



land designers of alternate woods for public-area furniture of hotels when designing "Hawaiian furniture." We are seeing lots of furniture that is designed based on traditional Hawaiian furniture designs, but is built with a less expensive wood than koa. The recent remodel of Kahala Mandarin is an example of this, where most public-area furniture is stained Honduras mahogany but designed after historic Hawaiian pieces.

Now let me touch on the trends we see at our retail store, particularly what we see at Aloha Tower Marketplace. There we are dealing with a clientele that is one third local and two thirds visitor. As well as our furniture, we sell the works of over 300 of Hawai'i's craftspeople, probably two thirds of whom are working in koa. With the increase in value of koa, and the increased skill and sophistication of these craftspeople, this is a growing business. Locals and visitors alike treasure something made of koa (especially, fine work). It not only is beautiful, but it speaks of Hawai'i. Despite our best efforts to introduce other woods, it is koa that

sells. When we buy wooden pens for example, we might buy a batch of 50 koa pens and five from other woods. When the 50 koa pens are sold, there will be two or three non-koa pens left.

Even in an item as subjective as a turned bowl, where the skill and art of the bowl-turner is so important, we still sell many more koa bowls than all other woods combined.

I think the craftsmen that make a living from woodworking and who do such fine work in non-koa woods in the Woodshow will tell you the same thing—making the non-koa pieces for the Woodshow is a diversion, then they go back to koa to make a some money.

In summary, my first message is that koa sells. It sells because it is beautiful and because it conveys the magic of Hawai'i. For a long time into the future, koa will dominate any hardwood forestry in Hawai'i. Second, premium grades of koa are important. The scientists and foresters who can tell us how to grow premium koa are as important as the scientists and foresters who can increase yield.

Koa Economics and Resource Values

Ed Winkler, Winkler Wood Products

I will discuss koa economics and marketing focusing particularly on stumpages and values of the resource base itself. That's where I think all of the economics come from. If a landowner doesn't make the decisions to plant trees or protect his forest so that the trees will grow, we won't have any koa as a resource base, and there won't be any economics. I'm just going to focus on what happened with the royalties over the past 16 years, and it's quite interesting.

First of all, I would like to acknowledge one of the greatest things that has happened over the past 16 years in the County of Hawai'i, and that is when finally we got a councilperson, Keiko Bonk, who literally went to work for us and actually made changes to the county tax structure in regard to property taxes. That is something (which maybe some of you people aren't aware of) that has been a tremendous disincentive to forestry in Hawai'i. And even more beyond that, I think it was a detriment and a serious problem to our ecosystems, a

problem many people have been working on for 20 years and more. It took 20 years to make that change, and I'm really pleased that it finally came about. But that change didn't come about on its own. It took work from everybody, including a lot of people that I see here, who worked on committees and made presentations and wanted to make the change. All it took was someone in the county to hire someone to physically figure out how it would work. HFIA, for example, put a lot of emphasis on that over the past few years, had a committee working on it, and spearheaded that kind of tremendous change.

As with a lot of the things that can happen in regards to our forest, it is important to come together in partnerships and learn to make changes and make the proper changes and do things together and not apart. I think that the only way that there is going to be economic-based forestry of any sort in the state of Hawaii is through partnerships, through large landowners and



small landowners and Hawaiian groups and industry folks and end-user folks all coming together and determining what are our real needs are and what are our long-range goals.

In regards to royalties, for example, when I first started working in the koa forest in 1978, I was felling trees for a timber firm out of Hilo called Campbell Burns, and one of the main management goals in the area that we were cutting at that particular time, and in a couple of other areas where I was also harvesting timber, was to improve the pasture lands. As a logger, from a logging family, I grew up in the forest and learned to love the outdoors and the forest, and I thought this policy of cutting down trees and improving pasture lands, rather than allowing more trees to grow or planting more trees or doing anything for the forest, but to improve pasture, was kind of a very short-sighted type of management system.

I was relatively new to Hawai'i. I had moved to Hawai'i in 1974, and logging brought me to Hawai'i, logging eucalyptus plantations on the Hamakua Coast. By 1978, when I started physically working koa forests, I had seen that type of management situation going on and had the opportunity to get around on the Big Island and see many other forests where the management decisions of those particular times was, basically, in my mind, for the development of pasture lands. The cattle had for many, many years, been eating all the seedlings, and new forest couldn't grow, the forests were all dying out.

