

Sea-Buckthorn

(*Hippophae rhamnoides*)



Family name: Elaeagnaceae (Oleaster family)

Common name/s: Sea-Buckthorn, Sallow Thorn, Sandthorn



Sea-Buckthorn (*Hippophae rhamnoides*) is a spiny, deciduous shrub, known for its bright orange berries and silvery-green leaves. In Ireland, it is considered an invasive species, especially in coastal areas and dunes, where it can spread rapidly and outcompete native vegetation. The plant reproduces through seed dispersal and suckering, making management challenging.

Control strategies include mechanical removal, herbicide use, and integrated management approaches. If left unmanaged, Sea-Buckthorn can significantly impact local biodiversity, soil composition, and coastal dynamics.

Description - Sea-Buckthorn is noted for its bright orange berries and dense, silvery-green foliage. It is well adapted to sandy, nutrient-poor soils and is often used for erosion control and land reclamation. In some regions, including parts of Ireland, it has become invasive, spreading rapidly and forming dense thickets that can outcompete native vegetation.

Key characteristics include:

Height: Typically grows to a height of 2 to 6 metres, but can reach up to 10 metres in ideal conditions.

Leaves: The leaves are narrow, lance-shaped, and 3-8 cm long, with a silvery-green colour due to a dense covering of scales on both surfaces. They are arranged alternately along the stem.

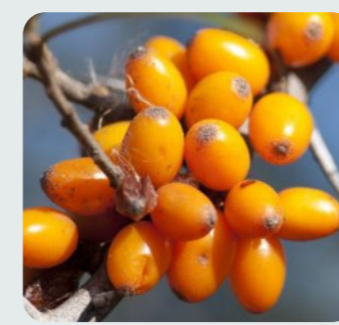


Flowers: Produces small, inconspicuous yellowish-green flowers in early spring, before the leaves appear.

The plant is dioecious, meaning there are separate male and female plants. Male flowers appear as small catkin-like clusters, while female flowers grow singly or in small groups along the stems. They bloom in early spring, often before the leaves fully develop, enabling pollination by wind



Fruit: Female plants produce bright orange berries in dense clusters along the branches, typically from August to December. The berries are rich in vitamins and have a sour taste.



Stem: The stems are thorny and woody, with a rough, brown bark. The branches often grow in a spreading or arching fashion. Often multi-stemmed and capable of forming dense thickets through suckering.

Root: Has a deep, extensive root system with nitrogen-fixing nodules, which help it thrive in nutrient-poor soils and contribute to soil stabilization.



Habitat - Sea-Buckthorn is native to coastal areas of Europe and Asia, where it grows in sandy soils and exposed conditions. In its introduced range, it thrives in:

- Coastal Cliffs and Sand Dunes: Commonly found along coastal cliffs, beaches, and sand dunes, where it helps stabilize shifting sands.
- Riverbanks and Floodplains: Can establish in riparian zones, particularly on gravelly or sandy riverbanks.
- Disturbed Sites: Often planted for land reclamation and erosion control on disturbed or degraded land, such as mines, quarries, and roadside embankments.



The plant prefers well-drained, sandy or gravelly soils and can tolerate saline conditions. It grows best in full sun and does not tolerate shade well.

Status in Ireland - In Ireland, Sea-Buckthorn is considered an invasive species, particularly in coastal areas and sand dunes, where it can spread rapidly and form dense thickets. It poses a threat to native dune vegetation, altering the structure and composition of these sensitive habitats. Sea-Buckthorn is sometimes planted for coastal stabilization, but its invasive potential requires careful management.

Reproduction and Spread - Sea-Buckthorn reproduces through both seed production and vegetative propagation:

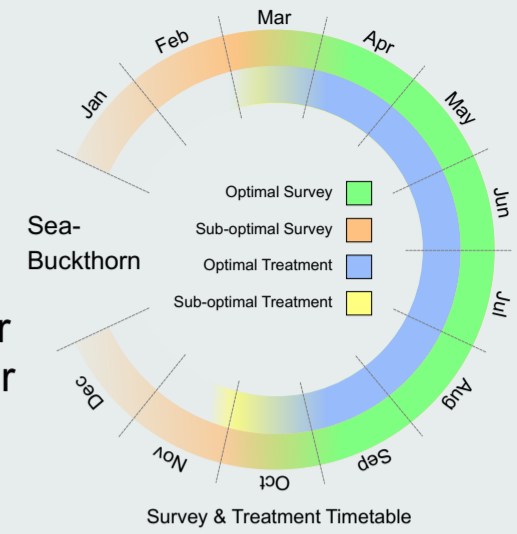


- Seed Dispersal: The seeds are dispersed by birds and mammals that eat the berries, as well as by water and wind. The seeds have a high germination rate in suitable conditions.
- Suckering: The plant spreads through root suckers, which can rapidly form dense thickets and expand the plant's range, especially when the soil is disturbed.

Management and Control - Controlling Sea-Buckthorn can be challenging due to its extensive root system and ability to regenerate from suckers. Management strategies include:

- Mechanical Control: Cutting or digging out plants can help reduce biomass, but all root material should be removed to prevent resprouting. Repeated cutting or mowing may weaken the plant over time.

- Chemical Control: Herbicide treatments, particularly with products containing glyphosate or triclopyr, can be effective when applied to cut stumps or young regrowth. Multiple applications over several years may be necessary for effective control.



- Integrated Management: Combining mechanical and chemical methods, such as cutting followed by herbicide application, can improve results.

- Preventative Measures: Avoid planting Sea-Buckthorn near sensitive habitats, and ensure that bird-dispersed seeds are managed to prevent spread.

Ecological Impact - Sea-Buckthorn can have significant ecological impacts, particularly in areas where it becomes invasive:

- Competition with Native Species: Forms dense thickets that outcompete native plants, leading to reduced biodiversity and altering the structure of plant communities.
- Soil Alteration: The plant's nitrogen-fixing ability can change soil nutrient levels, potentially making the habitat less suitable for native species adapted to low-nutrient conditions.
- Impact on Dune Systems: In coastal areas, the dense growth can stabilize shifting sands, but this can alter natural dune dynamics and disrupt habitats for species that rely on open sand.



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