

Coastal Plants - Spinifex



In partnership with...



Western Bay of Plenty
District Council



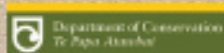
Tauranga City



Whakatane District
Council



Otago District Council



Department of Conservation
Te Papa Atihanga

working together to care for our coast



Coast Care
BOP
Programme

Coast Care Information Brochure Number 6

Spinifex, Kowhangatara

Spinifex sericeus

Spinifex is a native species and is common on the sand dunes around the coasts of New Zealand, Australia and New Caledonia.

It is identifiable by its rough or coarse grass appearance, silvery colour, and creeping runners that run down or across the dunes.

Other features include the large seedheads of radiating spikes (female, seed bearing inflorescence), which, once mature or ripe, blow free to roll about the beach until becoming lodged and releasing their seeds. Spinifex also spreads by horizontal creeping runners which produce roots and side runners at each leaf junction.

Spinifex has separate, and usually very large areas (>100m²) of male or female plants. The different genders can only be detected at flowering, usually in November/December.

Spinifex grass is an important pioneer sand stabilising plant occurring naturally on the coastal dunes of New Zealand. Spinifex is salt tolerant, and once established can withstand extreme temperatures, drought, and has the ability to grow through accumulations of wind blown sand.

Many areas of our coastline have been modified and disturbed by farming, recreational activities and development. As a result, the native dune binding species have been damaged or destroyed, leaving areas of dune unstable and without protection from wind erosion.

Spinifex grows well on all parts of the narrow frontal dune and is usually the dominant species along with pingao (*Desmoschoenus spiralis*) colonising the seaward slope. Both spinifex and pingao are the main species used in planting programmes for dune revegetation programmes.

Because of its high tolerance to salt water, spinifex grows down to the toe of dunes and helps build up the dune front. The upright leafy shoots reduce surface wind velocity resulting in sand deposition with frequent burial of the leaves and stems. Cycles of sand deposition and vegetative growth are an important feature of the dune forming process.

Growing Spinifex

The seed is contained in a seed head resembling a spiky ball. Each seed head can contain up to 150 spikelets, however usually less than one third have formed seeds attached. When the seed is mature, the seed ball is released from the plant and is often found being blown along a beach and over dunes by the wind.

Collect entire seed heads by either collecting fallen seed heads or those which come away easily by hand from the parent plant.

Avoid picking male flower heads as they contain no seeds, and do not pick half formed heads - they are either still developing or may have some defects. Seed is attached to the inner end of each spikelet and is encased in a husk. The collected seed can be sown at a depth of 2-3cm leaving the tail above the surface, in a sandy potting mix, watered daily and kept between 15°C - 25°C - a small glasshouse or similar will provide a suitable environment. Sow 2-3 seeds per container to avoid later disturbance of seedlings, as this can result in large losses due to root damage. Germination occurs between 2-6 weeks after sowing and is often sporadic.



Spinifex male flowers

A mixture of 50/50 coarse sand and standard potting mix is recommended, with a slow release fertiliser to assist plant growth. Once planted in bags or root trainers, ensure the plants don't become waterlogged - they require good free drainage.

Trials of growing spinifex have included taking cuttings and the planting of whole seed heads. Cuttings - are taken from healthy long-growing shoots. Place the cutting in a coarse sand mix and water regularly. Roots may begin to appear after two weeks, and cuttings can then be planted out into bags or root trainers, but this is very labour intensive.

Whole seed head plantings - in some areas whole seed heads have been planted in a trench - 100-150 mm deep - covered with sand and left to germinate naturally. Lower rates of success have been achieved, but this is a quick, low input method. Placement of slow release fertiliser with seed heads can assist growth considerably.

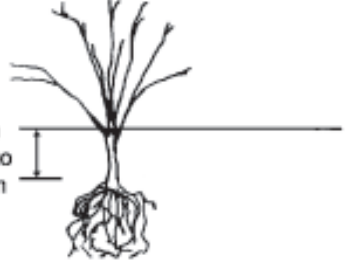
Young, nursery raised plants should be watered carefully during the summer period.

Planting out should be undertaken between June and September to ensure good establishment for the coming summer period.

It is vital to ensure deep planting, with the top of the potting mix about 100-200 mm below sand level, to prevent wind erosion exposing the root ball, and to place the rootball deep into reliably damp sand.

PLANTING SPINIFEX AND PINGAO

Plant 100 to 200mm below ground level to protect root ball from wind exposure and dehydration.



Titles in this information series are:

- | | | | |
|-------|---|--------|---|
| No. 1 | Bay of Plenty Coast Care | No. 7 | Control of Vehicle Damage in Sand Dunes |
| No. 2 | Formation and Functions of Beaches and Sand Dunes | No. 8 | Sand Ladders - Getting you to the Beach |
| No. 3 | Foredune Vegetation | No. 9 | Backyard Buffers |
| No. 4 | Dune Usage | No. 10 | Coast Care Code |
| No. 5 | Coastal Plants - Pingao | | |
| No. 6 | Coastal Plants - Spinifex | | |

Contact

Prepared by Greg Jenks, Coast Care BOP Programme. For further information on Coast Care groups and programmes contact your local District Council or Environment Bay of Plenty's Coast Care Coordinators at:

Telephone: 0800 ENV BOP (368 267)

Facsimile: 0800 ENV FAX (368 329)

Pollution Hotline: 0800 73 83 93

Email: info@envbop.govt.nz

Website: www.envbop.govt.nz

Address: 5 Quay Street, P O Box 364, Whakatane, New Zealand

Coast Care BOP Programme, Environment Bay of Plenty in partnership with Tauranga, Opotiki, Western Bay of Plenty and Whakatane District Councils, and Department of Conservation.

