark green and pinnately compound to 10 cm long. Leaflets are ovate to elliptical which occurs in pairs of 4 to 7 and a terminal leaflet. Leaf base may be heart shaped, 3 to 5 veined at base.

##### **4.4. Flower**

Flowers are small with mauve/pink and white colour and pea-shaped. They are also borne in profusion on short racemes up to 5 cm long during summer, from December through to April. During flowering stage, *Indigofera jucunda* plants are very attractive.

##### **4.5. Fruits/pod**

The fruit is a legume pod of varying size and shape. Fruits pods are 5 cm in length with diameter of 0.5 cm. The pods are smooth, green and mature brown cylindrical with 8 to 10 seeds in each pod, which occur from May to July. They split open and twist to release the seeds when ripe.

#### 4.6. Seed

The seeds are round and amber-coloured, approximately 2 mm in diameter.



Source: SANBI [PlantzAfrican.com](http://PlantzAfrican.com)

#### 5. Cultivars

River indigo (*Indigofera jucunda*) cultivars can be selected based on pericarp thickness. The pericarp (the tissue from the ovary that surrounds the seeds) can be categorised as type I, type II and type III with type I having the thinnest pericarp and fewest layers of sclerenchymatous (stiff) tissue and type III have the thickest pericarp and most sclerenchymatous layers.

Similar to fruit shape, the variation in fruit sizes allows for the thickest and most bountiful fruits to be selected.

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#### 6. Climatic requirements

##### 6.1. Temperature

*Indigofera jucunda* thrives in warm, frost-free regions of the country, but mature plants are semi-hardy to moderate frost; in cold regions plant in sheltered spot and cover the young plants until they are established. It is generally evergreen but can sometimes be semi-deciduous and prefers a warm, sunny position in the garden, although it tolerates semi-shade conditions during both morning and afternoon.

## **6.2. Rainfall**

*Indigofera jucunda* (river indigo) shrub is suitable to average annual rainfall of 640 to 4100 mm.

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## **7. Soil requirements**

River indigo shrub grows quickly and easily in moist soil types but thrives in a rich, loamy well-drained soil. The soil pH should be neutral.

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## **Part II: Cultivation practices**

### **1. Propagation**

Propagation of river indigo is through seeds and cuttings. It is easily propagated through seeds than cuttings. Cuttings take time to adopt the conditions of soil and climate so they take time to grow. Seeds are sown during spring and germinate easily within 3 to 6 weeks.

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### **2. Soil preparation**

Existing vegetation or grass should be removed with flat spade. It is very important to do this thoroughly in order to ensure that grass or weeds do not grow again. Then well rotten manure, leaf mold (composted leaves) or compost should be spread over the bed. The soil should be turned to a depth of 20 cm with a garden spade, fork or rototiller while breaking up heavy clods.

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### **3. Planting**

The seedlings should be pricked out and planted in containers until they reach 20 cm in height. The seedlings are transplanted to open field in spring. The river indigo normally take 2 to 3 years to bloom.

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#### **4. Fertilisation**

River indigo shrub can be fed with a balanced organic fertiliser during summer. The roots can be mulched with compost and watered regularly during dry summer time.

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#### **5. Irrigation**

River indigo shrub requires regular water during summer.

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#### **6. Weed control**

The suitable time to control weeds is during soil preparation. Mulching could be used to suppress weeds. Pre-emergence registered herbicides can be applied for weeds that appear before planting but herbicides label instructions should be followed to avoid contamination. It is recommended that only registered and recognized chemicals can be used.

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#### **7. Pest control**

River indigo shrub does not suffer from any serious pests. The flowers attract insects, which in turn are eaten by birds.

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#### **8. Disease control**

River indigo shrub does not suffer from any serious diseases.

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## **9. Other cultivation practices**

### 9.1 Pruning

*Indigofera jucunda* branches should be pruned during winter when the plant is dormant and this will encourage bushy new growth with abundant flowers in summer.

### 9.2 Mulching

A thick layer of compost should be applied for purpose of soil moisture and erosion.

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## **10 . Harvesting**

River indigo shrub flowers are harvested from December to April when dainty spikes are up to 5 cm long. River indigo flowers are picked early in the day for quality reasons. Flowers are harvested using shear scissors.

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### **Part III: Post-harvest handling**

The handling space should have a clean water source for preparing harvest, treatment and holding solutions, and for use in cleaning the area.

#### 1. Sorting and grading

River indigo flowers are sorted and graded according to maturity, flower number and stem length.

#### 2. Packing

River indigo flower stems are bunched into four groups namely; 5's, 10's, 20's and 75's. The uniformity of river indigo flower bunches depend on maturity and size. The river indigo flower bunches are tied at top and base with either string, wire and elastic bands.

### 3. Storage

There should be a cold storage, shaded place to store the shrubs until they are ready for harvest. Bunches of flowers are orderly packaged to allow good cooling in cold room.

### 4. Transport

River indigo shrub flowers are transported dry and in bulk to the pack shed by tractors and motor vehicles (bakkie) with/without trailers and hand pulled farm carts or carried by hands when grading shed is near.

### 5. Marketing

Fresh river indigo shrubs are sold for local such as hotels, restaurants, funeral parlours, supermarkets, florists and street vendors; as well as export market.

#### Part IV: Production schedules

ACTIVITIES	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Soil sampling						W	W	W				
Soil preparation						W	W	W				
Planting									Sp	Sp	Sp	
Fertilisation	S	S										S
Irrigation	S	S										S
Pest control			A	A	A							
Disease control			A	A	A							
Weed control							W	W				
Pruning						W	W	W				
Leaf sampling												
Harvesting	S	S										S
Marketing	S	S										S

N.B: S-Summer; Sp-Spring; A-Autumn; W-Winter

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## Part V: Utilisation

River indigo shrub flowers are mainly used for home and commercial decoration as well as in bouquets. It is also used as an excellent container plant and is really beautiful planted in groves; it attracts birds and insects to the garden. The shrub is also used for medicinal purposes in humans and animals.

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## Part VI: References

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