



Picea abies 'Inversa' 'Inversa' Norway Spruce¹

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INTRODUCTION

If left unpruned and untrained, this weeping, bush form of Norway Spruce only reaches a height of one-and-one-half feet but spreads widely across the ground, often reaching a width of 10 feet or more, making it quite spectacular for drooping over raised planters or retaining walls (Fig. 1). However, when staked to form an upright trunk, the densely-foliated branches sweep downward with branch tips pointing out and up, and the entire plant forms an irregular, upright, weeping silhouette. Quite spectacular but lots of work is required to get the plant to make a tree. This is an exquisite plant which can undeniably 'make' an entire landscape.

GENERAL INFORMATION

Scientific name: *Picea abies* 'Inversa'

Pronunciation: PIE-see-uh AY-beez

Common name(s): 'Inversa' Norway Spruce

Family: *Pinaceae*

USDA hardiness zones: 2B through 7A (Fig. 2)

Origin: not native to North America

Uses: Bonsai; screen; specimen; no proven urban tolerance

Availability: somewhat available, may have to go out of the region to find the tree

DESCRIPTION

Height: 30 to 40 feet

Spread: 10 to 15 feet

Crown uniformity: symmetrical canopy with a regular (or smooth) outline, and individuals have more

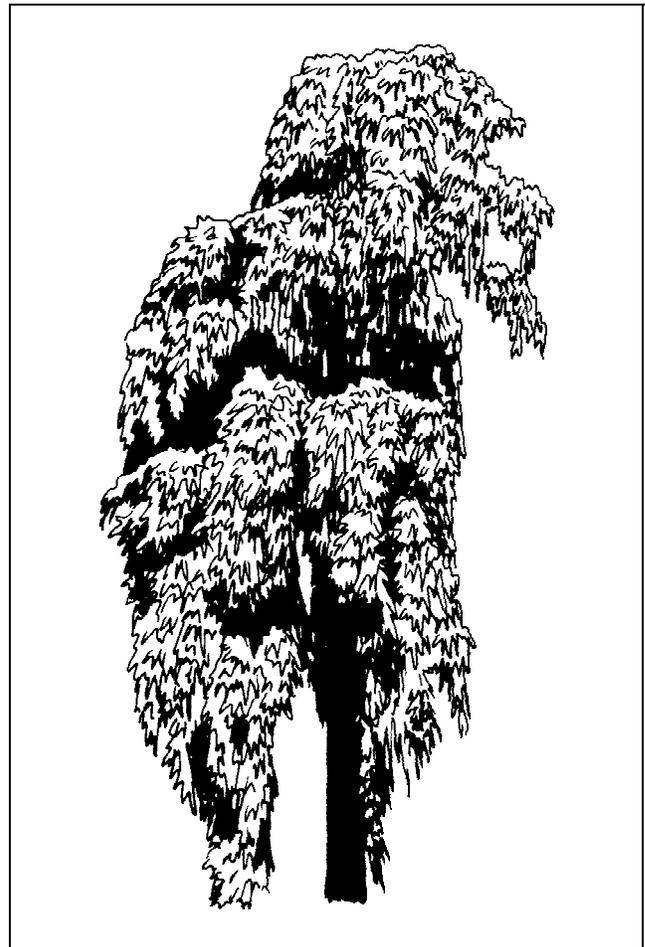


Figure 1. Mature 'Inversa' Norway Spruce.

or less identical crown forms

Crown shape: weeping

Crown density: moderate

Growth rate: slow

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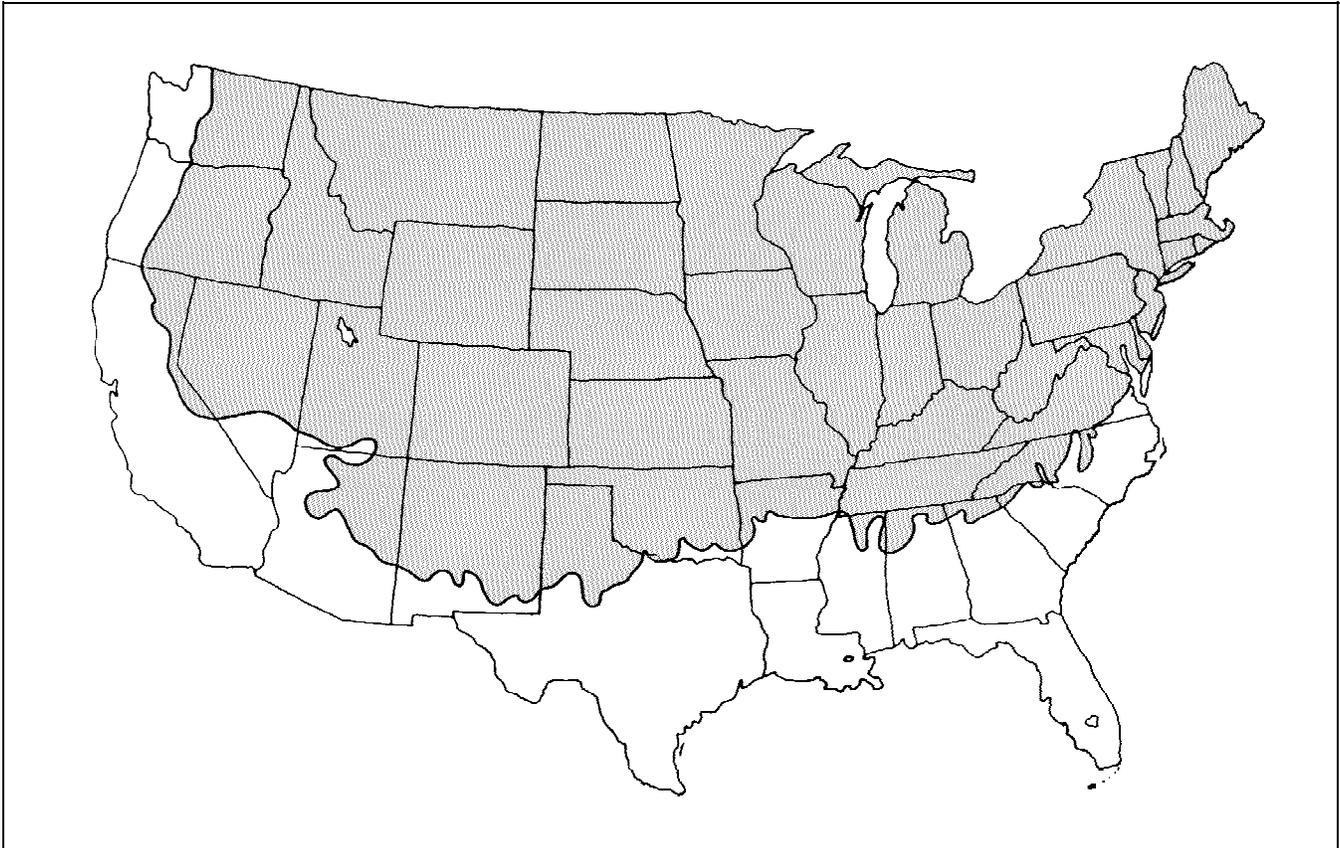


