

Farmstead Shelterbelt Plant Surveys and Application for Restoration and Renovation

Synopsis:

Most of the valuable farmstead shelterbelts were planted in the 1930's as part of the "New Deal" farm program to reduce wind erosion and the "dust bowl." These Upper Midwest groves were planted to primarily Green Ash and American Elm as well as Eastern Cottonwood and are 90 years old and in decline. With various invasive plant and insect species moving in from abroad serious loss of these shelterbelts will soon result; Dutch Elm Disease and Emerald Ash Borer could be a serious and fatal blow. These 90 year shelterbelts are naturalized plant communities and should be surveyed by a botanist to determine the reproductive capacity as well as the understory of these farm groves. These shelterbelts are very valuable to reduce wind soil erosion, reduce wind at the farm home and also reduce the destructive nature of adverse weather such as storms on the farmstead, as well provide high quality wildlife habitat. Having plant survey information will be invaluable as a first step process to secure modern plans and actions using the most advanced equipment for the renovation and restoration of these farmstead shelterbelts. The quality of life in rural and open agricultural areas is very much dependant on farmstead shelterbelts.

Here is the background so that this work could be accomplished: Bob Pollock (myself) was the Botanist for the National Park Service, Mississippi National River and Recreation Area. A Plant Survey Program was developed by him using advanced GIS components and format, specifically Ark View, Minn. Landcover Classification System, Microsoft Excel, on Garmin and Trimble GPS systems. These systems could be applied directly to these farmstead shelterbelts and the polygons of these naturalized plant communities documented using this developed system. This information would be valuable for the restoration and renovation of these plant plant communities (farmstead shelterbelts.) Of particular note renovation could occur in a selective corridors using mobile brush and tree grinders as are used for right of way clearing with tree seedlings and transplants utilized for planting. Nancy Duncan, Natural Resource Spec. at MNRA will cooperate in transferring this developed system for use in this work.

A basic literature review yielded very old information on farmstead shelterbelts most of which was 30 years old or older and performed by researchers Marven Smith and Harold "Scotty" Scholten of the University of Minnesota and Wray and Nelson of Iowa State University. All these workers are since deceased. Jesse Randall, ISU, Extension Forester sees the need to fund this work. Lee Frelich, U of Mn, Forest Ecology Head, sees the need for this work and will cooperate and collaborate in doing this important research.

Funding for this work could be secured through SARE, NCRS, Beth Nelson, Leopold Inst., Lessard fund, Mr. Baker, Heritage Fund, and LCCMR, State of Minn., various units of Agricultural Extension, as well as the Corporate Agricultural sector. The list is large and a concerted effort to secure professional grants workers must be stressed.

Thanks for your thoughtful consideration,

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