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Old growth better carbon dioxide filter than newer trees, says report

By AUGUST BAUNACH
of the Daily Barometer

Cutting old-growth forests substantially increases the carbon dioxide in the earth's atmosphere, according to a report co-authored by Mark Harmon and William Ferrell, of OSU's department of forest science, and Jerry Franklin, of the University of Washington.

Combustion of fossil fuels is known to be the primary cause of carbon dioxide pollution, which scientists say leads to the greenhouse effect. But this additional source has been identified and reported in the Feb. 9 issue of *Science*.

Harmon said previous harvesting decisions made by the timber industry and the U.S. Forest Service were based on a conventional wisdom.

"It was argued that since young trees more actively remove carbon from the environment, old-growth forests could be harvested and replanted, resulting in a net environmental gain," Harmon said.

"It was thought that younger, more active trees would actually reduce carbon dioxide in the atmosphere. But when you analyze the data you find that just the opposite is true."

According to Ferrell, managed forests or rotation-age forests are typically harvested 60 years after planting. Using computer modelling, Ferrell said a graphic curve was developed, and the potential carbon storage of a forest, composed entirely of 60-year-old trees, was compared to the carbon equilibrium found in old-growth ecosystems. It was found that the maximum carbon storage capacity of any forest currently under management was only 65 percent when compared to old-growth forests.

"We addressed the entire carbon budget within a forest," Ferrell said, "comparing the rate of decomposition of the wood within a forest to the rate of decomposition of the products that come out of a forest.

"Old-growth studies over the last 30 years indicate a steady state, a carbon equilibrium. As a tree dies, it is replaced by another from the understory. The statistical average over a long period of time is a constant," Ferrell said.

But managed forests, with an average rotation age of 60 years, never recover the carbon lost to the atmosphere when the original old-growth was logged.

Harmon said only about 45 percent of the utilized timber actually becomes building materials. The other 55 percent is processed or becomes wood fuel, and releases carbon into the atmosphere.

Ferrell said last fall, a German forester spoke at OSU and informed his audience that German forests have a longer harvest cycle, resulting in the average age of a harvested tree being 150 years. This extended rotation of the timber crop would more closely approximate the carbon storage capacity of an old-growth forest.

Ferrell said he hopes their research will broaden the scale that Northwest economic problems are weighed on. "This is a global issue, and we have to think in global terms."

The study estimates that of all the carbon dioxide added to the earth's atmosphere in the last century, 2 percent of that volume came from old-growth logging in Oregon and Washington. Yet Oregon and Washington comprise only 0.017 percent of the Earth's land surface.

The impact has been particularly significant because these forests were among the largest and most productive in the world, Harmon said.

SHOOTERS, from page 1

Rose's trainin[illegible] pistol event

1000 lambs expected by March

By MICHAEL KELLEY
for the Daily Barometer

Mary had a little lamb. OSU has about 650 little lambs as of Monday, and an event that brings hundreds of visitors to OSU each year is underway.

"Families, kindergartens and elementary school classes regularly visit the barns during lambing," said Howard Meyer, associate professor of animal science and supervisor of the sheep research program.

"Each year we usually have a group of nurses from the Oregon Health Sciences Center come down and observe the newborn lambs bonding with their mothers. They stay for hours watching them," Meyer said.

"We have had up to 1,000 visitors a week during the peak part of the season, with a total of around 5,000 people for the season," he said.

The OSU sheep barn is located on Campus Way, west of 35th Street. The barn is open 24 hours a day, seven days a week.

"People watching a ewe give birth occasionally panic. It is a genuine concern for them because of a lack of knowledge or experience on their part," Meyer said.

"Our goal is to bring the ewes into the [illegible]

ing birth to her own. When she does give birth to her own, she ignores it. Meyer calls these ewes "granny ewes."

One way to prevent having bummer lambs is to trick the ewe. When a ewe gives birth to a dead lamb, sheep barn workers will take the birth fluids and rub them on a bummer lamb.

"The mother will smell the fluids on the replacement lamb and sometimes will think it is her lamb," Meyer said.

The sheep program plans to have 1,000 lambs by the end of the lambing season. The season runs from the middle of January to about the first of March.

"Approximately 80 percent of the ewes will have multiple births," Meyer said.

Lamb mortality in the barn is not expected to exceed 5 percent. An example of how a lamb might die is when a ewe, which has already given birth to one lamb, is having another. She might lie down on the first lamb without knowing it, causing it to suffocate.

"This would not happen in open pasture," Meyer said.

The sheep program has also had its problems with dogs killing the sheep. Two years ago, two dogs chased six sheep into a creek