
Who is concerned about planting shortleaf pine seedlings with the “crook” below the surface?

Shortleaf sprouts after fire

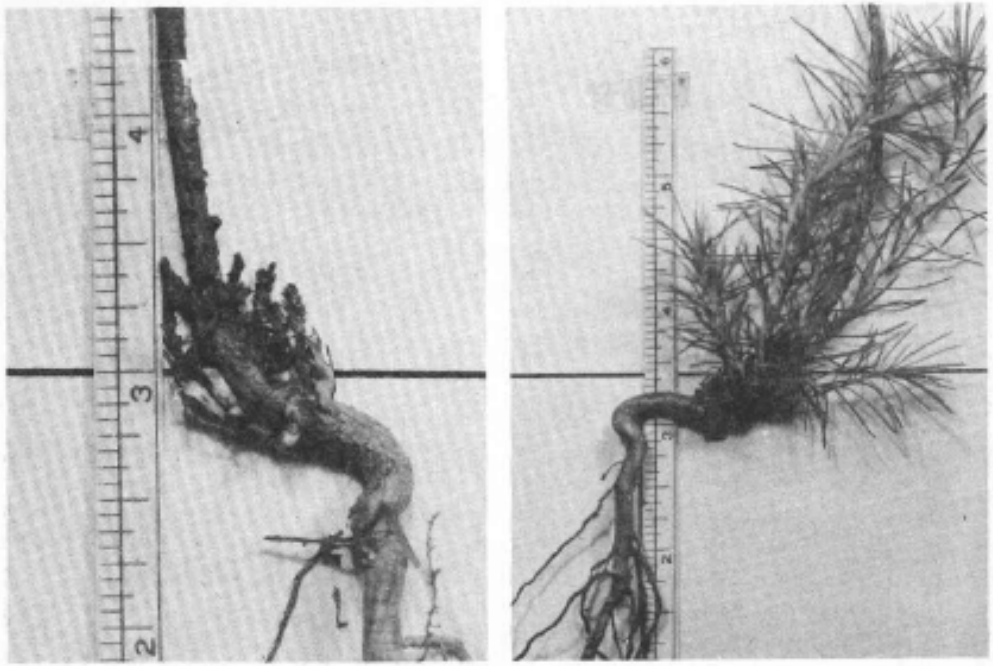
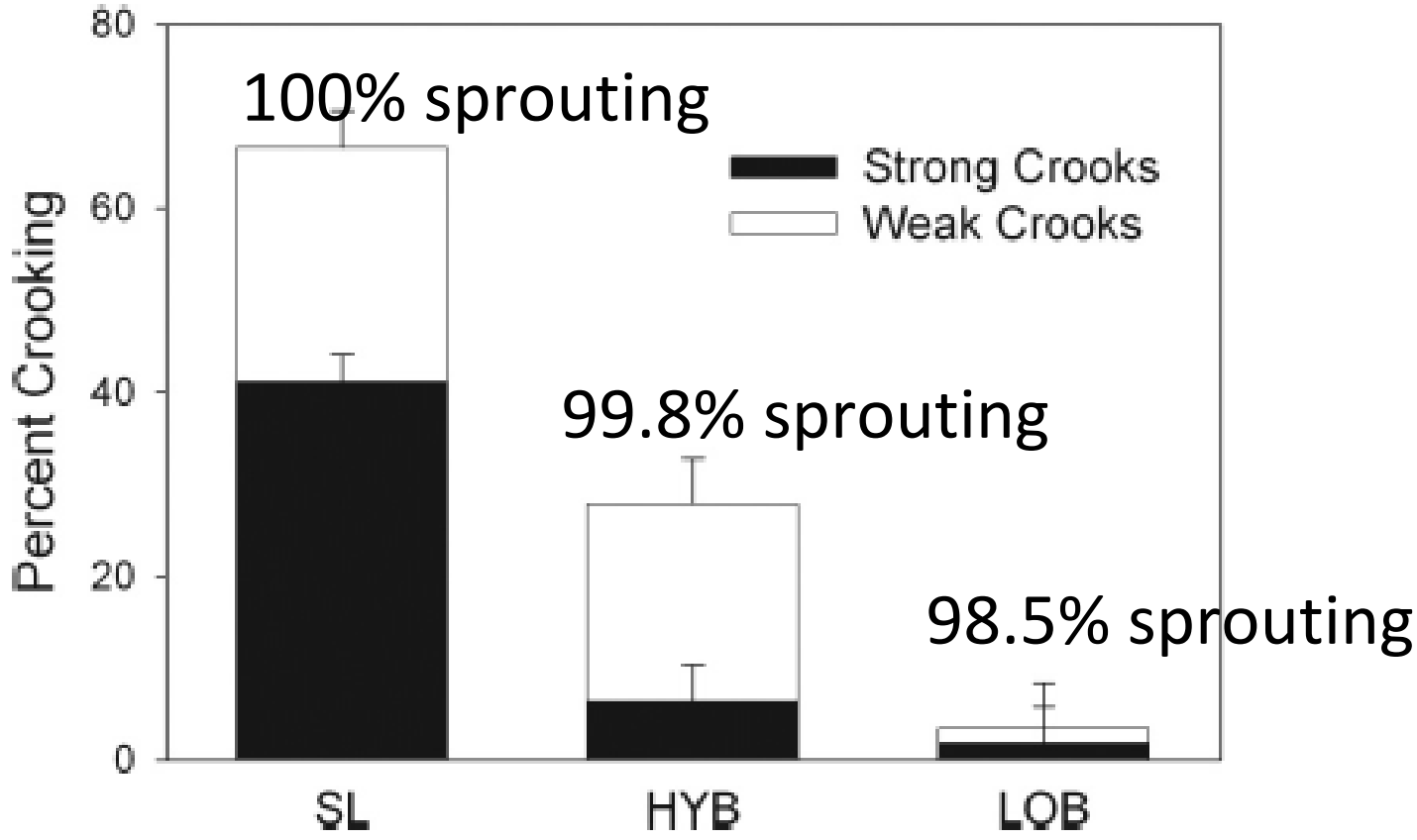


