



Regulatory Compliance Guide

USDA Quarantine for Emerald Ash Borer: Wood Species Certification Analysis – Not Viable for Used Pallets

From the National Wooden Pallet and Container Association (NWPCA)

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Purpose of this Guide: NWPCA has been alerted to the fact that pallet users in quarantine states are asking suppliers to “certify” that the provided pallets contain no ash lumber. There are a number of problems inherent in that request including exposure to legal liabilities for both the pallet company and pallet user as well as enforcement actions by the federal government if certification is not 100 percent accurate.

Background: In response to infestations by the Emerald Ash Borer, the U.S. Department of Agriculture’s Animal and Plant Health Inspection Service (APHIS) instituted a wood quarantine in the states of Illinois, Indiana, Ohio, Michigan and Prince George’s County, Maryland. The regulation restricts the movement of regulated articles, which includes wood pallets and containers.

Certification of Wood Species for New Pallets: Grade lumber mills have the ability to sell lumber to pallet manufacturers by wood species. They are able to reliably deliver non-ash loads of lumber for pallet production. Pallet producers using grade lumber mills can feel confident in giving customers assurances that the pallets are ash-free.

Certification of Wood Species for Recycled Pallets: NWPCA was asked by our members to research the industry’s ability to comply with end user demands for certification on reused, repaired, remanufactured pallets. Following is a technical description of the procedures necessary to identify wood species.

The first step in identifying hardwoods is to examine the cleanly-cut surface with a hand lens to assess the size and distribution of pores. Hardwoods are traditionally classified as ring-porous, semi-ring porous and diffuse-porous. There are four ring-porous hardwood groups: I-1 (chestnut and oaks), I-2 (elm and hackberry), I-3 (the confusing ring-porous woods) and I-4 (hickory and pecan).

Ash (Fraxinus spp.) belongs to a ring-porous hardwood group also known as the confusing ring-porous hardwoods. Species in this group can be the most difficult to identify because they share major wood characteristics (e.g. row of multiple earlywood pores, latewood pores that range from solitary to radial multiples to clustered). Every wood in this group is confusingly similar to one or more. White ash is confused with black ash. Black ash is confused with sassafras, honeylocust is similar to Kentucky coffeetree. Other species in this group are catalpa, red mulberry, black locust, osage-orange and staghorn sumac.

Source: Hoadley, R. Bruce. 1990. Identifying wood Accurate results with simple tools. The Taunton Press.

Our technical staff* discussed the process involved in species identification and laid out the following measures required for any pallet supplier to certify that no ash components are present in a used or remanufactured pallet.

- A person trained in wood identification would need to visually examine the end grain of each and every component in a pallet. (Examination of the end grain allows identification of the anatomical characteristics by which wood species can be differentiated when not in tree form.)

- A razor-sharp blade would first need to be used to cut a crisp, clean area on the end grain of each and every component in the pallet.
- A visual examination of the growth rings within that area of the cross-section would then need to be performed using a 10x hand lens. This process would likely take in excess of 10 minutes per pallet.

What this Means to Recycled Pallet Providers and End Users:

- It is not possible for anyone to identify with certainty the species of a piece of wood without careful examination of the end grain with a hand lens. It cannot be done by simply looking at the surface of a pallet or wood container.
- To certify a pallet load without going through the laborious process described would expose pallet companies to legal liabilities under the constructive knowledge law.
- To conduct the process necessary to make the certification valid and legal would be cost prohibitive.

APHIS has discussed with NWPCA the analysis conducted by the association on the impracticality of pursuing a certification program for non-ash used pallets and containers. They understand that the expertise and labor-intensive process of credible certification is unfeasible and that any such warranty would likely be subject to skepticism and increased scrutiny by enforcement officials. It is the advice of NWPCA to pallet recyclers (and brokers using recycled pallets) that all used pallets be treated and marked.

USDA has authorized programs for heat treatment and fumigation for international export. They have a system of certification and inspection and have designated the American Lumber Standards committee and NPWCA as program managers. Until such time that a truly certifiable (i.e. third-party inspection) capability can be implemented for domestic shipments, it is in the best interests of customers and suppliers alike to be extremely cautious of any unverifiable commitments.

Pallet User Consideration: One more important point to consider is that untreated pallets are not marked. If a pallet user with multiple suppliers is a target of an inspection and found to have used infested pallets, they will have no way of identifying which company supplied the contaminated products. This would render any certification meaningless. Also to consider is that while a pallet provider could legitimately state “no ash lumber was used in the repair of the pallet,” without the described technical inspection there is no way of authenticating whether the core of the repaired pallet contains ash.

*The NWPCA Technical Staff is comprised of Edgar Deomano, Ph.D. and John McLeod, III, both graduates of Virginia Polytechnic Institute and State University in the Department of Wood Science and Forest Products. While at Virginia Tech, Edgar taught courses on wood identification and wood seasoning/drying. He has been with NWPCA for 5 years where in addition to his technical responsibilities, he also manages the Export WPM Fumigation Program of USDA-APHIS. John is the former Senior Research Associate at Virginia Tech. where he was the principal researcher and programmer for NWPCA’s Pallet Design System (PDS) for more than 20 years.