

CONSUMER PREFERENCES FOR KITCHEN CABINETS MADE FROM RED ALDER: A COMPARISON TO OTHER HARDWOODS

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ABSTRACT

In Alaska, red alder (*Alnus rubra* Bong.) is an abundant but commercially underutilized species despite having properties suitable for higher value products, including furniture and cabinetry. However, it lacks the name recognition of more traditional hardwoods. Our research measured the effect of this lack of familiarity on consumer preferences for red alder products, allowing the development of more effective marketing strategies for the species. Our study was conducted in two West Coast markets—Seattle, WA, and Anchorage, AK, where attendees at home shows were surveyed about their preferences for cabinet doors made from several different species: cherry (*Prunus spp.*), red oak (*Quercus rubra*), hickory (*Carya spp.*), maple (*Acer spp.*), and three red alder doors with different levels of stain. Two measures of consumer preference were used: relative popularity (percent of time chosen as favorite), and willingness to pay (the price premium consumers were willing to pay for their favorite versus second favorite door).

Maple and cherry doors were overall the most popular doors, as measured by percent of time chosen as favorite. Cherry and red oak showed large increases in popularity when their species names were known, whereas all other species declined in popularity (based on chi-square evaluations). All three alder doors declined in popularity when their names were known, with heavy-stained alder exhibiting the steepest decline. Estimates of mean willingness to pay ranged from \$15.70 for moderate-stained alder to \$39.30 for maple, suggesting that consumers are willing to pay a significant price premium for their favorite door. With the exception of oak and cherry, doors that were chosen as favorite more (less) often, commanded a higher (lower) price premium. Therefore, doors that are more popular have potential advantages in achieving higher market shares and greater price premiums. Results suggest that when marketing red alder products little, if any, emphasis should be placed on the red alder name; rather emphasis should be placed on red alder's visual characteristics.

Keywords: Secondary manufacturing, consumer preferences, red alder, furniture, cabinetry, willingness to pay, Alaska.

INTRODUCTION

Red alder (*Alnus rubra* Bong.) is a commercially important hardwood native to the Pacific Northwest; lumber production in 2002 exceeded 300 million board feet (MMBF) in Washington State alone (Washington Hardwoods Commission 2003). Red alder lumber exports from the Pacific Northwest to Asia and Europe have also been significant, accounting for 10% (by volume) of all U.S. hardwood lumber exports to these destinations in 1991 (Tarrant et al. 1994).

In southeast Alaska, red alder is abundant; however, there is little commercial harvest in the region: no hardwood exports were reported in 2001 (U.S. Department of Commerce). It is estimated that approximately 49.3 million cubic ft of red alder is currently available in the 6- to 24-in diameter classes on timberlands within the Tongass National Forest (van Hees 2003). In Alaska, red alder has been used primarily for niche products such as chips for smoking fish and wood carving, but otherwise has seen little commercial use (Wipfli et al. 2002).

Red alder in southeast Alaska predominantly grows in areas that have been disturbed, primarily by timber harvesting. Therefore, in contrast to much of the timber resource in southeast Alaska, a high proportion of red alder is easily accessed by existing roadbeds. Research has shown that pure red alder stands can mature in less than 50 years (Smith 1968), suggesting that stands established during the pulp mill era in southeast Alaska (1960s to 1990s), are now reaching maturity.

Although red alder has properties that are suitable for higher value products, including furniture and cabinetry, it generally lacks the name recognition of more traditional hardwoods, such as the oaks (*Quercus spp.*) and maples (*Acer spp.*). This lack of familiarity may inhibit the use of red alder from southeast Alaska for higher-value applications. Our research measured the effect of this lack of familiarity on consumer preferences for red alder.

Cabinet doors were selected as a representative red alder product for this study, because most consumers are familiar with this product.

Further, the wood cabinet industry is an important consumer of hardwood lumber. Olah et al. (2003) found a 70% increase in consumer demand for cabinets during the 1990s, and that the cabinet industry consumed an estimated 1.2 billion board feet of hardwood lumber annually.