Figure 2.--*Shortleaf pine seedlings that sprouted after a fire.* Left: *seedling with dead basal branches and buds that are expanding into new shoots.* Right: *a later stage in the development of basal sprouts from dormant buds; the lower buds in the basal cluster, though still alive, did not sprout. The scale shown is in inches. The black line marks the boundary of fire-kill in stem tissue.*

- **There is some concern over how deep seedlings should be planted. The current thinking has been to plant with root plugs about 1 inch below the soil surface. Some practitioners are questioning if the crook should be below the soil surface if resprouting is desired. This is another area for research.**

(Wayne Bell 2012)

“Crook” not needed for sprouting (after clipping)

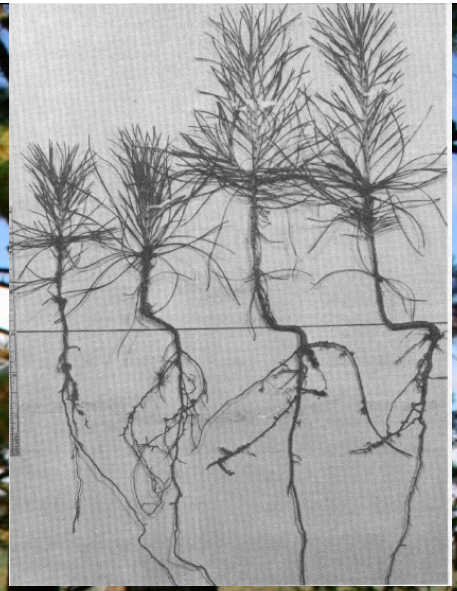


Physiological and morphological attributes of shortleaf × loblolly pine F1 hybrid seedlings: is there an advantage to being a hybrid?

