

PALLET PHYTOSANITARY PROJECT BULLETIN



A Cooperative Effort of the Limestone Bluffs Resource Conservation and Development Area And The Wood Education and Resource Center USDA Forest Service

Number 8

July 2004

THE EFFECTS OF PHYTOSANITARY STANDARDS ON WOOD PACKAGING USERS¹

This bulletin summarizes the results of the above titled research project funded under the Competitive Grants Program of the Pallet Phytosanitary Project.

INTRODUCTION

The implementation of ISPM 15 “Guidelines for Regulating Wood Packaging Material (WPM) in International Trade” may create challenges and impacts that include increased pallet prices, reduced use of low quality hardwood lumber, and substitution of solid wood packaging by other materials. Many of these impacts will be driven by packaging buyers and not by the WPM manufacturers. In order to gain a better understanding of packaging buyers’ needs and attitudes, the researchers conducted a survey of packaging buyers.

The primary objectives of the research were to:

- Gain insight into the role of wooden pallets in the international supply chain (i.e., the amount of WPM used for export).
- Explore competition from alternative materials (e.g., plastic/metal) and channels (e.g., pallet management and/or leasing companies) potentially benefiting from ISPM 15.
- Better understand customer requirements surrounding treatment methods outlined in ISPM 15 influencing future business strategy.

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- Examine customer differences around the purchase of WPM and potentially identify export market segments.

METHODOLOGY

The population of interest included all US manufacturers engaged in exporting activities. The survey sample consisted of the top 600 exporters of containers (i.e., 20 feet in length) and a random sample of 600 of those remaining firms (small and medium exporters (SME's)) that shipped more than 20 containers per year, resulting in a total sample of 1200 exporting companies. Two surveys and a post card were mailed to all company addresses, phone calls were made to all non-respondents and the survey faxed to those who indicated they would respond. These various efforts resulted in a total sample frame of 1026 companies, with a final adjusted response rate of 4.7 percent. The researchers suggest that due to the low response rate that the results should be interpreted as qualitative in nature.

RESULTS

Companies Profile

The survey respondents represented a wide variety of industries. These include, with their associated percentages of responses: metal/glass/automotive (20%); agriculture (17.14%); food/grocery (17.14%); wood products (11.43%); chemicals (11.43%); clothing (5.71%); construction (5.17%); and other (11.43%).

Wooden Pallets and Other Packaging Products

Pallets account for nearly 80 percent of all packaging used by both small and large exporters and on average 90% of the pallets are made of solid wood. The top 600 companies purchase, on average, 87,226 wooden pallets per year. Of this total, 28.6 percent are used for exporting activities or 24,922 pallets. The small and medium exporters (SME) purchase, on average, 31,739 pallets each year, with only 11.9 percent (3,779) used for export.

Only the large companies reported being engaged in leasing pallets, representing 2.3 percent of the total number of pallets used and further, used only in domestic shipments.

An estimate of the total number of wood pallets exported by US companies was based entirely on purchased pallets. Two approaches were used. The first estimate is based on survey responses of pallet purchasing behavior and is extrapolated to reflect total purchases of the industry (i.e., 15,465 companies in the study population). The total annual purchase of wooden pallets, including both the Top 600 category and the small/medium exporters, was estimated to be 71.13 million. It is also important to note that this estimate does not include military shipments that use wooden pallets.

The second method estimates wooden pallets exported by examining container shipments and uses the 2003 Directory of US Exporters to determine the number of containers shipped. Adjusting for the percentage of containers not containing pallets, and for those pallets not made of solid wood, the second estimate of total wooden pallets used for export was 63.58 million.

Pallet Characteristics and Purchaser Preferences

Respondents were asked to rank eighteen attributes of pallets from “not important” to “very important”. These attributes were:

Weight of pallet	Style/design
Nestable for compact storage	Free of government regulation
Re-use (life cycle) of pallets	Impact of pallets on the environment
Treated to IPPC standards	Recyclability
Pallet material	Strength
Ability to lease pallets	Fire resistance
Bending resistance (Stackability)	Moisture resistance
Maintenance	Pallet height
Payment terms	Price

Importance: these attributes were analyzed statistically to determine any significant differences from the average value. For those attributes with statistical significance, strength of pallet was considered the most important, followed by pallet price, treated to IPPC standards, and pallet material. Those considered least important, statistically, were ability to lease, followed by re-use (life cycle), fire resistance, maintenance, and nestable for compact storage.

Performance: The seventeen attributes were also analyzed to determine respondent perceptions about wood pallet performance (from “poor” to “excellent”). Statistical significance showed that strength, price, height, style, and weight were perceived positively. Statistically significant negative perceptions of pallets included nestability for compact storage, fire resistance, and ability to lease.

Perceptions of the Impact of the International Phytosanitary Standards

Statements regarding the possible impact of the new IPPC standard were rated by respondents. Of the ten statements rated by respondents, only four were statistically significant and were rated as **NOT** resulting in:

- The purchase of more non-wood pallets.
- Seeking out new non-wood suppliers.
- Leasing more packaging materials.
- Investigating the use of non-wood pallets.

DISCUSSION

Export packaging customers, as evidenced by the low response rate to the survey and comments received, are not nearly as aware of the IPPC standard as are the WPM manufacturers. The situation provides pallet manufacturers with

an opportunity to satisfy packaging customers' needs and to maintain market share. If pallet manufacturers cannot satisfy their customers, they may begin to lose market share from competing packaging products. Fortunately, the survey results strongly indicate that exporters are not currently inclined to change packaging material. One of the strongest reasons remains the low cost of solid wood to alternative materials. Further, exporters are not currently inclined to move to leasing and reuse of packaging materials.

However, it is important to recognize that an inability on the part of WPM manufacturers to satisfy exporters can have a significant impact, given that between 60 and 70 million pallets are used in export by US companies. Loss of this number of pallets can have a negative impact on domestic pallet manufacturers.

Finally, it would be premature to conclude that these circumstances will remain true as packaging customers lack knowledge of the IPPC standard and have not been required to implement the standard. It is likely that solid wood packaging will remain in use and shifts to alternatives, if any, will be slow, particularly if the following conditions are met: 1) solid wood packaging continues to be the low cost alternative, and 2) packaging manufacturers continue to assist exporters overcome the confusion regarding treatment regulations. As packaging customers become more knowledgeable about the IPPC regulations, purchasing behavior may change. Therefore, it is important for WPM manufacturers to continually engage customers and be proactive in assisting customers in avoiding frustrated shipments as a means of maintaining their customer base.