We measured consumer preferences in two ways. First, to determine relative popularity, respondents were asked to select their favorite cabinet door from a group of seven. Second, we determined willingness to pay using a dichotomous choice contingent valuation method to estimate respondents' willingness to pay a price premium for their favorite cabinet door over their second favorite door.

In this study, conducted within Anchorage, AK, and Seattle, WA, markets, we addressed the following research questions:

1. How do consumer preferences for red alder products compare to those for established hardwoods?
2. What influence does species name and/or a logo have on consumer preferences for red alder products?
3. How important is level of staining as a product attribute, given that red alder is an easily stained wood?

REVIEW OF RELATED RESEARCH

We reviewed three topics in the wood products literature relevant to this study. First, we reviewed marketing studies that have investigated the effect of different characteristics of wood on consumer preferences. Second, we examined studies specifically focused on the properties of red alder and its use. Third, we looked at the use of contingent valuation to estimate consumer willingness to pay for attributes of wood products.

Fell (2002) evaluated consumer acceptance of eleven lesser-used Canadian species, including four hardwoods and seven softwoods. Wood color and grain were the attributes that most affected consumer acceptance. Demographics were an important factor in species preferences, including differences between Canadian provinces, gender of respondent, and urban vs.

suburban residents. Fell found that respondents generally preferred a warm look for furniture, whereas for cabinets, lighter colors with distinct grain patterns were often preferred.

Bush et al. (1991) used a mail survey to evaluate the relative importance of 33 different hardwood lumber attributes to large hardwood producers. Lumber drying attributes, including moisture content accuracy and absence of surface checks and end splits, were consistently rated as important. Surface checking, in particular, could be a key attribute for kitchen cabinets, where visual qualities are important.

Bumgardner et al. (2000) found that character marks can be effectively incorporated into furniture production if the "fit" of the character marks matches other product attributes such as finish, hardware, and design. Character-marked wood was marketed effectively when sales staff educated the consumers. However, one obstacle hindering the marketing of character-marked wood was the lack of consistency between product displays and the actual product purchased.

In a related paper, Bumgardner and Bowe (2002) investigated the differences between word-based and specimen-based evaluations of commercially important wood species. They found that in appearance-based evaluations, respondents tended to rate woods based on general color. Darker woods tended to be rated as expensive, whereas lighter colored woods were generally viewed as inexpensive. Some gender differences were observed between male and female perspectives on oak and pine.

Both the growth properties and processing characteristics of red alder could affect appearance features and, therefore, consumer preferences for alder products. In a study evaluating selected properties of red alder, Evans et al. (2000) found that many of the factors associated with juvenile wood, potentially limiting utilization, were present only during the first 6 to 10 years of growth. This suggests that red alder trees in the 40- to 50-year age class (typical of southeast Alaska) could contain significant volumes of mature wood and, therefore, would be well suited for products such as cabinets. Brunner et al. (1996) found that edging practices for

red alder lumber can influence yields of higher-value components such as cut-stock parts. The potential yields of cut-stock parts were as much as 9 to 13% greater for nominally edged lumber than lumber edged under conventional practices.

Willingness to pay, estimated by using contingent valuation, is one of the two measures of consumer preferences used in this study. Previous work in the wood products literature has used contingent valuation to estimate consumer willingness to pay a price premium for environmentally certified wood products. Ozanne and Vlosky (1997) found that consumers were willing to pay a price premium between 4.4 and 18.7% for environmentally certified wood products, depending on the product type. However, they found that 37% of the sample was not willing to pay a price premium for any type of environmentally certified wood product. Veisten (2002) estimated consumer willingness to pay for eco-labeled furniture in Norway to be 1% greater than for non-labeled furniture, and 1.6% more in Britain. To control for potential upward bias, Veisten asked respondents a secondary question concerning the certainty of their response. Only respondents who were "absolutely sure" of their response were included in the analysis.

Recent research in Alaska has considered willingness to pay for locally produced products from underutilized species. Donovan and Hessel (2003) evaluated consumer willingness to pay for a children's play structure sawn from Alaska yellow-cedar, a naturally decay-resistant species, compared to an identical structure made from treated southern pine. Results indicated that consumers were willing to pay approximately double for the play structure sawn from Alaska yellow-cedar.