It seemed really silly to me that some landowners and other people didn't have a longer-range goal in mind. I had the opportunity to work on some lands in 1980, on Bishop Estate Lands, who initially had started some plantation work on Keauhou Ranch in 1977 and a little bit earlier; they did a couple of plots even earlier, prior to 1977, a couple of three-acre parcels and five-acre parcels where they fenced it off as little test sites for canoe log and for curly-type trees. And then they did some bigger areas where they fenced off the cattle in 1977, a couple hundred acres for their initial sites where they were re-foresting. Bishop Estate was not going into this venture for economical reasons; there is no question about that. The value of the resource base in itself was so minuscule that there was no way that they could fathom and even project out in the long-run that they'd harvest those trees and they would be economically-viable type of situation. Bishop Estate could not have been

going into it for that because at that point in time, the royalties Bishop Estate was selling their trees for was about \$100 a thousand[board feet], which is very, very minimal.

When I first started cutting koa on that ranch in about 1980, I thought that price was very, very low. The wholesale price that larger users would be buying, basically green koa, selected better koa, good grade, good value koa was about \$900 a thousand. I think maybe at that point in time the retail of kiln dry koa was probably around the order of \$1500 to \$1750 per thousand board feet. I started cutting on that ranch, worked out a land license with Bishop Estate and started harvesting behind Campbell Burns, material that they left behind. I saw an opportunity where I felt I could recover resource and still make a living and started my business up around 1980 between there and Kapapala Ranch, a couple of different areas. I started selling koa and trying to market green koa when I first started, on the wholesale level, selling to whomever for about \$1500 a thousand. I was paying Bishop Estate, going behind what Campbell Burns had left behind, and paying Bishop Estate, at that early stage, at about \$225 a thousand board feet, over double what Bishop Estate was paying them for basically the prime timber on the same lands.

I felt at that point in time that koa, relative to other hard woods around the world that I was familiar with, was, relatively speaking, quite low in price. I knew that the stumpage values were tremendously low, and the idea of cutting down trees to improve lands for pastoral uses seemed to terrible to me. I cut on that property for quite a number of years, on that parcel and various other Big Island parcels as well. By 1990, the price of koa had gone up quite a lot. The royalties by around 1990 were anywhere from about \$550 to \$750 a thousand, so basically it went up in five years time from \$100 to \$700 a thousand.

The larger users were buying wholesale, green lumber after it had been harvested and cut into boards, for around \$3250 a thousand. The retail level for kiln-dry, selected, better lumber at that time was about \$4700 to \$4500 per thousand board feet, a pretty good increase. The royalties were going up, and by 1990, there was a lot more interest in the community.

By 1990 we had had a couple of conferences, a lot more people were interested with what's going on with koa. How long does it take for koa to grow? People in



1980 said it would probably take a hundred years for a koa tree to grow before you could harvest it. It wasn't worth anything in 1980 and at \$100 a thousand and a hundred years for it to grow, my gosh! they thought, "Let's get rid of these trees and this forest so that we can make better pasture lands and put more cattle on it." By 1990, things had changed a bit, and people were taking a little more serious look into how quickly a koa tree can grow. The thought by that point in time was maybe 40 to 80 years that it would take it to grow. My feeling was that the cycle for growing those trees was still a lot less than that.

Today, 1996, another six years from 1990, the price of koa is as high as \$3 a board foot, \$3000 per thousand for royalties for koa. I think maybe the price of koa on the stumpage value has reached a high point at \$3 a board foot. I don't imagine that, on a world-market level anyway, competing with other hardwoods around the world, it's going to go up too much more than that in the near future. It's very possible that it could go considerably higher yet, but you would be looking at selected types of koa, more of the curly type, real fiddle-back figured, and maybe if it went higher the lower grade would be reduced quite a bit.

So, on the average, it's probably at a pretty high level at this point in time. I don't think it's at a peak. I don't think it's at a spike where it's going to drop down tremendously, although there maybe some minor fluctuations in the value of koa, meaning that the value right now could be anywhere from \$2 to \$3. And maybe in some areas of koa where people are harvesting, I think they're paying as low as 85 cents, which is 850 dollars thousand. What is the price of wholesale? The price of wholesale koa, \$3 a board foot right now for royalties. The wholesale price right now for the larger-volume sales is running on the order of about \$6 a board foot. The retail of koa for kiln-dry stocks is running about \$10 a board foot.

