Using a Modified Delphi in Rapidly Changing Times – Ash Management Guide

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Abstract

The world is changing quickly; however, delivering scientific information takes time. A modified-Delphi approach offers those of us working in Extension a way to address methodological constraints to our ability to provide research-based, credible information under rapidly changing conditions.

In 2011, the authors used a modified-Delphi technique facilitated by Survey Monkey to create a systematic, interactive, structured survey process to engage a panel of experts from many different areas of expertise. A careful administration of the survey over three distinct rounds generated sound management recommendations from which the publication *Ash Management Guidelines for Private Forest Landowners* was produced.

The process used could be applied in varied disciplines when there is a desire to find meaningful answers to difficult questions in an efficient, timely manner. The modified-Delphi process enabled natural resource professionals and other stakeholders to share management recommendations in a quickly changing world of invasive species, climate change, and an increasingly unknown future.

Respondents provided survey-based feedback in three rounds. Their responses, stripped of identifiers, were used to generate each subsequent survey round.

Method

For this Ash Management project Extension personnel facilitated three rounds of a modified Delphi survey.

Round 1 consisted of 19 open-ended questions to which participants were given two weeks to respond.

Round 2 of the survey was based on the responses to Round 1. In all, 103 questions were generated from Round 1 and proposed in Round 2.

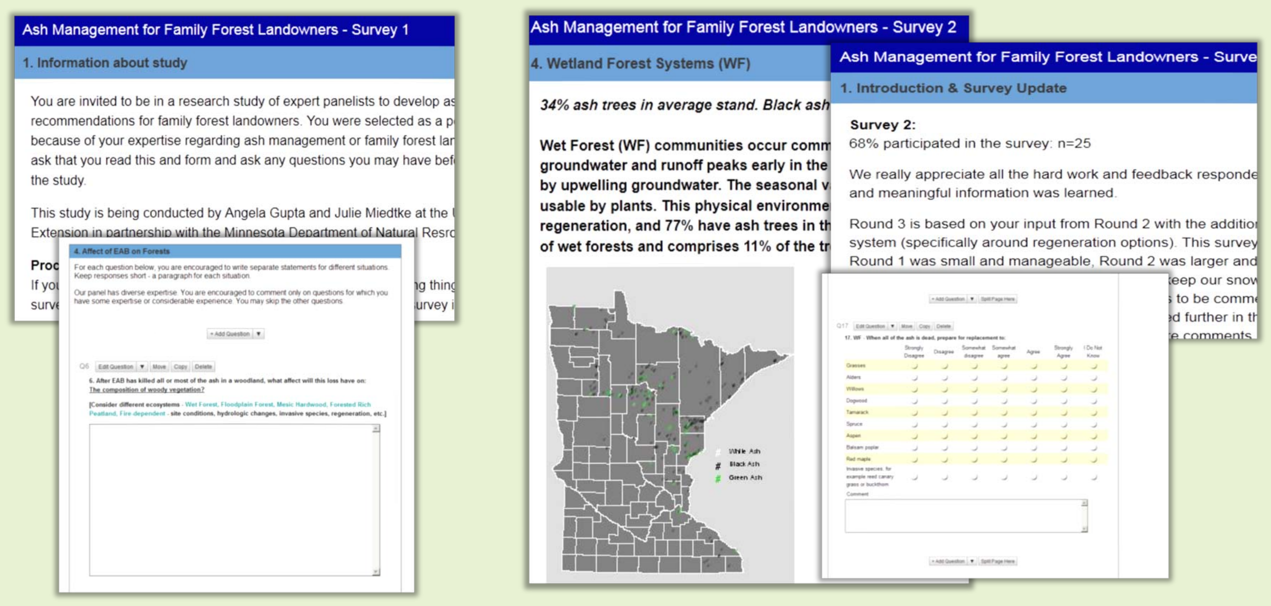
Round 3 presented the results from Round 2, plus new information generated in Round 2, for a total of 98 questions.

Participation rates:
Round 1 (84%)
Round 2 (81%)
Round 3 (68%)

The results of this survey process are wide reaching, but they are not exhaustive. When consensus couldn't be reached we didn't report that recommendation.

In order to offer users of the *Ash Management Guidelines for Private Forest Landowners* publication with a quick way to assess the difference between important resource information and recommendations generated from the survey, all survey recommendations were presented in eye-catching graphics boxes.

Although attributed to an individual, all recommendations in the boxes were approved by group consensus using the modified-Delphi process.



Results

Baseline Tips

- Seek and use the advice of a professional forester/forest plan writer.
- Closely monitor stands with ash.
- Plan for forest conversions when ash is a major component of your forest.
- Work with neighboring landowners to address threats on a larger scale.
- Actively discourage invasive plant and insect species; manage for native species.
- Think outside the box. Contemplate a wider choice of tree species appropriate to your sites and needs. Diversify the species you select. Tree and plant diversity will help prevent future large-scale mortality the next time we discover a major pest attacking a tree species.
- Think about replacement tree species before the ash dies.
- Underplanting. Consider planting shade-tolerant trees beneath canopies of existing trees.
- Minimize harvest damage by using the services of a professional logger who has taken training with the Minnesota Logger Education Program. Ask for credentials and references.
- Keep in mind - you can't call a logger and expect him/her to be out harvesting at your site in the next week or month. In most cases, you are going to need to set the plans in motion 2-3 years before the timber is harvested.
- Be extremely careful if using heavy equipment on very wet sites. It may be best to leave the ash alone in these areas.
- Be familiar with, and apply Best Management Practices.