Curtis J. Lilly, Rodney E. Will, and Charles G. Tauer

- **Planting shortleaf pine deep…..**

  is **NOT** a problem… if the area is to be "naturally" regenerated.
- is **NOT** a problem if there is no fire.
- is **NOT** a problem if there is fire and trees are large (old) enough to tolerate a prescribed burn (> 10 cm GLD).



- If you are going to conduct a prescribed fire in within 4 years after planting (why?)…then be sure to plant the shortleaf “crook” **at least** 1 cm deep. This will reduce the chance of killing the “crook” when seedlings are taller than 1.5 m.

Factors affecting the sprouting of shortleaf pine rootstock following prescribed

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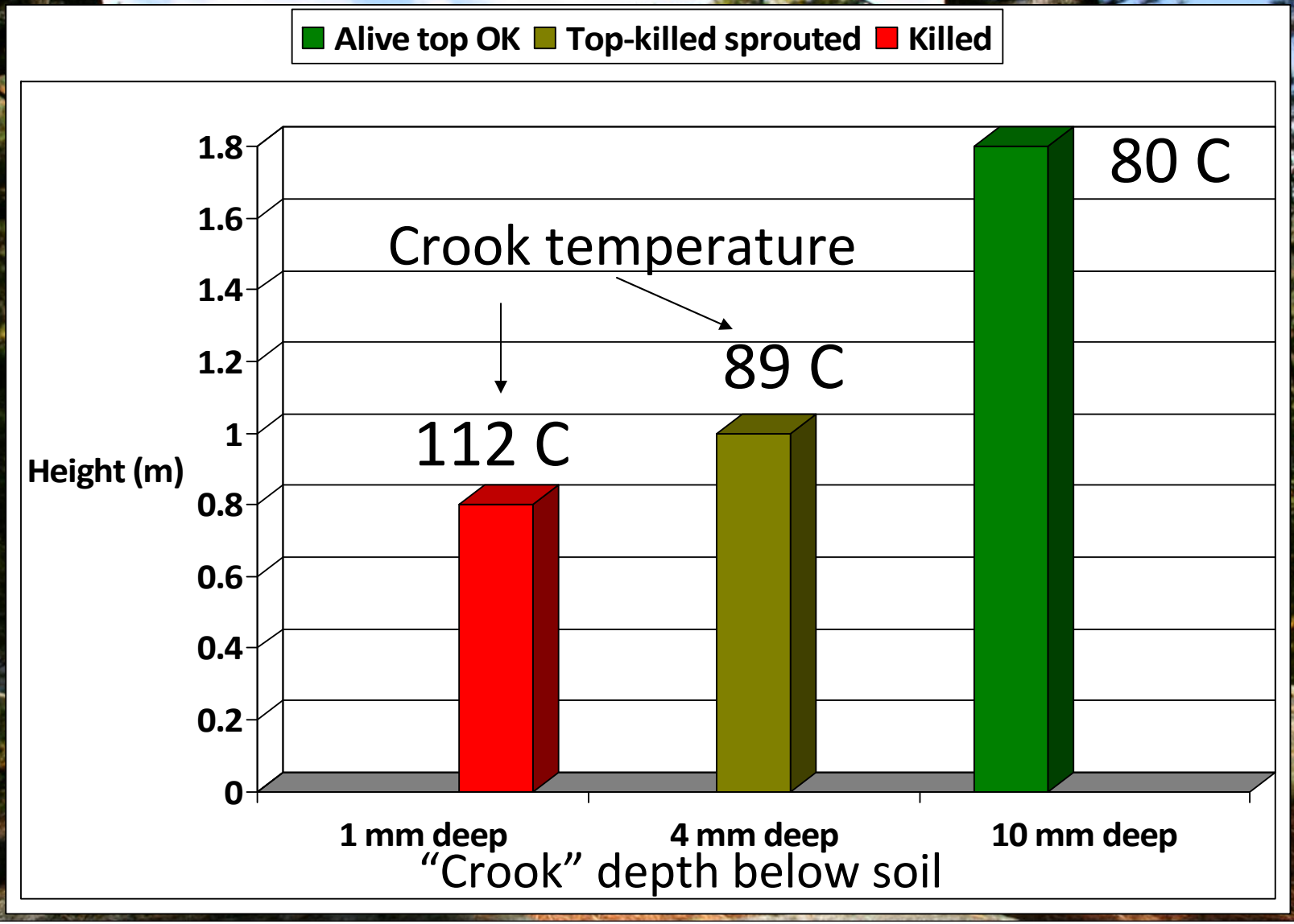
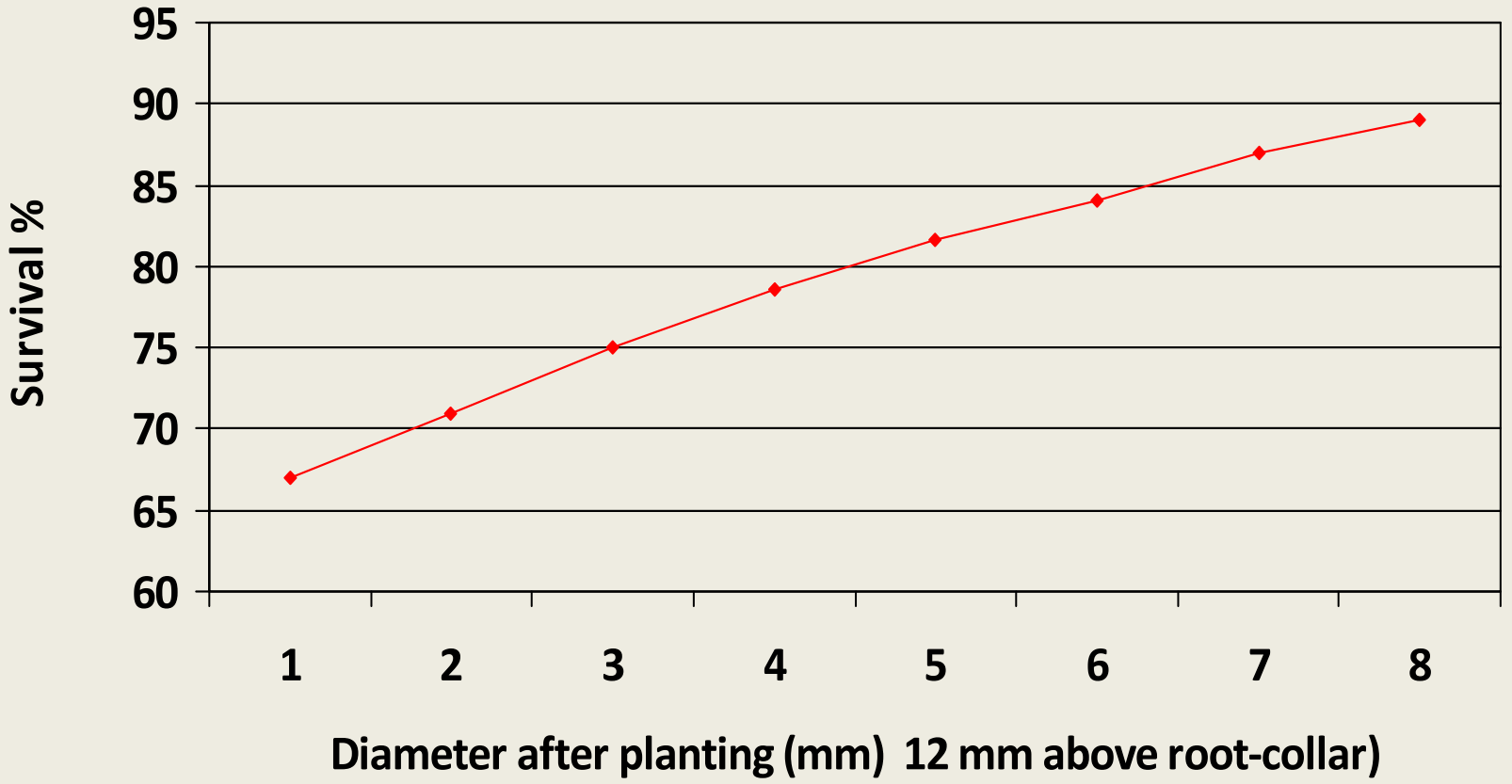