Donovan and Nicholls (2003a) also used contingent valuation to estimate consumer willingness to pay for kitchen cabinets constructed from Alaska birch. The study evaluated whether consumers regarded character marks as a positive feature of hardwood lumber. They found that consumers were generally willing to pay higher premiums for cabinet doors with higher levels of character marking. In a related study, Donovan and Nicholls (2003b) used contingent valuation



FIG. 1. Photographs of red alder and other hardwood cabinet doors evaluated in consumer preferences survey.

to quantify a made-in-Alaska price premium for secondary wood products. Results showed that consumers were willing to pay an \$82 price premium for a made-in-Alaska coffee table compared to an identical table made in China.

MATERIALS AND METHODS

Data were collected from attendees at home shows in Anchorage, Alaska, and Seattle, Washington, during September and October 2002. Respondents were asked to select their favorite and second favorite cabinet doors from a group of seven doors. Demographic data on age, income, gender, state residency, and decision-making role within the household were also collected.

All cabinet doors were made from clear lumber, free of knots or other character markings,

and cabinet dimensions were chosen to reflect the sizes that consumers would likely purchase for their kitchens. Three of the sample doors were constructed from red alder, with different amounts of stain (unstained, moderate stain, or heavy stain) (Fig. 1). The remaining four doors were constructed from red oak, hickory, maple, and cherry, and were all unstained (Fig. 1).

Several authors (Bumgardner et al. 2000; Fell 2002) have noted that consumer preferences for wood products can be influenced by the visual characteristics of the wood and by species preconceptions. An additional goal of our study was to determine whether consumer preferences for red alder were influenced by the presence of a logo (Fig. 2). The logo shown in Fig. 2 was one of three sample logos prepared for this study. An informal pre-test was used to determine the pre-



FIG. 2. Red alder logo used in consumer preference survey.

ferred logo. Home show attendees were asked to complete a short questionnaire concerning their preferences for the seven doors under one of three possible labeling regimes.

1. No species information provided
2. Species name provided
3. Species name provided and a logo (red alder only)

Each respondent was exposed to only one of the three labeling regimes, which were rotated in groups of 50 (i.e., a given regime was used for 50 consecutive responses and then changed to the next regime). After 150 responses, each of the three regimes had 50 completed surveys before beginning the cycle again. This system ensured that a given sampling regime could be tested several times throughout a 3- to 4-day home show.

An assumption in this study was that the respondents for labeling regime 1 (no species information) were not able to identify the species used in cabinet construction. If this assumption was not met, then one would expect very little difference in responses between regime 1 and regime 2 (species name provided). Although we did not formally ask respondents if they could identify the species used to construct the cabi-

nets, our experience collecting the data suggests that less than 10% of the sample thought that they could identify the species used, and less than 5% could do so correctly.

Two measures of consumer preference were used:

1. Relative popularity (percent of time chosen as favorite from the group of cabinet doors), and
2. Willingness to pay (the premium consumers were willing to pay for their favorite versus second favorite door)

Responses to the above questions were used to evaluate the following three hypotheses:

Hypothesis 1: Species information

Ho: Consumer preferences are unaffected by the presence of species name

Ha: Consumer preferences are affected by the presence of species name

Hypothesis 2: Logo

Ho: Consumer preferences for red alder are unaffected by the presence of a logo

Ha: Consumer preferences for red alder are affected by the presence of a logo

Hypothesis 3: Staining

Ho: Consumer preferences for red alder are unaffected by the level of stain

Ha: Consumer preferences for red alder are affected by the level of stain

Consumer willingness to pay was estimated using dichotomous choice contingent valuation methodology. In the absence of consumer choice data, contingent valuation can be used to estimate consumer willingness to pay by asking respondents how much they would be willing to pay for a given good or attribute of a good. A dichotomous choice format was used in this study (Loomis 1988); respondents were asked the following question, "If your second favorite door cost \$40 and your favorite door cost \$X, which