From the Guide…

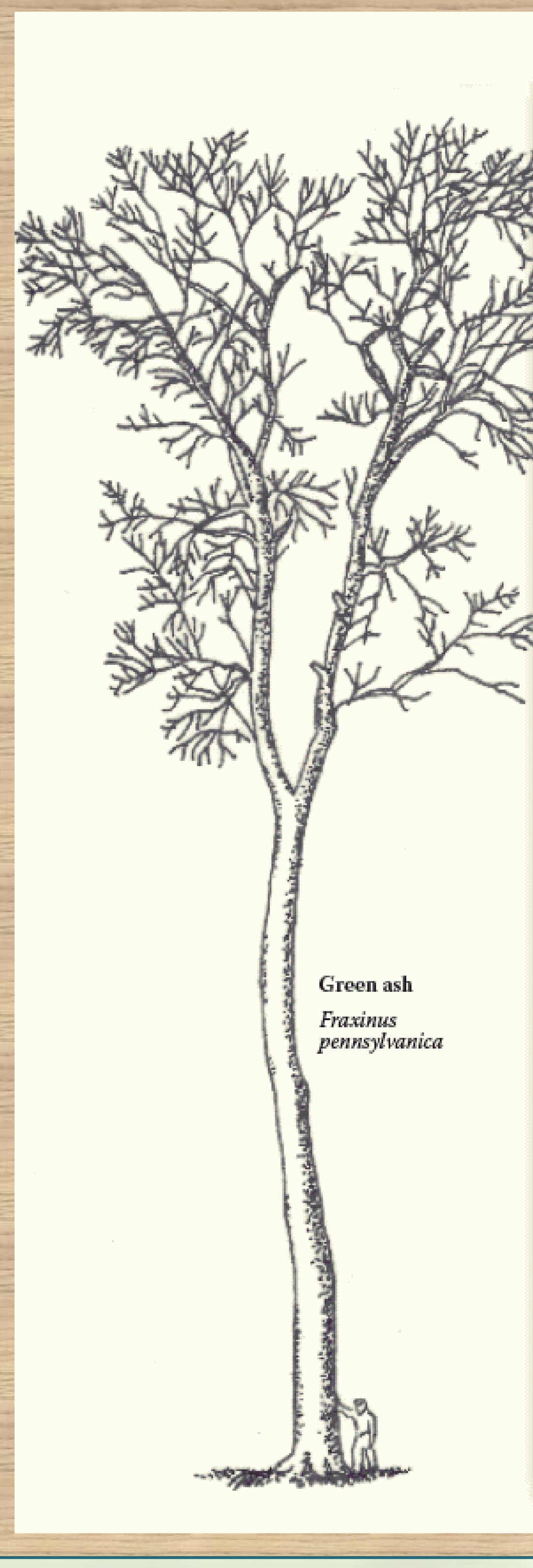
"We should emphasize to family forest owners that change is coming and using some of the wood would be good rather than letting it all die and rot."

"The goal should be to think about replacement before the ash dies because that is when the landowner has the best hopes of influencing the results."

"If the trees are in an area where the falling trees will be a hazard to people or property then they should be removed, or at least cut down."

"I favor strongly encouraging management when feasible (e.g., removal of ash in conjunction with other harvests.)"

From the Guide…



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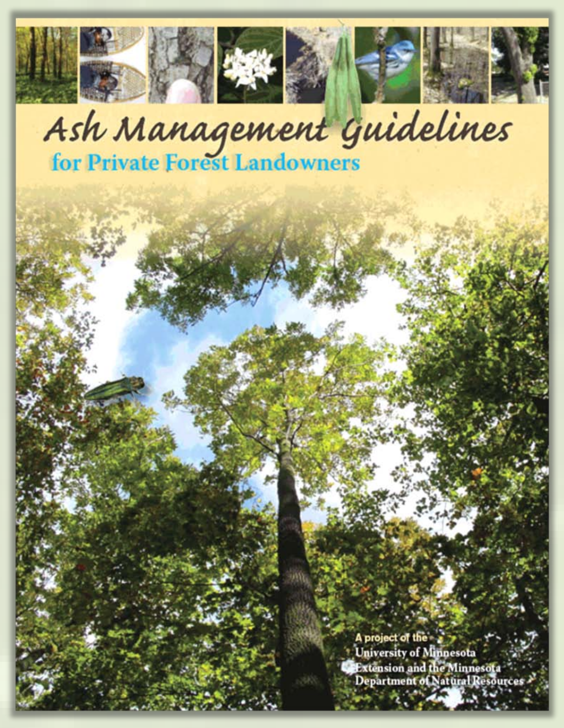

This project is a good example of how Extension Educators can marshal their resources and networks to tackle a major issue facing Extension's constituents in a scientifically sound and academically rigorous and timely way. This project went from conception to publication in one year!

From the Guide…

"It is very important to remember none of us has a crystal ball into which we can see the future of Minnesota's ash forests. This is our best effort to find a method and experts to offer help. "

"It will be important for everyone, landowners and natural resource professionals alike, to stay abreast of current research and information because recommendations are likely to change as the sciences catches up."

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