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Date: 10/29/2002

To: Don Bright, Forest Supervisor

Subject: (RCSC-03-03) Sick pines in the Nebraska National Forest, Bessey Ranger District

At the request of Patti Barney, District Ranger, on October 17, 2002 Jeri Lyn Harris and I examined some dying jack pine (*Pinus banksiana*) on forest road 203 in the Nebraska National Forest, Bessey Ranger District. We looked at two stands that were approximately 2.5 miles apart. The circles on the attached map show the approximate sampling locations. In each area we examined three/four recently dead or dying trees.

All the trees examined were being killed by a bark beetle called the six-spined engraver beetle (*Ips calligraphus*). This Web Page is a good publication that includes information regarding the six-spined engraver beetle.

<http://www.na.fs.fed.us/spfo/pubs/fidls/ips/ipsfidl.htm>

As an additional note, a stain fungus was associated with the *Ips* on all the trees. The stain fungi might be typical blue-stain fungi associated with the beetle, or it could be the black stain root disease (*Leptographium terrebrantis*). Black stain root disease is known to be in the forest and has been associated with the *Ips*.

Ips is associated with weakened trees. Some of the associated stress agents in the area include the black stain root disease; the drought conditions this year; and the recent jack pine budworm (*Choristoneura pinus*) outbreak. This outbreak resulted in significant defoliation in the Nebraska National Forest, Bessey RD from 1998 to 2001. The outbreak has been monitored by our group (Rapid City Service Center) during this time. A prior budworm outbreak in the 1980s was also followed by a tree-killing episode caused by the six-spined engraver beetle.



If you have further questions please contact me (jbodgett@fs.fed.us; (605) 394-6191).

Since my specialty covers plant diseases, if you have further questions specifically about the six-spined engraver beetle, the jack pine budworm, or other insect related things, please contact Kurt Allen (kallen@fs.fed.us; (605) 394-6051).

With best regards,

\s\ *James T. Blodgett*

James T. Blodgett, Plant Pathologist
USDA-Forest Service
Forest Health Management
1730 SAMCO RD
RAPID CITY, SD 57702

CC: Patti Barney, District Ranger, E-mail: pbarney
Frank Cross, Group Leader, E-mail: fjcross
Roy Mask, Service Center Leader, Entomologist, E-mail: rmask
Jeff Witcosky, Service Center Leader, E-mail: jwitcosky
Kurt Allen, Service Center Leader, Entomologist, E-mail: kallen
Jeri Lyn Harris, Forest Health Monitoring, E-mail: jharris
Mark Harrell, Nebraska Forest Service, mharrell2@unl.edu
Diana McGinn, Nebraska National Forest, dmcginn