What has happened over the past 16 years is that the value has shifted to the positive side of the landowner or the person that's growing the trees or has the forest, which is really good, which is the way it should be, at least that kind of balance in nature where landowners can now take a serious look at protecting their forest from the economic standpoint, from the koa resource. So, it's changed quite a lot over the last 16 years from \$100 a thousand to \$3000 a thousand, from a wholesale level of \$900 to \$6000 a thousand, and at those

levels, if you really think about it, you're now looking at the royalty figure or the stumpage value at about fifty percent of the value of the wholesale, which is, relatively speaking, quite high, I think, in regard to the average of what you do get out of koa forests. I think it's a real good value and a real good thing and I think the future is good for our whole industry. I look at the positive side of things. I think with the right management and the changes that need to come in our community and working together and figuring out problems that we have with the Endangered Species Act.

The problem is, how can you protect your land and hold it in conservation and those type of uses for perpetuity and not get any kind of economic return on it? Well, basically you really can't. You really, really can't. But there's got to be some way that landowners like, for example, Bishop Estate, can realize the benefit that they should be realizing for protecting lands for the whole public use for watershed reasons. And those are just a few issues that we need to continue to talk about and discuss, and changes need to be made. From an economic and marketing standpoint, I think the future looks good.

When I first started working in koa and marketing koa in 1980, it was really interesting. The main buyers of koa at that time were asking for \$1.50 a board foot, and the largest manufacturer of koa was selling it for \$900 a thousand board foot and here I am, the new man on the block, asking \$1.50. I needed that in order just barely to survive. My costs were tremendously higher; I'm just a small company. I thought it was worth it. That's my feeling of the resource and how beautiful it was, and then the larger user says, "Well, you can't sell koa for that. Nobody's going to buy it." And I went around to people and I recall selling curly koa for \$2 a board foot green, and I cut it for one person, a log for one person, and he was happy to get it. It was the first time that curly koa got sold for that kind of a price. He was tickled to death to have that resource. And I learned some good lessons, that you can't undervalue it. And he turned around and made it into an economical thing. He didn't lose any money on it; he made money on that venture. The price of it needed to go up, the value had to go up.

People that are selling furniture in the industry right now have to realize that the landowner has got to be able to protect his trees, protect his land, and grow the trees, and that's where all the cost and value come from, is right from the basic start. You also have to have the



right attitude about when the pricing structure is going up. You have to compare it to what's really out there. You can't replace koa. Koa, culturally for the state of Hawai'i, is an absolutely marvelous resource, and that's why the price structure can go where it has gone over the last 16 years. There's no sense to it. The economists cannot make sense of what's happened with the price. The only thing is, it's carrying the value, because for one thing it should. It's one of the most beautiful woods in the world, not just in Hawai'i, and culturally for Hawai'i, you cannot replace it. People really love it and respect it here in Hawai'i, and they always will. There'll always be a tremendous market for koa in Hawai'i.

Questions following panel on fiscal realities

Q: [to Tom Loudat] You had 34,000 board feet as your assumption [yield per acre]; what number of trees, what size per acre?

Loudat: To the best of my recollection, it was harvesting 76 trees per acre, assuming a 15 or 20 foot bole, and that was all you were really harvesting. [Refers to the table in the report.]

Q: [to Lloyd Jones] I'm interested in having you reflect a little more seriously on what you mean by quality. Are you saying, for example, curly is number one and everything else number two?

Jones: Of the characteristics that are driving price up, curly is certainly one you can put your finger on pretty easily. There's a grade below that has got nice figure and a lot of black in it, a lot of streak, a lot of character; all of that is high quality. The color is important; the dark, rich red commands a premium over the blond koa. Again, I challenge the scientists to give us some knowledge: is it genetic, is it the soil, the environment, trace elements? What causes those characteristics?

Q: [to Loudat] In years 20 to 25 I didn't see any harvesting costs in your plantations. How are you going to harvest, and what is the cost?

Loudat: It just assumes a stumpage fee. Someone like Ed comes in and pays you the stumpage fee and he incurs all the costs of harvesting. You can do other types of arrangements, but that's the one that's most typical.

Q: [to Peter Simmons] All the koa that's coming into

the saw mills and these stores, I'm assuming it's all coming from native forest? There's no plantations yet that have harvestable koa? Is that true?

Simmons: Well, I can let these fellows say, but to me it's pastures. Ed?

Ed Winkler: Yes, I'm not aware of any koa that's coming in from what you'd really call a native forest. All the koa right now currently is being harvested off of pretty much open pasture lands. Historically, where I've cut, for example on Bishop Estate lands, was all pasture lands. It had been in pasture lands for many, many years. Where koa forests are—and people have the misconception that koa comes out of the forest, and the fact of the matter is that where koa is being harvested these days is not out of a real forest situation—it's coming out of very depleted, degraded lands that have been managed for other things than the forest.