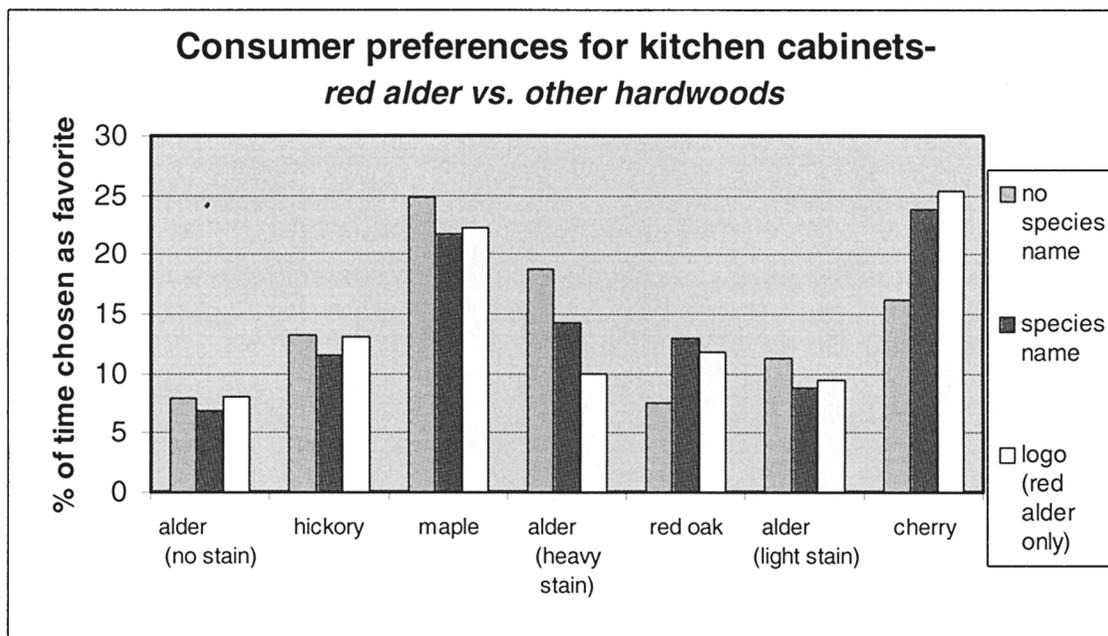


FIG. 3. Consumer preferences for kitchen cabinets—red alder vs. other hardwoods.

would you select?” The value of X varied between \$45 and \$110, and was based upon pre-test data. Demographic data on age, household size, gender, and income were also collected.

A discrete choice logit regression model was used to analyze survey data and calculate willingness to pay estimates (Hanemann 1984). This model is useful because it yields a closed-ended expression for mean willingness to pay in terms of estimated regression coefficients and independent variable means (Loomis 1998) as represented in Eq. (1):

$$Mean\ WTP = \frac{B_0}{-B_1} \quad (1)$$

where B_0 is either the estimated constant if there are no additional independent variables, or the sum of the estimated constant plus the product of all other independent variables multiplied by their means, and B_1 is the estimated coefficient on the bid amount \$X.

Equation (1) shows that mean willingness to pay is a function of estimated regression coefficients, which have associated variance. There-

fore, confidence intervals around estimates of mean willingness to pay cannot be calculated conventionally. We use the simulation approach developed by Park et al. (1991). The variance covariance matrix of estimated regression coefficients is used to define a multivariate normal distribution. One thousand draws are made from this distribution, allowing the calculation of 1000 estimates of mean willingness to pay and associated confidence intervals.

RESULTS

Survey respondents were older and wealthier than the population as a whole (Table 1). However, the self-selecting nature of the sample may be an asset as home show attendees probably better represent consumers with an active interest in purchasing cabinets. The total sample size (number of responses) for the Anchorage and Seattle locations was 1454. To determine if species name affects consumer’s preferences, the number of respondents who selected each door as their favorite, in the presence or absence of species names, was compared using a chi-squared test.

TABLE 1. Selected demographic information for Anchorage, AK, and Seattle, WA, metropolitan areas vs. information from home show respondents.*

	Anchorage, AK		Seattle, WA	
	2000 U.S. Census	Home show respondents	2000 U.S. Census	Home show respondents
Mean age (years)	32.7	46.9	35.9	47.4
Mean family income (\$ per year)	69,711	77,729	61,580	86,628

* Source: U.S. Census Bureau.

