



JUNIPER TREE NURSERY

Growing The Future Forest Today.
A Promise We've Been Keeping Since 1957.



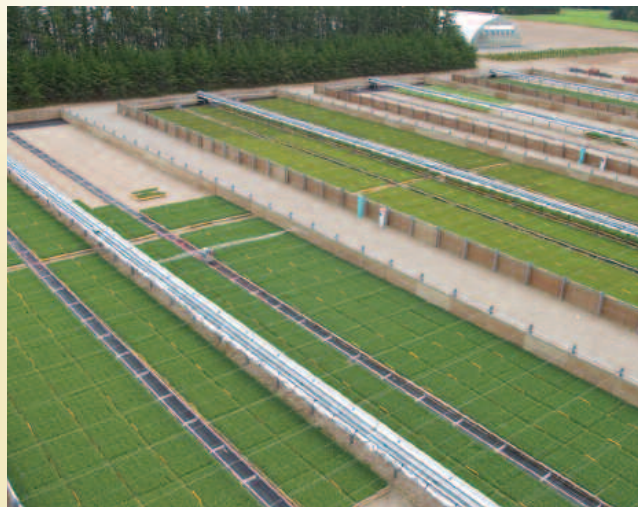
JUNIPER TREE NURSERY

J.D. Irving, Limited has had an active tree growing program since 1957 as part of our responsible forest management practices. The Juniper Tree Nursery in Juniper, New Brunswick, produces approximately 25.5 million high quality seedlings and rooted cuttings a year for planting on land managed by our company. That's more than one tree for every one harvested! Species planted are determined by site conditions such as soil type, drainage and elevation. Reforestation species produced are black spruce, white spruce, red spruce, Norway spruce, white pine, jack pine, red pine and cedar. If the conditions determine that mixed species are required for planting, the trays of seedlings are mixed right at the nursery.

Juniper Tree Nursery in Juniper, New Brunswick started out as a bareroot (field grown) nursery in 1957. The greenhouses at the nursery were updated in 1984 with the addition of new technology and container stock production facilities.

The present facilities at Juniper include six large greenhouses, eight smaller greenhouses, fourteen outdoor holding areas with black-out systems, a shade frame and specialized handling and shipping equipment. A garage, office, refrigeration storage, warehouse and automated seed filling line support seedling production.

Juniper Tree Nursery is one of the most modern and efficient tree nurseries in North America and has produced over 500 million seedlings.





GREENHOUSES

Most seedlings produced at the Juniper Nursery are grown from superior seed collected from our seed orchard in Parkindale, New Brunswick. This seed is collected from the strongest growing trees across New Brunswick, Nova Scotia and Maine for diversity and hardiness. The seed is mechanically sown into multi-pot container trays (holding 67 seedlings) that are prefilled with growing medium. The medium is a mixture of peat moss and vermiculite, which ensures adequate aeration, drainage and vigorous seedling growth. The filling line is capable of seeding 1/2 million trees per 9-hour day.

Inside each large greenhouse 1.9 million seedlings are grown with automatic fertilizing and irrigation equipment. From the time of germination to the time of shipment, the seedlings are closely monitored with the aid of a computer-based system that controls conditions in the greenhouse environment and provides continuous information about the greenhouse environment. The seedling crops are routinely monitored to track growth performance and nutrient levels. This information is used when making fertilizer decisions for optimum seedling performance.





HOLDING AREA

Two greenhouse crops of trees are produced each year. The first, started in March, is grown in greenhouses until the end of May. The trees are then moved outside to the holding area in preparation for planting in July and August of the same year. The second crop is started in June, then in October it is moved to the outside holding area where it is maintained until planting in May and June of the following year.

Water and nutrients are applied in the holding area just as they are in the greenhouses. The holding area has high plywood side walls and a retractable curtain to protect the actively growing seedlings from night frost. The retractable curtain is also used to reduce the daylight hours, which simulates fall and prepares the seedlings for out-planting (without being damaged by drought and early frost). During the winter the greatest risks are freezing and foliar desiccation. To protect the seedlings from extreme cold and wind, the nursery is equipped with artificial snow making equipment.

SEEDLING DELIVERY

During the planting season, (April to mid-September), a fleet of specially equipped truck and trailer units deliver over 500,000 seedlings per day to the planting sites in New Brunswick, Nova Scotia and Maine. The empty containers and pallets are returned to the nursery for reuse.





GROWING TREES FROM CUTTINGS

In some cases planting stock is produced from rooted cuttings, (as is common in houseplants), instead of the usual seed method. This technique is used to provide planting stock from small amounts of seed from families selected for particular traits such as resistance to insect attack, superior growth or quality characteristics. The procedure involves growing the desirable seeds in containers and repotting as the seedlings grow. They are pruned to a hedge shape to promote many branches. The branch tips are then clipped off for rooting in the greenhouse. A single hedge plant is used for up to four years and may supply up to 300 cuttings over that time.



When the cuttings are taken, they are immediately inserted into standard containers and growing media in the greenhouse. The greenhouses are equipped with fogging equipment to provide high humidity while the cuttings develop roots over a 12-week period. Considerable research has been conducted to improve methods and techniques. Juniper Nursery is now producing approximately half a million spruce cuttings per year.



We would be pleased to hear
any questions or comments you may have.

Address your inquiries to:

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