A.1 JOINTED CACTUS

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Jointed cactus (*Opuntia aurantiaca* Lindley; family: Cactaceae) is South Africa's most noxious and costly weed. Infestations limit the grazing potential of the veld because nutritive plants are replaced and grazing animals are injured. The sharp spines penetrate the skin causing sores, abscesses and often lameness in smaller stock. Spiny joints also become lodged in the hair and wool of animals resulting in inconvenience to handlers and downgrading of wool. In the past dense, uncontrolled infestations have made farming altogether impossible and resulted in marked devaluation of the infested land. The continuing high cost of control constitutes a serious drain on landowners and the State.

Jointed cactus is an inconspicuous, perennial succulent which seldom exceeds 500 mm in height in open veld. The plant can consist of one to 100 or more spiny, elongated, fleshy segments or joints. Each joint is 50 to 200 mm long, 10 to 30 mm wide and contains 10-to-30 mm long spines. Young joints are slightly flattened and have a bright green colour while older joints become cylindrical with a corky surface. The joint from which a plant originated may become buried with time, in which case it develops into a tuber and functions as a storage organ.

The length of joints and spines is influenced by habitat and climate. Plants growing under bush in high rainfall areas develop slender, long joints with shorter and thinner spines. When supported by bush the plant can grow up to heights of 2 m. During periods of drought the joints which are exposed to the sun assume a red to purplish colour.

The spines arise in groups from greyish-coloured areas on the joints called areoles. The areoles also contain many minute thorns or glochids. The spines have minute barbs at their extremities which result in the joints becoming attached to any passing object with surprising ease. The joints become detached from the plant very easily, especially during periods of drought and during winter.

Jointed cactus flowers between November and January. The flowers are bright yellow, 30 to 40 mm long, and look like miniatures of the more fimiliar flowers of prickly pear. Small green to reddish club-like fruits are formed which readily become detached from the plant.

Distribution

This species is probably of hybrid origin and originated in eastern Argentina and Uruguay. It is believed to have been introduced into Cape Town as a collector's item in 1843. It was taken to the Eastern Cape by early settlers and planted as an ornamental in rockeries and grave-yards. It soon escaped into the veld and was first reported as a weed in the Bedford district in 1892.

Today dense infestations are found in the Eastern Cape between the Gamtoos River and Transkei, in the North-Eastern Cape on the banks of the Vaal River between Christiana and Douglas, and in Natal. Infestations have also been reported from the Orange Free State, Transvaal and Zimbabwe. It is estimated that the total area infested in South Africa exceeds 1 million hectares.

The weed has by no means reached its limits of distribution in this country. It is well adapted to grow in a diversity of habitats from sparse, drought-adapted communities receiving 150 mm rainfall per year, to dense Valley Bushveld where the rainfall exceeds 800 mm per year. The plant does not establish well in winter rainfall areas or in dense grassveld.

Jointed cactus is also a serious problem in New South Wales and Queensland, Australia, where it is known as tiger pear.

Growth and reproduction

Formation of new joints commences in early spring and continues until March or April. Joint drop normally occurs in winter, but may also take place whenever the plant is under prolonged water stress.

Jointed cactus propagates exclusively by vegetative means; all the seeds produced are sterile. Detached joints and fruits which fall to the ground will root and develop new joints whenever conditions are favourable. Due to a specialised type of metabolism, which is unique to many succulents, detached joints and fruits can survive for extended

FIG. 1 - A jointed cactus plant

FIG. 3 - A dense infestation of jointed cactus

FIG. 2 - Only large clumps of jointed cactus are conspicuous. Infestations such as this contain many smaller plants and isolated joints which are not visible on casual inspection

FIG. 4 - Detached joints are easily spread by animals

periods under natural conditions. Whole plants also have a remarkable drought resistance.

Joints are disseminated by water; new infestations often appear on river banks or after floods. Joints are also spread when they adhere to livestock, wild animals and vehicles. Remote infestations often originate from cultivations in pots, rockeries or on graves. From here, joints invariably find their way into the surrounding veld either by natural means, or by the dumping of excess growth.

Legislation

Jointed cactus is a proclaimed weed throughout the Republic of South Africa and in accordance with section 2(1) of the Weeds Act no. 42 of 1937, as amended, every occupier, or, where there is no occupier, every owner of land must eradicate jointed cactus growing on such land. It is the duty of an occupier (or owner) of land to report infestations to the nearest extension office of the Department of Agriculture and Fisheries, or alternatively, to the nearest office of the South African Police.

Control

The latest developments in the control of jointed cactus are reviewed in leaflet A.1.1.

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