TABLE 2. Percent of respondents who selected each door as favorite when species name was absent versus present.

Door	No Name (percent)	Cell chi-square	Name (percent)	Cell chi-square	Percent change from no name to name
Unstained alder	7.93	0.185	6.89	0.198	-13.1
Hickory	13.2	0.287	11.5	0.308	-12.9
Maple	24.8	0.439	21.7	0.472	-12.5
Heavy-stained alder	18.8	1.55	14.2	1.67	-24.5
Red oak	7.50	3.40	12.9	3.65	72.0
Moderate-stained alder	11.2	0.739	8.77	0.795	-21.7
Cherry	16.2	3.37	23.8	3.62	46.90
	DF	Value	Prob.		
Chi-square	6	20.7	0.0021		

The data in Table 2 allow us to reject the null hypothesis that species name does not affect consumer preference. Cell chi-squared values indicate which species exhibited the greatest changes in preferences between the two naming regimes. Cherry and red oak showed large increases in popularity when their species names were known, whereas all other species declined in popularity (Fig. 3). Among the five species that declined in popularity, heavy- and moderate-stained alder exhibited the greatest reductions. All three alder doors declined in popularity when their names were known, with heavy-stained alder exhibiting the steepest decline, followed by moderate and unstained alder (Fig. 3). This result suggests that although consumers prefer the appearance of stained alder, and more stain is preferred to less, stain appears to have negative connotations for many in the sample.

To evaluate the null hypothesis that logo does not affect consumer preferences, the number of respondents who selected each door as their favorite, in the presence or absence of a logo, was compared by using a chi-squared test.

Data in Table 3 do not allow us to reject the hypothesis that a logo does not affect consumer preferences for red alder. Although we failed to reject the overall hypothesis, there were changes in preferences for individual doors. In particular, the proportion of the sample selecting heavy-stained alder as its favorite declined unexpectedly when the logo was present. Although the logo for alder cabinets did not appear to directly influence respondents, it may do so indirectly by drawing attention to a door's level of stain. Given that stain, in particular heavy stain, is perceived as a negative product attribute, this increased attention may result in fewer respondents selecting the heavy-stained alder door.

The comparisons made in Tables 2 and 3 are not independent because preference for species name only appears in both tables. Type 1 error rate was controlled by a Bonferroni-type adjustment to the significance level used in each test. The Bonferroni adjustment takes the overall desired Type 1 error rate and divides it by the number of nonindependent tests to determine the significance level to use in each test. In this case, alpha was set at 0.05, and there were 2 tests;

TABLE 3. Percent of respondents who selected each door as favorite when species name was absent versus present.

Door	No only (percent)	Cell chi-square	Logo (percent)	Cell chi-square	Percent change from only name to logo
Unstained alder	6.89	0.217	8.01	0.227	16.3
Hickory	11.50	0.2442	13.10	0.2554	13.9
Maple	21.70	0.0063	22.30	0.0066	2.76
Heavy-stained alder	14.20	1.62	10.00	1.70	-29.6
Red oak	12.90	0.123	11.80	0.129	-8.53
Moderate-stained alder	8.77	0.0486	9.39	0.0508	7.07
Cherry	23.80	0.108	25.30	0.114	6.30
	DF	Value	Prob.		
Chi-square	6	4.85	0.564		

therefore, the alpha level used after the Bonferroni adjustment is 0.025. So for either individual test to be significant at alpha=0.05, the observed p-value would need to be smaller than 0.025.

The hypothesis that stain does not affect consumer preferences was separately evaluated for each naming regime by using a chi-squared test. Under the no species name and species name only labeling regime, there was a difference in the relative popularity of the alder doors at a 1% significance level (chi-square statistics of 25.2 and 13.9, respectively). However, in the logo labeling regime, there was no significant difference in the relative popularity of the alder doors (chi-square statistic 1.13). Note that these results are conditional on respondents selecting one of the three alder doors as their favorite. That is, results may have differed if other choices were available. These results allow us to reject the null hypothesis that stain does not affect consumer preferences for red alder. The relative magnitude of the chi-squared statistics for the no name and species name only labeling regime suggests that the effect of stain on the popularity of red alder is most pronounced when consumers base their preferences solely on visual characteristics. In essence, the appearance of stain was a positive product attribute, whereas the knowledge that cabinet doors were stained appeared to make doors less appealing to respondents. The absence of a significant difference in the relative popularity of red alder under the logo labeling regime may be attributed to the logo intensifying a negative stain perception.