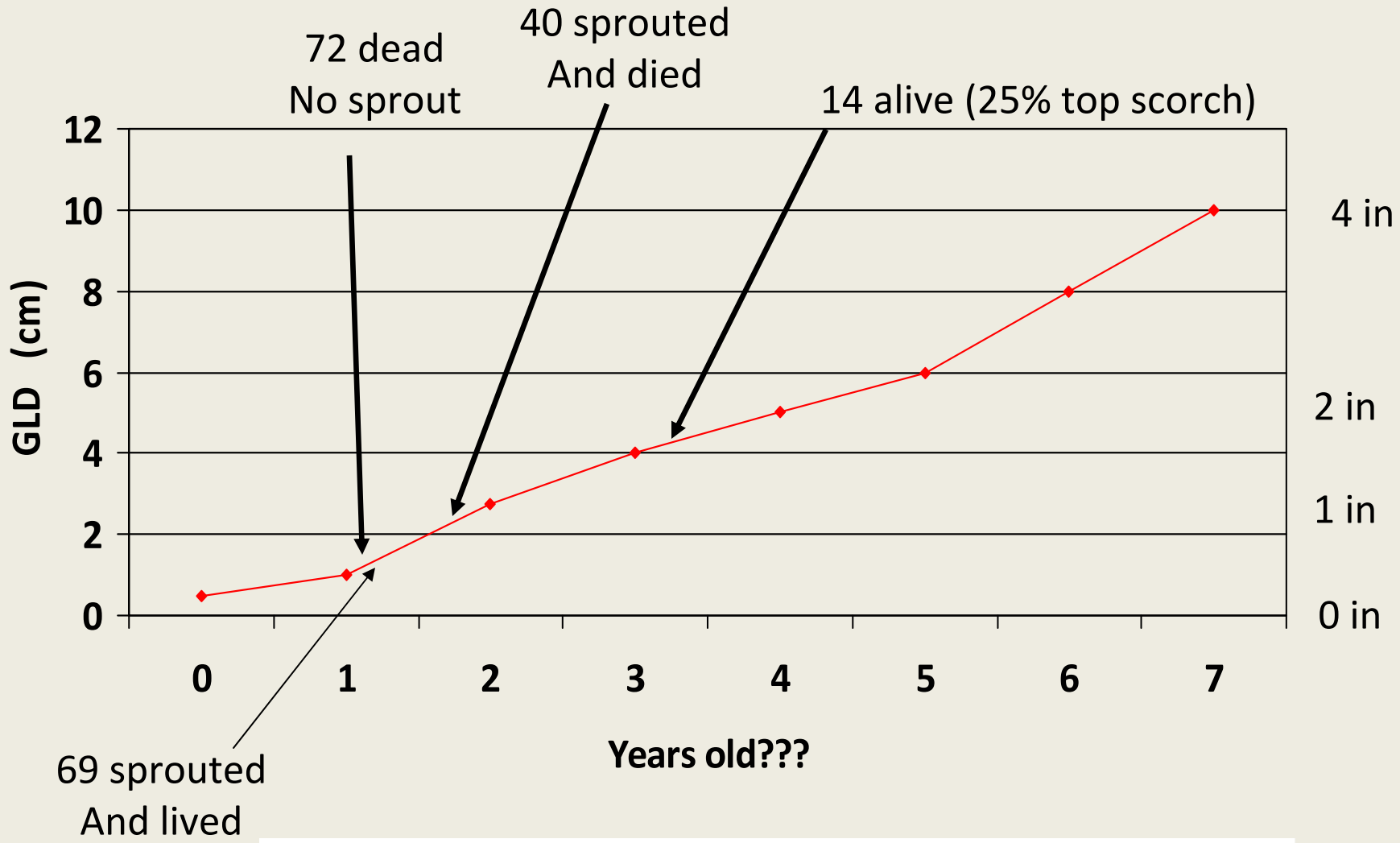
First-year survival of **planted** shortleaf pine with no fire (total 1440 seedlings)



