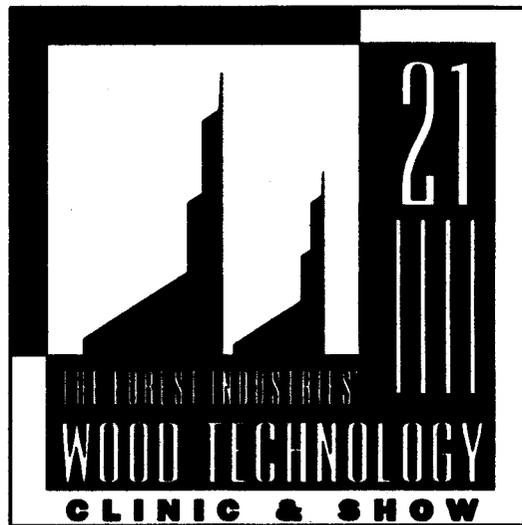


# **The Market for U.S. Hardwoods in the United Kingdom: Market Needs and Satisfaction with U.S. Products**

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# ***THE MARKET FOR U.S. HARDWOODS IN THE UNITED KINGDOM: MARKET NEEDS AND SATISFACTION WITH U.S. PRODUCTS***

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## **ABSTRACT**

Importers of hardwood lumber in the United Kingdom were studied to determine the product and supplier attributes that most influenced their purchase decisions. Importers of North American hardwoods were least satisfied with Lumber Straightness. Straightness, Absence of Stain and the Absence of Surface Checks were the most important lumber attributes. On Time Shipment of Orders, Competitive Prices and Quick Responses to Inquiries were the most important supplier attributes.

## **INTRODUCTION**

This is the second of two articles describing the characteristics and needs of the U.K. market for U.S. hardwoods. The first article described the general characteristics of the market. In this article we look at the importance of specific lumber characteristics and causes of dissatisfaction.

## **Satisfaction When Importing Lumber**

An effort was made to determine the level of satisfaction when importing hardwood lumber and the causes of dissatisfaction (if any). Respondents were asked to indicate their general level of satisfaction with the product (lumber) and service they receive. Five point rating scales (1= "Very Dissatisfied", 5="Very Satisfied") were used. Ratings were standardized to remove response style bias.

Respondents were neutral to slightly satisfied with overall service and lumber quality. The mean ratings for overall service and lumber quality did not statistically differ. However, statistical differences were evident among the remaining attributes.

The attributes with which respondents were most satisfied were Moisture Content, Species Availability, and the Supplier's Commitment of Exporting. Among the attributes included in the study, Lumber Straightness, Shipment Times and Credit Terms caused the most dissatisfaction.

The above results were for all responding companies. However, the focus of this study was on North American lumber. Consequently, the respondents were placed into two groups: those who imported North American lumber and those that imported only Non-North American lumber. Table 1 provides the mean raw ratings for each group.

North American importers reported the highest degree of satisfaction with Moisture Content while Non-North American lumber importers were most satisfied with Lumber Size Availability. Importers of North American lumber were least satisfied with lumber Straightness while importers of Non-North American lumber gave the lowest satisfaction rating to Shipment Times.

Although there are a number of differences between the two groups of importers, merely examining the mean satisfaction ratings does not readily reveal those attributes on which they differ significantly. Consequently, multivariate analysis of variance was used to compare the two groups of responding companies. The analysis revealed that, taking all variables into account, the two groups did differ. The analysis also indicated that the difference was due, primarily, to difference in satisfaction with Lumber Size Availability, Credit Terms, Commitment to Exporting, and Shipment Times.

**TABLE 1. Satisfaction Ratings for Lumber and Supplier Attributes: U.K. Lumber Importers**

Attribute	Importers of North American Hardwoods	Importers of Non-North American Hardwood
	-----Mean Satisfaction Score-----	
Lumber Moisture Content	53.69	51.64
Supplier's Commitment to Exporting	53.21	49.37
Availability of Certain Species	53.06	49.81
Supplier's Reliability	51.73	49.00
Lumber Thickness Consistency	50.47	48.81
Lumber Price	49.74	52.47
Lumber Color	49.32	51.45
Lumber Grading	48.98	49.91
Shipment Times	47.96	42.60
Lumber Size Availability	47.91	53.80
Credit Terms	46.27	51.20
Lumber Straightness	43.45	46.42
Overall Service Quality	52.76	50.75
Overall Lumber Quality	52.05	52.28

In general, North American exporters have a advantage in the area of Shipment Times. However, neither group was particularly satisfied with this factor. The perception that North American exporters are not committed to serving overseas markets appears to have changed; exporters of North American lumber have an advantage over Non-North American exporters on this factor. North American exporters are at a disadvantage on the factors of Size Availability and, surprisingly, Credit Terms. One respondent lamented his inability to find an exporter that would provide lumber in thicknesses of less than 4/4. The last factor (Credit Terms) is one that may warrant further investigation since it is also one over which exporters can have considerable control.