Survey data were used to estimate Eq. (2) for each of the seven doors (other demographic factors are excluded for clarity):

$$Pay = B_0 + B_1 * Bid \tag{2}$$

where

Pay = Respondent's yes/no response to the willingness to pay question.

Bid = The price premium respondents were asked to pay for their favorite door.

As shown in Table 4, the bid coefficients for each of the seven doors were negative, which is consistent with microeconomic theory. Income was significant for maple and cherry, and in both cases the coefficient was positive, as microeconomic theory would suggest for normal goods.¹ Microeconomic theory does not imply a sign for the coefficient on age, which was significant for moderate-stained alder. The negative sign on the age coefficient suggests younger consumers are more likely to pay a price premium for moderate-stained alder. It is interesting to note that maple and hickory have the two highest McFadden R-squared values and exhibited little change in popularity under different regimes. This suggests that price and income are more important components of the decision process for

¹The consumption of normal goods increases with income, while the consumption of inferior goods declines with income. For example, as people get wealthier, they may buy less hamburger helper (inferior good) and more steak (normal good).

TABLE 4. Regression results for income and age factors—consumer preferences for kitchen cabinets constructed from red alder and other hardwoods.

	Intercept	Bid	Income	Age	McFadden R-squared
Unstained alder	0.552 (1.49)	-0.0293 (-2.32)	ns	ns	0.0403
Hickory	1.87 (5.12)	-0.0583 (-4.66)	ns	ns	0.113
Maple	1.47 (4.14)	-0.0564 (-6.55)	0.00891 (2.50)	ns	0.140
Heavy-stained alder	1.43 (4.79)	-0.0400 (-4.41)	ns	ns	0.0767
Red oak	1.41 (4.03)	-0.0405 (-3.76)	ns	ns	0.0759
Moderate-stained alder	3.31 (3.58)	-0.0436 (-3.21)	ns	-0.0538 (-2.94)	0.110
Cherry	0.762 (1.96)	-0.0465 (-4.70)	0.00692 (2.13)	ns	0.0810

ns = not significant at the 0.05 significance level

consumers who prefer doors with neutral species associations. Conversely, consumers who prefer doors that have either positive or negative species associations place more weight on variables not considered in this analysis.

The coefficients in Table 4 were substituted into Eq. (1) to calculate estimates of the respondents' mean willingness to pay a price premium for a favorite door over a second favorite door. The estimates of mean willingness to pay range from \$15.70 for unstained alder to \$39.30 for maple (Table 5). Since the confidence interval for unstained alder includes 0, the data do not allow us to conclude that willingness to pay for this door is non-zero.

These results (shown in Table 5) suggest that consumers are willing to pay a significant price premium for their favorite door. The variation in estimates of mean willingness to pay can be largely explained by comparing the relative

TABLE 5. Estimates of respondents' mean willingness to pay* a price premium for a favorite door, and associated confidence intervals (CI).

	Mean willingness to pay (\$)	Upper 95% CI (\$)	Lower 95% CI (\$)
Unstained alder	15.70	139.00	-108.00
Hickory	32.50	38.90	26.10
Maple	39.30	45.10	33.50
Heavy-stained alder	33.60	42.80	24.40
Red oak	35.40	46.60	35.40
Moderate-stained alder	20.50	32.00	9.10
Cherry	29.20	34.90	23.50

*Willingness to pay was calculated based on pooled data from all 3 labeling regimes.

magnitudes of willingness to pay estimates with the relative popularity of each door (Table 6).

As we see in Table 6, with the exception of oak and cherry, doors that were chosen as favorite more (less) often, commanded a higher (lower) price premium. Therefore, doors that are more popular have a double advantage: they can achieve a higher market share, and consumers are willing to pay higher price premiums for these doors.

