

Jack Pine

Project Subject/Title: Jigsaw Pine

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Abstract: A 92 acre jack pine stand in the Brule River State Forest was set up for a clearcut harvest in 2013. Prior to the harvest, the stand was scarified with the goal of creating an ideal seedbed for the jack pine to regenerate naturally. Scarification with natural regeneration is less expensive than planting the entire stand to achieve successful regeneration. Competition from hardwood species such as oak and red maple is the biggest concern when trying to naturally regenerate jack pine.

Trial Location:

County: Douglas

Township: 46N **Range:** 10W **Section:** 34

GPS Coordinates: Lat: 46°25'29" **Long:** -91°36'21"

Property Name: Brule River State Forest

Baseline Stand Data

- *Cover Type:* Jack Pine
- *Acres:* 92
- *Habitat Type:*
- *Soil Type:* Rubicon Sand
- *Year of Origin:* 1950
- *Total Height:*
- *Site Index Species and Site Index:* 53
- *Mean Stand Diameter:*
- *Total Basal Area per Acre:*
- *Other stand Condition:* Snowmobile trail runs through the stand.

Prescription and Methods:

- *Type of Prescription:* Scarification followed by clearcut.
- *Year Initiated:* 2012
- *Establishment Methods:*

The stand was pre-sale scarified in 2012. A few months after the scarification, the stand was harvested using the clearcut silvicultural method.

- *Data Collection Methods:*

The stand was revisited in September of 2014. Thirty mil-acre regeneration plots were taken throughout the stand. Along with regeneration, competition from herbaceous and woody species was also recorded.

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Results: The total amount of regeneration found within the stand was 6,200 stems per acre. Oak and red maple were the two most numerous regenerating species with 3,533 and 1,467 stems per acre respectively. Jack pine was the third most numerous species with 833 stems per acre. Red pine was the least common species and had 367 stems per acre. Competition from herbaceous cover was minimal with sedge being the most common competitor.

Discussion/Recommendations: Oak was the most dominant regenerating tree species found throughout the stand. In areas where jack pine and oak were both present, the oak was outcompeting the jack pine. One management consideration would be to spray the stand to top-kill the unwanted hardwood species which would release the jack pine. In order for the entire stand to have an adequate amount of jack pine regeneration, it would need to be planted or seeded. Without further treatment, the stand will regenerate into a scrub oak timber type.