## **Attribute Importance**

All respondents were asked to indicate how important certain lumber and supplier characteristics (attributes) were to their companies. The scale used to measure importance ranged from 1="Not Important" to 5="Extremely Important." Again, responses were standardized to remove response style bias.

Importers of North American lumber considered Lumber Straightness, Freedom from Stain, Freedom from Surface Checks, Thickness Uniformity, and Meeting Grade Specifications to be the most important lumber attributes (Table 2). In this respect, the lumber needs of customers in the U.K. are not unlike those of domestic customers. A previous study conducted by the authors found that Grading, Thickness Consistency, and Freedom from Surface Checks were among the five most important lumber attributes in U.S. hardwood markets. Freedom from Stain was not included in the domestic study so no comparison can be made on this attribute.

The least important lumber attributes to U.K. importers of North American hardwoods were the Presence of the Supplier's Trademark or Logotype, End Coating, Uniformity of Length, Square End Trimming, and Lumber Cleanliness. Again, these results closely match those in domestic markets. With the exception of Cleanliness, each of these attributes were also rated in the bottom five by U.S. users of hardwood lumber. Cleanliness was considered to be more important by domestic users.

Both domestic and foreign companies ranked the presence of a Trademark as the least important attribute of the product (lumber). However, it should be remembered that, in spite of its low importance to users, a trademark may be worth considering. Trademarks can help to develop brand recognition and, if the customer is satisfied with the product, brand loyalty. This is especially true for indirect exporters who are separated from the customer by channel intermediaries.

End coating is another attribute that must be considered carefully. If it is purely cosmetic, its relatively low importance rating may indicate that it is not worthwhile. However, if it prevents end checks (an attribute that was rated as considerably more important) end coating may be appropriate.

**TABLE 2. Importance Ratings for Lumber Attributes: U.K. Importers of North American Hardwoods**

Lumber Attribute	Mean Importance Score
Straightness	55.48
Stain	55.33
Surface Checks	55.06
Uniform Thickness	54.84
Meeting Grade Specifications	54.76
Wane	54.21
Moisture Content Consistency	52.02
End Splits	51.83
Square Edges	51.73
Moisture Content Accuracy	51.43
Uniform Width	51.36
Chipped Grain	50.66
Uniform Color	50.57
Cleanliness	48.37
Square End Trimming	46.15
Uniform Length	45.85
End Coating	40.41
Trademark	30.15

In addition to attributes of the product, respondents rated the importance of various supplier attributes. The results are provided in Table 3. Importers of North American hardwood lumber considered a Supplier's Ability to Ship Orders on Time, Competitive Pricing, Quick Response to Inquirers, Supplier's Reputation, and a Supplier's Commitment to Exporting to be the most important supplier attributes. The least important attributes were a Supplier's Activity at Trade Shows, a Supplier's Ability to Provide Planed Lumber, a Supplier's Ability to Provide Both Rough Components and Lumber, Supplier's Ability to Provide Technical Information, and the Ability to Fill Large Orders.

In general, the needs of customers in the U.K. are similar to those of U.S. customers in terms of supplier attributes. Competitive Pricing and Supplier's Reputation were among the five most important supplier attributes for both groups. The attribute ratings differ primarily in that certain attributes were not appropriate to ask of domestic customers and were not included in that study. Commitment to Exporting is an example of such an attribute.

### **Lumber Attribute Determinance**

In addition to attribute importance, respondents provided information concerning the extent to which suppliers differed in their ability to provide the attribute. The purpose for this line of questioning is to identify attributes that could be used to gain a competitive advantage in the marketplace. If, for example, the presence of square edges was found to be extremely important and there was a large difference among suppliers on the ability to provide this attribute, this may represent an opportunity to gain a competitive advantage by consistently supplying hardwood importers with square edged lumber. Such attributes have been termed *Determinant*.

To identify determinant attributes, a composite score was computed for each attribute. This was done by first multiplying the importance score for each attribute by its difference score and then standardizing the product.

Table 4 provides the lumber attribute composite scores for importers of North American lumber. Lumber Straightness has the highest score and Trademark the lowest. The top five attributes are the same as when looking at importance scores in Table 2. Absence of Stain, however, drops from second to fifth due to its lower variability among suppliers.

