



Ted Katsigianis, vice president of agriculture for Biltmore Estate, oversees the Angus herd.

Nestled in the Great Smoky Mountain range of the western part of North Carolina is the largest private residence ever built in the United States.

Biltmore Estate was constructed as a summer residence during the 1890s by George Washington Vanderbilt, grandson of renowned businessman, Cornelius "Commodore" Vanderbilt. Commodore Vanderbilt amassed a family fortune through shrewd investments in steamships, railroads and other commercial endeavors.

It is obvious he passed on his exceptional business abilities through generations of the Vanderbilt family to his great-great grandson, William Cecil, who today owns and operates the national historic landmark as a completely self-supporting enterprise, independent of government subsidy, grants or trusts. The estate has about 500 employees, making the operation one of the area's largest employers.

While the major income for the estate is derived from tourism, few people realize agriculture is and has

BILTMORE ESTATE

*A statement of a family,
an age and quality Angus
cattle production.*

by Janet Mayer

always been, an important part of the Biltmore program.

"The estate is a statement of the man, a family and an age," says Ted Katsigianis, vice president of agriculture for Biltmore Estate. "Many people are familiar with George Vanderbilt the millionaire, but not Vanderbilt the farmer."

It was Vanderbilt's belief that the estate should be self-sufficient and the concept was encouraged through the growing of potatoes and corn, and the raising of sheep, hogs, chickens, horses and a world-famous herd of Jersey cattle.

So intent was Vanderbilt in his agricultural endeavors, that he commissioned Richard Morris Hunt, the architect who had designed the mansion, to design all the barns and agricultural buildings for the operation.

Biltmore could also be called the birthplace of the nation's forestry program. Katsigianis says the estate's forestry program may be George Vanderbilt's most important contribution to this country. The forestry efforts at Biltmore were part of the early land conservation

movement in America. In addition to management of the forest under Vanderbilt's sponsorship, the Biltmore School of Forestry was begun as a place to train foresters. It was in operation from 1898 until the advent of World War I.

When Vanderbilt bought the land for the estate, it totaled about 125,000 acres of barren hills, washed out gullies and a succession of worn-out farms. Gross mismanagement of the forest resources and farmlands of the area gave Vanderbilt the opportunity to try innovative concepts to improve the land.

Frederick Law Olmstead, the eminent landscape designer who had designed the gardens and grounds surrounding the mansion, assisted Vanderbilt by designating the land that was to be used for pastures, cropland and forestry. By economical management of the woodlands to produce healthy, beautiful stands of timber, and yet provide a steady income, a new concept was introduced to a nation that was accustomed to raping forest resources.

Today, all but 8,000 of the original acres have been given to the National Forestry Service and make up a part of the Great Smoky Mountain National Forest.

The estate still works with several forestry organizations, and the forests are harvested on a sustained yield basis consistent with the best ideas of modern forestry. An average of 10 to 20 acres of white pine timber is marketed each year.

Through the years, the Biltmore Dairy became the primary source of farm income for the estate, with the operation milking about 1,800 head of dairy cattle during the 1950s. Over the next decade, production at the dairy was increased by purchasing additional milk from other area dairy farmers. In the early 1980s, the dairy ceased operation; while at the same time, the Biltmore beef cattle herd was being established.

During this same period of time, plans were also being made for an estate winery. Housed in a building that was part of the dairy operation, the winery officially opened in 1985. Both the winery and the beef cattle operation were new agricultural endeavors for the estate that continued Vanderbilt's original concept that the estate be self-sufficient.

Before, the Biltmore cattle were purchased, Katsigianis, who was working as an Extension livestock specialist at the University of Maryland, was invited by a friend of Mr. Cecil to accompany him to



The Biltmore Estate's main house, shown in the background, attracts many tourists throughout the year, says Ted Katsigianis.



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Biltmore. Katsigianis was asked to look over the situation and make suggestions about starting a beef cattle operation at the estate.

"When they started to plan the cow herd, they had no idea what they wanted to do," Katsigianis recalls. "They talked about several breeds of cattle, and there was even the question of dealing with purebred cattle. I suggested that they start with a mixture, both purebred and commercial. Then, over the years, they could phase out the things they didn't like and let grow the ones they did like. I worked for about a year and a half as a consultant for the estate. But I had gotten to the point where I couldn't take the rat race of living so near to Washington, D.C.; so I decided to move down here. That was nine years ago."