EARLY SURVIVAL AND GROWTH
OF PLANTED SHORTLEAF PINE SEEDLINGS AS A FUNCTION
OF INITIAL SIZE AND OVERSTORY STOCKING

John M. Kabrick, Daniel C. Dey, Stephen R. Shifley, and Jason L. Villwock[1]

Natural shortleaf after an April Fire (total 195 seedlings)



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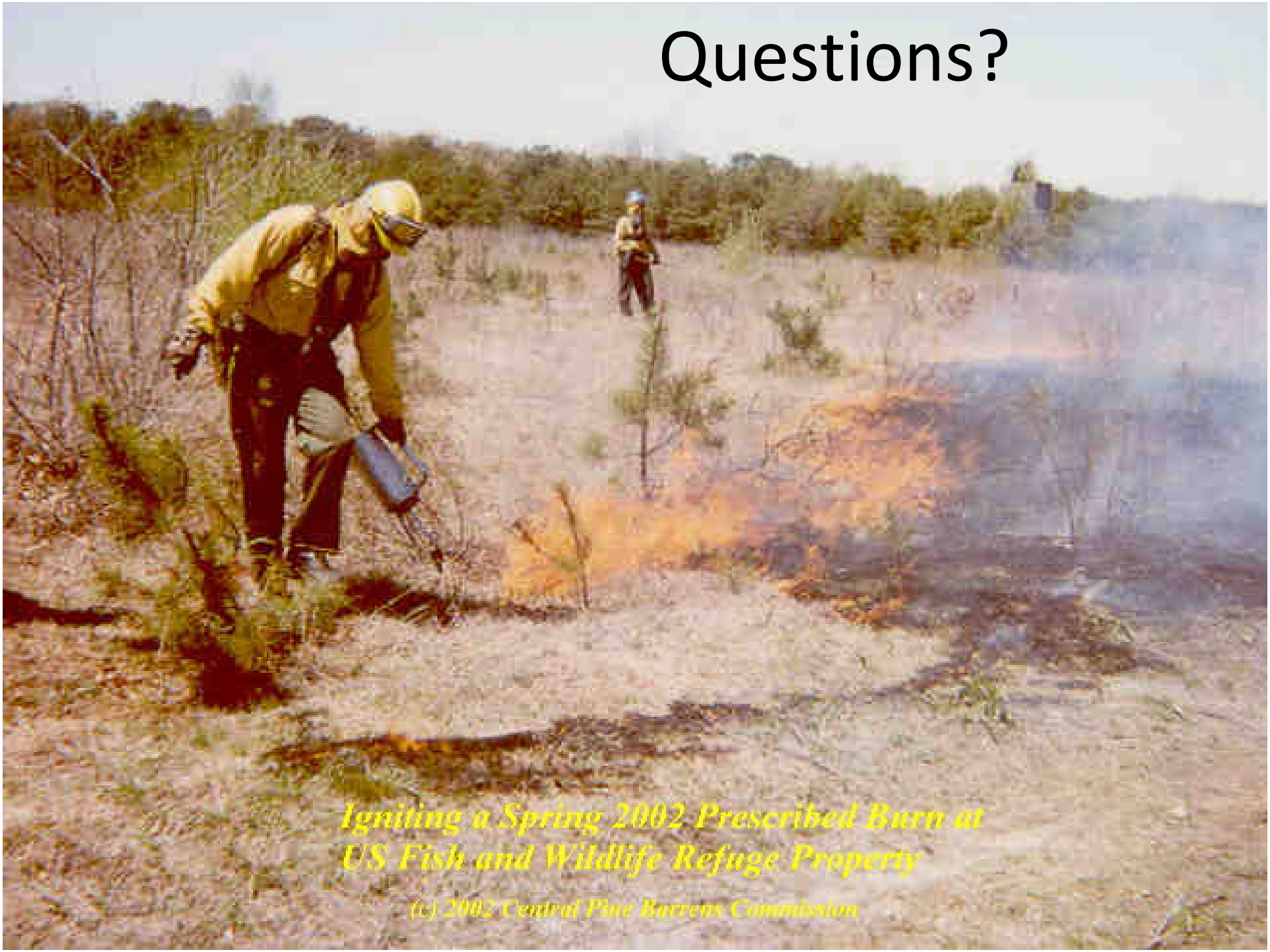
For shortleaf pine…