Figure 2. Shaded area represents potential planting range.

Texture: fine

Foliage

Leaf arrangement: alternate; spiral (Fig. 3)

Leaf type: simple

Leaf margin: entire

Leaf shape: needle-like (filiform)

Leaf venation: parallel

Leaf type and persistence: evergreen; needle leaf evergreen

Leaf blade length: less than 2 inches

Leaf color: green

Fall color: no fall color change

Fall characteristic: not showy

Flower

Flower color: pink

Flower characteristics: inconspicuous and not showy

Fruit

Fruit shape: elongated; oval

Fruit length: 3 to 6 inches

Fruit covering: dry or hard

Fruit color: brown

Fruit characteristics: does not attract wildlife; no significant litter problem; persistent on the tree; showy

Trunk and Branches

Trunk/bark/branches: droop as the tree grows, and will require pruning for vehicular or pedestrian clearance beneath the canopy; not particularly showy; should be grown with a single leader; no thorns

Pruning requirement: requires pruning to develop strong structure

Breakage: resistant

Current year twig color: brown

Current year twig thickness: medium

Culture

Light requirement: tree grows in full sun

Soil tolerances: clay; loam; sand; slightly alkaline; acidic; occasionally wet; well-drained



Figure 3. Foliage of 'Inversa' Norway Spruce.

Drought tolerance: moderate

Other

Roots: surface roots are usually not a problem

Winter interest: no special winter interest

Outstanding tree: not particularly outstanding

Invasive potential: little, if any, potential at this time

Verticillium wilt susceptibility: not known to be susceptible

Pest resistance: very sensitive to one or more pests or diseases which can affect tree health or aesthetics

USE AND MANAGEMENT

'Inversa' Norway Spruce tolerates most acid soils if moist and transplants easily if balled and burlapped or potted. Many small-diameter roots originate from the base of the trunk and they are often found fairly close to the surface of the soil. This allows them to tolerate wet soil fairly well although trees do fine with no irrigation, even in clay. The root system is very dense and other plants often grow poorly beneath the canopy.

Pests

Mites, aphids and bagworms are the most common pests.

Mites are the worst problem, and in hot weather they can build to populations which require control. They can be a major problem in summer after hot dry weather, especially near concrete, buildings, and other urban surfaces which reflect heat. The small insects can't be readily seen with the naked eye. The first noticeable symptoms are yellowing at the base of the oldest needles on infested branches. Close inspection with a magnifying glass will confirm the presence of the mites.

Two gall commonly attack Spruce. Eastern Spruce gall adelgid forms pineapple like galls at the base of twigs. Galls caused by Cooley's Spruce gall adelgid look like miniature cones at the branch tips. The gall adelgids do not kill trees unless the infestation is heavy. A few galls on a large tree are not serious.

Bagworms make a sack by webbing needles and debris together. Small numbers may be picked off by hand or use *Bacillus thuringiensis*.

Spruce budworm larvae feed on developing buds and young needles. The yellowish brown caterpillars are difficult to see.

The Spruce needle miner makes a small hole in the base of a needle then mines out the center. Dead needles are webbed together and can be found on infested twigs.

Pine needle scale is a white, elongated scale found feeding on the needles only. Populations would have to be quite high to cause major damage.

Sawfly larvae may feed on the needles. One infestation will usually not kill the tree.

Diseases

Cytospora canker infects a branch then eventually kills it. The lower branches are usually attacked first then progressively higher branches. The needles turn brown to reddish brown and eventually drop off. White resin patches are seen on infected branches. Prune off infected branches. Be certain to water Spruces during dry weather. Blue Spruce is particularly susceptible.

Spruce may be attacked by needle casts. One causes needles to turn yellow or brown and drop off. Another, affects the lowest needles first then moves up the tree. Infected needles are a mottled yellow.

Several rust diseases attack Spruce but these are rarely seen. Infected needles turn yellow and drop off.