Katsigianis lives on the grounds of the estate, where he supervises the forestry program, landscaping and gardens, crops, pastures and cattle operation, and vineyards. About 100 employees work under his direction. Of that number, four work directly with the cattle and crops.

The **Biltmore herd** was started with 100 bred cows falling into three groups. A group of spring calving Angus cows, primarily of Wye and Graham breeding, was purchased from Irvington Farms in Georgia.

At the time, Katsigianis says, the Irvington operation had moved from Maryland to Georgia and was in the process of changing its herd from a spring calving to fall calving program. Therefore, when they sold the cows bred to calve in the spring, Biltmore had the opportunity to purchase a very good group of cows that otherwise might not have been available.

A small group was also purchased from Ed Oliver's operation in Georgia.

A group of Limousin cows was bought from the Bates Ranch in Oklahoma, and the last part of the herd was cattle called Cash cows. Bred for a 20-year ongoing research project on heterosis retention over generations, the group of Charolais, Angus, Brown Swiss and Hereford crosses was dispersed when the project ended.

"They are some of the most amazing cows I have ever worked with," Katsigianis says. "They are gentle and calm with tremendous fertility and productivity, especially in milk. We had steers that were not creep fed that had 205-day adjusted weights of 935 pounds. They are just great females with great longevity. We're still breeding one of the cows that was born in 1978."

The Biltmore herd consists of 75 Angus cows, 50 Limousin cows and the remainder commercial. The Simmental and Limousin percentage cattle are registered with their respective associations.

Almost all of the 250 brood cows in the herd are bred by artificial insemination (AI). Katsigianis says his formula for a

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because timing is everything. We also spend about three hours a night watching the cows to detect heat signs. When you spend this much time watching the cows, you get to know them well. Many times I will know a cow is in heat even though she isn't showing the classic signs. Being familiar with the cows on a daily basis lets you know when they deviate from their normal pattern."

Breeding season starts in April and lasts for 45 days, when a clean-up bull is turned in with the herd. Calving starts in January and continues to mid-March, with the majority of the cows calving at this time. Katsigianis says they have two separate calving seasons just to split things up. About 50 cows calve in September and October.

At Biltmore, the heifers in the herd are given special treatment. To help the heifers grow, they are pushed on grain through their first winter and on through the AI season. They are heat synchronized, bred AI and then turned in with a clean-up bull. Regardless of the breed of heifer, Angus clean-up bulls sired by a calving ease bull such as Traveler or Tehama Bando are always used. After the heifers are bred, they are kept on good pasture and high quality legume grass-hay until they calve.

"During this time, we especially watch their protein intake because it can be a culprit in producing large calves," Katsigianis explains.

After the cows are bred, they will be sustained on regular pasture until after Christmas when they are fed haylage and corn silage. Biltmore uses a controlled grazing program for their cattle. About 100 cow-calf pairs are rotated every two to three days through a series of 35 paddocks that range in

size from five to 10-acre pastures.

"It is a wonderful system. It increases forage utilization and it gentles the cows. It really makes AI easy, because you don't have to chase cows up and down the hills all over a 100-acre pasture to get them in to breed," Katsigianis says with a laugh. The unrenovated pastures contain mostly native grasses such as orchard, timothy, fescue and white clover.

The heifers are the first to calve in January. Most of the cows calve out in the



successful AI program is to have an excellent breeder, to be diligent in doing heat checks, to have the cows in good condition by giving them good nutrition, and to use top quality, certified semen.

He receives help in these areas from Kevin Payne, who is herdsman for the operation. Kevin is an excellent breeder. At pregnancy check, every single Angus was called to the scales. The problem with using an AI program is they will usually come only once a day and this isn't good,

Biltmore Estate's Angus cow herd is based on Wye and Graham breeding. The cattle are on a controlled grazing system for increased forage utilization.

pasture on their own but the heifers are brought to a pasture behind one of the dairy barns where the crew can observe them. After calving the cows are separated by ages. The first-calf heifers are always turned in with a bull for ease of breeding for their second gestation.

Calves of the first-calf heifers will at times, be creep fed. This is done so the calves don't drain down the two-year-old mothers. The remainder of the calves will be creep fed three weeks to a month before weaning.

"We never have any sick calves at weaning. We vaccinate twice before weaning. We don't castrate until about a month after calving, but we generally know which cows will give us bulls that will be good ones, and this helps us make up our mind."