The absence, or presence, of species name can affect the relative popularity of a door (Table 2). To determine if species name affected mean willingness to pay, the sample was divided into responses when species name was not known, and responses when species name was known (including responses when the logo was present). This allowed two estimates of mean willingness to pay to be calculated for each door. This further division of the sample meant that for some of the doors, particularly the less popular ones, independent variable coefficients were not significant. Mean willingness to pay was esti-

TABLE 6. A comparison of willingness to pay and relative popularity for kitchen cabinets constructed from red alder and other hardwood species.

	Mean willingness to pay ranking	Favorite ranking
Unstained alder	7	7
Hickory	4	4
Maple	1	1
Heavy-stained alder	2	3
Red oak	3	5
Moderate-stained alder	6	6
Cherry	5	2

mated for the cases in which independent variable coefficients were significant (Table 7).

In four out of the five cases, as Table 7 shows, where an estimate of mean willingness to pay for a known species name could be calculated, the estimate was higher than in the full sample. In the fifth case, the estimate of mean willingness to pay for a known species name was only 20 cents lower than in the full sample. Estimates of mean willingness to pay when species name was not known could be calculated for three doors. In all three cases, the estimates were lower than in the full sample. While it was not possible to estimate mean willingness to pay with and without species labels for each door, the results suggest that the presence of species name increases consumer willingness to pay for a given door. This result even held for doors where the species names previously had a negative effect on relative popularity.

CONCLUSIONS

This study evaluated consumer preferences for kitchen cabinets constructed from red alder and four other hardwood species. Two measures of preference were used—popularity and willingness to pay. Red oak and cherry were clearly more popular when species name was known. However, red alder was clearly less popular when its species name was known (particularly for heavy-stained alder).

Mean willingness to pay a price premium ranged from approximately \$15 to \$40. Greater willingness to pay was generally associated with

greater popularity, indicating that the most popular doors had a double advantage in capturing a greater market share and commanding a greater price. However, species name increased willingness to pay for all species, even for those species whose name had been shown to decrease relative popularity.

For red oak and cherry, the presence of species name increased both popularity and willingness to pay. Therefore, marketing efforts for these woods should always emphasize species name.

For the other woods, the presence of species name reduced popularity but increased willingness to pay. Therefore, the use of these species raises an empirical question of whether it is worth sacrificing market share to capture a higher price.

The presence of a logo failed to increase the popularity of red alder. In fact, for heavy-stained alder, the logo caused an unexpected decrease in popularity. We attribute this result to the logo attracting additional attention to the presence of stain. Results suggest that the use of an unfamiliar logo is an ineffective marketing tool for red alder products.

For red alder, higher levels of stain were more popular. However, it seems unlikely that the sharp declines in popularity when species name and stain level were known could be offset by increased willingness to pay for these doors. Therefore, marketing efforts for red alder (particularly stained red alder) should emphasize visual characteristics and not species name. A limitation of

TABLE 7. Estimates of respondents' mean willingness to pay a price premium for a favorite door, and associated confidence intervals (CI). Full sample, no name, and species name labeling regimes are included.

	Mean willingness to pay (\$)		Mean willingness to pay (\$)		Names	Mean willingness to pay (\$)	
	Full sample	No names	Upper 95% CI (\$)	Lower 95% CI (\$)		Upper 95% CI (\$)	Lower 95% CI (\$)
Unstained alder	15.70	ns	ns	ns	ns	ns	ns
Hickory	32.50	24.20	41.60	6.70	36.30	47.20	25.40
Maple	39.30	35.40	43.10	27.80	42.40	53.00	31.80
Heavy-stained alder	36.60	35.10	60.80	9.50	38.20	53.10	23.30
Red oak	35.40	ns	ns	ns	ns	ns	ns
Moderate-stained alder	20.50	ns	ns	ns	20.30	33.00	7.70
Cherry	29.20	ns	ns	ns	30.40	36.70	24.10

this study was that the red alder cabinets were evaluated over 3 different stain levels (since they were the primary species of interest), while all other species were evaluated without stain. Future research could address this limitation, while also investigating other product attributes of cabinets that consumers consider important. Additional research could also explore new markets within Alaska and the continental United States.

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