- Who makes planting depth recommendations based on naturally regenerated seedlings?
- Who makes planting depth recommendations without conducting a planting depth study?
- Who claims that seedlings with the “crook” 1 cm below the surface will not survive a prescribed burn that occurs 4 years after planting?

Questions?



Igniting a Spring 2002 Prescribed Burn at US Fish and Wildlife Refuge Property

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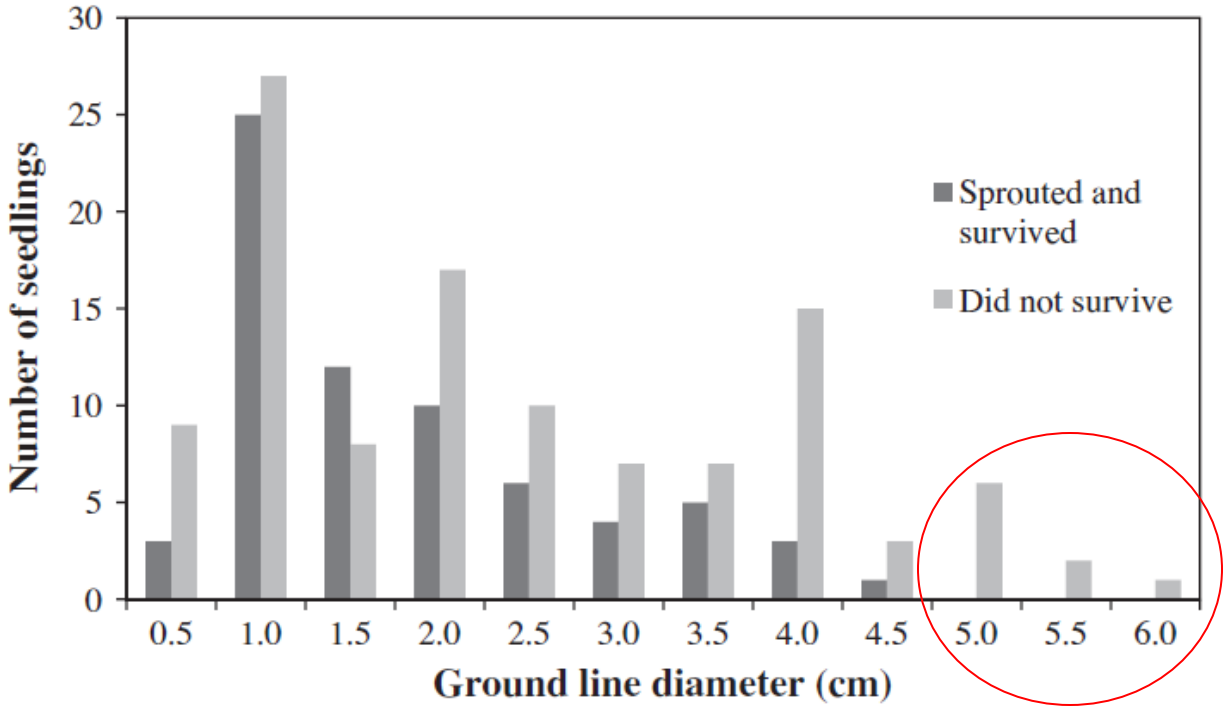

Fig. 1. Ground line diameter and number of top-killed shortleaf pine seedlings that sprouted and survived vs. the total of those that did not survive (did not sprout + those that sprouted but did not survive one growing season) after prescribed fire in northwestern AR, USA, 2010. Each unit on the *X*-axis represents the upper limit of the size class (i.e. 0.5 corresponds to a size class of 0–0.5 cm).