



SYRINGA

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Although the syringa, *Melia azedarach* L., family Meliaceae, is popular in South Africa for planting along streets and in gardens, it is rapidly invading the indigenous vegetation in some parts of the country, forming dense thickets. In certain areas large sums of money have already been spent in efforts to arrest its dispersal.

Syringa is also known as Cape lilac, Persian lilac, bead tree, China-berry or azedarach. In Afrikaans it is usually called "sering", or sometimes "maksering", "seringboom", "Kaapse sering" or "bessieboom".

MORPHOLOGY

Syringa is a deciduous tree that usually grows to a height of 12 m, although it can reach a height of

approximately 23 m. It has a thick, reasonably short, upright trunk with a round, open spreading crown. The dark-green leaves are bipinnate and approximately 150 to 800 mm long. The separate leaflet is elliptical, with a sharp tip, and dentate or lobate margins. It is 30 to 50 mm long and 10 to 25 mm wide.

During October and November the tree is covered with lilac florets with a pleasant fragrance that is particularly noticeable during the late afternoon and evening. The florets with their conspicuous purplish staminal columns are borne in large, open clusters at the ends of the branches. Bees visit them for the nectar and pollen.

The fruit is a smooth, green, globose drupe, with a diameter of 10 to 15 mm. It has an unpleasant odour and a very bitter, revolting taste. It matures to



FIG. 1. The typical pale mauve flowers and yellow berries of the syringa



FIG. 2. A dense stand of syringa trees along the Crocodile River

become yellow and wrinkled and it remains attached to the tree for a long time. The smooth, brown, oblong seeds are approximately 3,5 x 1,6 mm in size.

ORIGIN AND DISTRIBUTION IN SOUTH AFRICA

Melia azedarach is indigenous to the Far East - occurring from India, Sri Lanka and tropical China, to the south and to the east, through Malaysia and New Guinea to tropical Australia and the Solomon Islands - and it is to be found mainly in forests. It has long been naturalised in Asia Minor and occurs widespread in the tropical and subtropical regions of the world.

The cultivar occurring in South Africa was imported from India as an ornamental plant. By 1894 it had already been established in Natal. It is planted throughout the Republic, Namibia, Zimbabwe and Mozambique in parks, gardens and along streets for its ornamental and shade value. From here it often spreads by natural means to waste land or alongside rivers, and in many cases it occurs far from plantings. It is a weed in especially the moister eastern parts of the country where it invades even the undisturbed natural bushveld flora.

In the Transvaal syringa is already a common sight along roads, in the veld and especially along river banks in the grasslands of the Highveld, the bushveld of the Middle and the Lowveld and the forests of the escarpment. It is already the dominant tree in the canopy of the banks of many perennial rivers. In the Kruger National Park where there is constant recontamination from the upper reaches of the rivers outside the park, the control of syringa is a never-ending process. Of all the exotic trees growing in the Transvaal, syringa is the most widespread and aggressive one. In Natal it is also considered to be one of the most prominent invader plants.

Syringa occurs in all the temperate, subtropical and all the rainfall regions of South Africa. Mature trees are resistant to considerably high temperatures, cold, frost, sea air, drought and termites. It does better in reasonably dry areas than do most other trees, and it thrives in most kinds of soil, including brackish soils.

PROPAGATION

Syringa is propagated mainly by means of seed. Each fruit contains four or five seeds, thus producing dense groups of up to five seedlings when they germinate in the veld. The fruit is very widely spread by birds, especially mouse-birds (*Colius* spp.) and grey louries (*Corythaixoides concolor*), and in Natal also by fruit-bats. Syringa seeds can also be spread by water in drains, canals and rivers. If the tree is

chopped down, it will coppice and damaged roots readily do the same.

DETRIMENTAL QUALITIES

Syringa can have a most detrimental effect on grazing and ecosystems as it invades and even replaces natural vegetation communities in many parts of the country. The effective dispersal of seeds by water enables the species to invade protected areas far from the parent plant. The rate at which syringa is spreading, is a matter of grave concern.

The large numbers of fruit annually produced by syringa, and the fact that the fruit remains on the tree for such a long time, make the berries an attractive and easy food source for fruit-eating birds. It may even happen that these birds will come to prefer syringa berries to the fruit of indigenous trees that are dependent solely on birds for seed dispersal. This may cause the numbers of certain plant species to diminish locally.

It is generally accepted that parts of the plant, and the berries, in particular, are poisonous for humans and various animal species. Four melia toxins have already been identified in the fruit flesh, although it does not always appear to be present in all syringa trees. Furthermore, it has to be taken in large quantities to be lethal. Children are said to have died after having eaten of the berries and various animal species, especially ruminants, have also been poisoned by them. However, different authors have many divergent opinions on the toxicity of the plant. As most animals find the berries unpalatable, they are seldom eaten.

CONTROL

Seedlings can be pulled out manually when the soil is moist, and larger plants can be ring-barked to prevent coppicing.

At present triclopyr (commercially available as Garlon 4) is registered for the chemical control of syringa. A 2% solution in diesel is painted onto the stem up to a height of 25 cm above the soil surface. Details concerning the trade names, dose and method of application are to be found in *A guide to the use of herbicides*. It is available from the Directorate of Agricultural Information, Private Bag X144, Pretoria 0001. This publication is updated annually and therefore contains the latest information on chemical control.

LEGISLATION

So far there is no legislation concerning syringa. However, the plant is expected to be placed on the weed list soon, so that it can be controlled wherever it poses a threat to agricultural resources.