

Dwarf Eel-Grass

(*Zostera japonica*)



Family name: Zosteraceae (Eelgrass family)
Common name/s: Dwarf Eel-Grass, Japanese Eelgrass, Asian Eelgrass



Dwarf Eel-Grass (*Zostera japonica*) is a small seagrass known for its ability to form dense underwater meadows in intertidal and shallow subtidal zones. While not currently considered invasive in Ireland, it poses a potential risk to coastal habitats if introduced.

The plant spreads through seeds and rhizome growth, making management challenging. Control measures include mechanical removal and monitoring to prevent accidental spread. In regions where it becomes invasive, Dwarf Eel-Grass can outcompete native species, alter sediment dynamics, and impact local marine ecosystems.

Description - Dwarf Eel-Grass is a small marine seagrass noted for its fine, grass-like leaves and its ability to form dense underwater meadows in intertidal and shallow subtidal zones. It can become invasive, altering local ecosystems.

Key characteristics include:

Size: The leaves typically grow to a length of 10 to 30 cm, but can reach up to 50 cm in some cases, with a width of 1-3 mm.



Leaves: The leaves are narrow, linear, and ribbon-like, with rounded tips, and are often bright green.

They grow in clumps from a rhizome and can appear slightly wavy underwater.

Flowers: Produces small, inconspicuous flowers within sheaths at the base of the leaves.



The flowering period occurs from spring to autumn, depending on environmental conditions.



Fruit: Forms small seeds that develop within elongated fruiting structures attached to the rhizome. The seeds can be dispersed by water currents.



Rhizomes: The plant spreads through creeping rhizomes, which are white to pale brown, allowing it to form dense mats or meadows over time. The roots extend from the rhizomes and anchor the plant to the substrate.

Habitat - Dwarf Eel-Grass is native to the coastal regions of the western Pacific, including Japan, Korea, China, and Russia. It has been introduced to other regions, such as the Pacific coast of North America. It thrives in:

- Intertidal and Shallow Subtidal Zones: Commonly found in mudflats, sandflats, and sheltered bays, where it can tolerate periodic exposure during low tides.
- Estuaries and Coastal Lagoons: Grows in brackish water environments, where fresh and saltwater mix, providing ideal conditions for its growth.
- Soft Sediment Substrates: Prefers sandy or muddy substrates in areas with low to moderate water movement.

The plant is highly adaptable and can tolerate a range of salinity levels, although it prefers moderate salinity and clear, nutrient-rich waters.

Status in Ireland - In Ireland, Dwarf Eel-Grass is not currently widespread or considered a significant invasive threat.

However, monitoring is recommended in areas with suitable habitats, particularly in coastal estuaries and sheltered bays, to prevent potential establishment and spread from introduced populations.

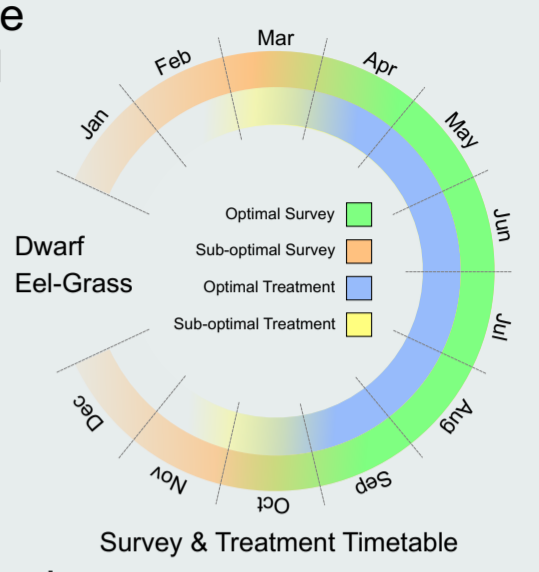
Reproduction and Spread - Dwarf Eel-Grass spreads through both sexual reproduction (seed production) and vegetative propagation (rhizome expansion):

- Seed Dispersal: The seeds are dispersed by water currents, allowing the plant to colonise new areas. Seeds can remain viable in the sediment for a time, potentially germinating in suitable conditions.
- Vegetative Propagation: The plant primarily spreads through rhizome growth, forming dense mats that can expand over large areas, often outcompeting other seagrasses and benthic species.

Management and Control - Controlling Dwarf Eel-Grass can be challenging due to its growth in sensitive intertidal and subtidal habitats:

- Mechanical Control: Manual removal or raking may be used in small areas, but care must be taken to minimise disturbance to the substrate and surrounding vegetation. Mechanical methods must ensure that rhizomes and fragments are completely removed to prevent regrowth.

- Biological Control: Currently, there are no widely accepted biological control methods for Dwarf Eel-Grass.
- Preventative Measures: Monitoring areas where the plant may establish, such as estuaries and coastal lagoons, is important for early detection.



Limiting the movement of boats and fishing equipment between infested and non-infested areas can help prevent accidental spread.

Ecological Impact - Dwarf Eel-Grass can have several ecological impacts, particularly in regions where it becomes invasive:

- Competition with Native Species: Can displace native seagrasses and other benthic species by forming dense mats, reducing biodiversity in the affected areas.
- Alteration of Sediment Dynamics: The dense growth can trap sediment and organic matter, potentially changing the composition and stability of the substrate.
- Impact on Local Fauna: While Dwarf Eel-Grass can provide habitat for some marine species, it can also disrupt existing ecosystems, affecting species that depend on native seagrasses for food or shelter.



For further information and free advice, please contact:
 Japanese Knotweed Control Ltd.



Email: mail@jkc.ie
 Tel: +353 (0)86 250 8805
 Web: www.jkc.ie