All steer calves are pre-conditioned before they are sold. Most of the steers go to a graded feeder calf sale in Asheville and to other feeder calf sales in the area. This is the second year the estate has participated in the Asheville sale, with many of the calves from the last sale going to a feedlot in Ohio.

"The sale in town has given us a good way to market our steers. Most of our bulls are sold right off the farm by private treaty to commercial breeders. A few others are put on test at one of the North Carolina bull tests. Because we have been in a growth phase up until now, we have been keeping all the heifers for the herd."

Birthweights for the herd have averaged 75 to 95 pounds, with first-calf heifers about 60 to 75 pounds. Katsigianis says weaning weights depend a lot on the type of weather conditions during the year. The average weaning weight for heifers is about 500 pounds, with 600 to 650 pounds for bulls.

When Katsigianis makes sire selections, he tries to come up with a combination that will produce a calf that has a balanced set of EPDs. Breeding decisions are based on several things with the sire summary being one of the most important.

"The bulls we use are those we feel will be sires of the next generation," he says. "People will know those names 20 years from now. A large percentage of our herd is, and has been, bred to bulls that are known to be great bulls in terms of the kind of females they are putting on the ground. These are bulls that are going to give some strength in a pedigree. They have to have milk,

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growth and structural correctness. I can't say I go strictly by the numbers, because I do keep visual appeal in mind. EPDs are important, but regardless of what people say, they will pick the pretty cattle. I consider our herd functional cattle with good EPDs, but with visual appeal."

The Biltmore Angus cow herd is made up predominantly of daughters and granddaughters of Schearbrook Shoshone, Pine Drive Big Sky, Scotch Cap, QAS Traveler 23-4, Tehama Bando 155 and Rito 9M9. Yearlings and weaned heifers are Leachman Tonto, Leachman Paragon, Leachman Prompter, Rito 2100 GDAR, GDAR Rainmaker 340, R&J Spade 1204 plus a few more Pine Drives, Scotch Caps, Travelers and Bandos. Fall 1992 and spring 1993 calves were sired by Rito 9M9, Pine Drive, Temaha Bando, Traveler, Leachman Tonto, Leachman Prompter, Rito 9M9, RR Traveler 5204 and KMA Highroller.

Cow families do not play a major role in the overall breeding plans at Biltmore. Katsigianis says he has never had any great faith in cow families because it is his belief that most genetic progress is made through the bulls.

"After a few generations, a cow family becomes less important than the bulls you have used over this period of time. But there are certainly some cows that will produce well no matter how they are bred. I always try to take that into account when I am selecting bulls. I feel Leachman Lass and Blackbird 2036

would have to be classified as two of the all-time great Angus cows. What I like to do is identify the great sons out of the great cows and incorporate them into our herd."

An example of a cow he cites from the Biltmore herd is a 13-year-old Shoshone daughter that was one of the original Irvington cows.

Katsigianis says the cow, bred to Leachman Prompter, gave birth to twin calves, a heifer and a bull, on January 15. The calves were creep fed and weaned August 4 with the bull weighing 750 pounds, and the heifer 580 pounds. The 205-day adjusted weight on the bull calf was 835 pounds. The bull, which Katsigianis describes as "a big stout old calf that is exceptional," is on test at the Waynesville Bull Test in North Carolina. Over the years, three bull calves from this cow have been used at Biltmore as clean-up bulls.

Another outstanding cow in the herd is a Pine Drive granddaughter bred to Rito 2100. The cow calved on January 24 giving birth to twin heifers. The calves weaned on August 4th at 505 pounds and 510 pounds with adjusted 205-day weights over 600 pounds.

Katsigianis, who is a graduate of the University of New York, with a masters and doctorate in animal science from Pennsylvania State University, believes there isn't just one breed in the world that will work for everyone.

"I think the Limousin breed is the ultimate choice to cross with Angus because it produces what the industry is looking for in terms of an 1,100-pound carcass that grades low Choice," he says.

"Even though I love the Angus breed, we need genetic diversity; I feel that is very important to our industry. The Angus are very easy to work with; they are adaptable, fertile and are good mothers. The maternal traits are good, but everything has to be in moderation. I am glad to see the breeders are thinking about moderation, because when we tip the scale from one side to the other, we run into problems.

The breeding goal I try to keep in mind when I sort bulls for breeding is to come up with a calf that has a balanced set of EPDs and is functional without being extreme. Being in the cattle business and making the right choices is not always easy. But regardless of what some may think, we are not just a bunch of dumb cowboys."

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