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<sup>1</sup> The distinction between product (lumber) and supplier attributes is somewhat artificial and is used for the purposes of clarity. Some attributes could, arguably, be placed in either category.

**TABLE 3. Importance Ratings for Supplier Attributes: U.K. Importers of North American Hardwoods**

Supplier Attribute	Mean Importance Score
Ship Orders on Time	58.97
Competitive Pricing	58.09
Quick Response to Inquiries	58.05
Reputation	55.02
Commitment to Exporting	54.80
Arrange Shipping	54.29
Rapid Delivery	53.54
Personal Relationship with Supplier	52.24
Previous Business with Supplier	52.09
Fill Small Orders	51.81
Variety of Species	49.92
Thick Lumber	59.56
Protective Packaging	48.83
Ship Single Width Orders	48.32
Arrange Credit	47.72
Fill Large Orders	46.52
Technical Information	45.43
Rough Components and Lumber	41.19
Planed Lumber	36.91
Activity at Trade Shows	36.45

**TABLE 4. Composite Scores and Rankings for Lumber Attributes: importers of North American Hardwoods**

Attribute	Mean Composite Score	Rank by Composite Score
Straightness	56.32	1
Meeting Grade Specifications	54.97	2
Surface Checks	54.39	3
Uniform Thickness	53.24	4
Stain	52.58	5
Wane	52.44	6
Uniform Color	51.90	7
End Splits	51.74	8
Uniform Width	51.67	9
Moisture Content Consistency	49.55	10
Moisture Content Accuracy	49.41	11
Chipped Grain	49.28	12
Cleanliness	49.25	13
Square Edges	48.79	14
Square End Trimming	47.08	15

Multivariate analysis of variance revealed that, based on this composite score, importers and non-importers of North American lumber differed only on Absence of Wane. While Absence of Wane was considered by both groups to be relatively important, importers of North American lumber perceived a greater degree of difference among suppliers on this attribute. This difference may stem in part from the fact that many U.K. hardwood companies import tropical and European species in the form of wany-edged flitches.

## **Supplier Attribute Determinance**

Composite scores were also calculated for supplier attributes (Table 5). Among importers of North American hardwoods, On Time Shipment of Orders attained the highest composite score followed by Competitive Pricing, Quick Response to Inquiries, Suppliers Reputation and Rapid Delivery. Activity at Trade Shows ranked last among supplier characteristics with the Suppliers Ability to Provide Planed Lumber, Rough Components, Technical Information and Filling Large Orders rounding out the bottom five. Considering those attributes in the top five, it appears that responsiveness on the part of suppliers presents the greatest opportunity to gain a competitive edge.

A Multivariate Analysis of Variance indicated that companies that imported North American hardwoods differed from those that imported only other types of hardwoods in terms of supplier attribute composite scores. No differences were found based on the top five attributes for each group. However, differences on the Supplier's Ability to Provide Both Rough and Planed Lumber, a Variety of Species and Fill Large Orders were indicated. In light of the low importance of these attributes, none appear to represent a significant advantage or disadvantage for North American exporters.

## **SUMMARY**

The research reported in this paper involved the characteristics and needs of lumber importers in the United Kingdom, a significant market for North American hardwood products. The majority of importers dealt with both temperate and tropical species. Over 93% of the volume of North American hardwood purchases was high grade (above No. 1 Common/Comsel). Joinery manufacturers were the largest market for imported hardwood lumber in the U.K. Importers of North American hardwoods were least satisfied with Lumber Straightness. Straightness, Absence of Stain and the Absence of Surface Checks were the most important lumber attributes. On Time Shipment of Orders, Competitive Prices and Quick Responses to inquiries were the most important supplier attributes.

**TABLE 5. Composite Scores and Rankings for Supplier Attributes: Importers of North American Hardwoods**

Attribute	Mean Composite Score	Rank by Composite Score
Ship Orders on Time	58.81	1
Competitive Pricing	57.85	2
Quick Response to Inquiries	57.14	3
Reputation	55.18	4
Rapid Delivery	53.33	5
Commitment to Exporting	53.27	6
Personal Relationship with Supplier	52.12	7
Ship Single Width Orders	51.54	8
Fill Small Orders	51.19	9
Variety of Species	50.79	10
Thick Lumber	50.14	11
Previous Business with Supplier	49.82	12
Arrange Shipping	48.41	13
Protective Packaging	47.93	14
Arrange Credit	46.89	15
Fill Large Orders	46.22	16
Technical Information	44.60	17
Rough Components	44.02	18
Planed Lumber	39.95	19
Activity at Trade Shows	39.16	20