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Biofuels News

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Wageningen expert: "Brazilian ethanol not causing deforestation"

(Biopact) - Ethanol production in Brazil is not causing deforestation in the Amazon region, says Peter Zuurbier, Associate Professor and Director the Latin America Office of Wageningen University, the world's leading center of expertise on tropical agriculture.

According to him, the notion often held by NGO's that sugarcane is displacing cattle and soybean production into the Amazon is inaccurate. "The real problem lies in illegal deforestation and lack of property rights, as around 50 percent of the Amazon region has disputed titles and this is an invitation for timber companies" he says.

In an interview with Ethanol Statistics, prof Zuurbier tries to explain a dynamic process between illegal activities in the Amazon rainforest and the expansion of agricultural lands towards that region. NGO's often state that sugarcane production is displacing cattle and soybean production towards and into the Amazon, burning down the area to make it suitable for agriculture and pastures.

According to Zuurbier however, the process is slightly different. "Well organized groups and corporations with questionable land titles, but also official land owners began to chop down large acreages of forest to trade timber, both legally and illegally" he says. "Usually, after the empty strips of land were abandoned, cattle owners would move into these cheap lands. However, after 3 to 4 years of cattle breeding, the thin soil of the Amazon is completely useless without any form of fertilization and livestock owners usually move into the next abandoned area. Soybean farmers meanwhile replace the livestock in these areas, recognizing the opportunity to fertilize the area for soybean production."

Prof Zuurbier says the cause of deforestation and agricultural production in or near the Amazon, is simply illegal deforestation itself. The fact that Brazil still has questionable land titles, no set-aside policy and great difficulty to enforce existing laws to counter illegal timber trade, are the real reasons why the Amazon rainforest is in danger according to him. The discussion on the sustainability of Brazilian ethanol was off to a fresh start in 2008, at the European Motor BioFuels Forum 2008 in Rotterdam. On the 9th and 10th of January, industry experts once again gathered to discuss various aspects of the growing market for fuel ethanol, specifically in Europe and Brazil. Among the subjects was of course sustainability. Conflicting opinions were expressed about the real contribution of ethanol to the reduction of CO2 emissions, the impact of biofuels on food prices and food availability, and also indirect effects on tropical forests and biodiversity. Indirect effects, because the notion that Brazil is planting sugarcane in the Amazon region has proven to be factually wrong. The indirect effect seems to be a fair point however, since sugarcane fields are moving into areas that were previously used for cattle and soybeans.

In October last year, Ethanol Statistics interviewed José Roberto Moreira on the subject, who said that the idea of cattle moving into the Amazon would not be economically sustainable, because diseases in those areas would prevent Brazil from exporting beef. At the Biofuels Forum in Rotterdam, we discussed the issue again with Peter Zuurbier, Associate Professor and Director of the Wageningen UR Latin America Office. After having established the office in Piracicaba (São Paulo, Brazil), Mr. Zuurbier is now actively involved in research projects concerning the ethanol industry and an expert in the field of ethanol feedstock. In October last year, he organized a conference at Wageningen University, specifically aimed at exploring the indirect effects of sugarcane and soybean production on the Amazon. According to him, deforestation leads to soybean production near the Amazon, not the other way around.

The role of (il)legal timber trade "It's a dynamic process between roughly two regions in Brazil," he says. "One is the Amazon region and the other is the rest of Brazil surrounding it. Over the past 15 years, soybeans have been moving North into the savannah-like Cerrado region, and up to the tropical rainforests of the Amazon. However, what happened after that was an interaction with often illegal timber trade in the Amazon region. Well organized groups and corporations with questionable land titles, but also official land owners began to chop down large acreages of forest to trade timber, both legally and illegally. Usually, after the empty strips of land were abandoned, cattle owners would move into these cheap lands.

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without any form of fertilization and livestock owners usually move into the next abandoned area. Soybean farmers meanwhile replace the livestock in these areas, recognizing the opportunity to fertilize the area for soybean production. Now the question is, can you blame the cattle owners for moving into these empty strips of land, or the soybean farmers for moving in after the cattle has left? I personally don't think so. I think the real problem lies in illegal deforestation and lack of property rights, as around 50 percent of the Amazon region has disputed titles and this is an invitation for timber companies."

Protected areas and ownership titles

So what about government installed protected areas? Brazil does in fact have laws to prevent activities like this. "The problem, among other things, is the fact legislation from the 1980's confirmed the right of some people to start agricultural activities in the Amazon region, simply because they had official documents to show that they owned the land. Now, the good news is that the Brazilian government, both state and federal, realized under intense international pressure that they couldn't allow this to continue. So gradually, the legislation has been adjusted. First, it imposed that 20% of the land had to be reserved for natural resources, while 80% could be used for other purposes. This soon changed to 80% for natural resources, under heavy protest of the land owners, who saw their land value decline rapidly. This problem still exists today, as Brazil has no set-aside land subsidies like they have in the EU."

A first step towards the solution: satellite monitoring

The problem of soybeans being produced in or near the Amazon Biome is however, close to being solved, says Mr. Zuurbier. Large commodity traders, such as Cargill and ADM, decided to impose a moratorium on soybean production on the Amazon region, meaning that they wouldn't buy soybeans from producers in those areas. The initiative for this came from Brazil itself, specifically from the state of Mato Grosso. Although only 2% of the state's land falls within the area, the measure came across strong opposition among farmers, since they are the ones losing income. The question then is, is it enforceable, is it traceable? Considering the sheer size of the region and the homogeneity of the product, it has been difficult. But now, the government has introduced a satellite monitoring system in combination with certificates, to make it more transparent. Again, because of international pressure, it is in the interest of the largest traders and farmers to make this legislation work. Subsequently, the soybean farmers association AproSoja plays an important role in this."

The future of soybean production and cattle breeding

Thinking this through, one could think that preventing illegal deforestation and soybean production near the Amazon, could only result in less cattle and soy production as it has no other place to go considering the expansion of sugarcane for ethanol. "I understand that logic," says Mr. Zuurbier, "but it discards the alternatives." "Currently, there is 90 million hectares of Cerrado, the savannah of Brazil, available for agriculture. This is slowly being utilized, taking into account strict environmental demands, zoning and waterways. You could utilize 10, 20 or 30 million hectares of this without significantly damaging the environment, at a reasonably sustainable basis."

"Cattle breeders on the other hand, have a different future. It is absolutely mad what those people are doing with land. Currently, there is a terribly extensive form of cattle breeding. So they are being told to intensify." Farmers rightfully point out that moving cattle into other areas is cheaper than intensifying, which needs investments. "I'm absolutely sure that it's cheaper, no doubt about that. But food safety is becoming a real issue at the moment. There are many diseases at the moment, which could affect the export market". In that respect, Mr. Zuurbier agrees with José Roberto Moreira who concluded the same. "He was proven absolutely right," he says. "In 2004, the EU discovered that Brazilian laboratories were not equipped to trace specific residues in beef. Threatening to close the market for Brazilian beef, the EU asked the Brazilian government to improve this situation. After not complying with the request, the European Commission reduced the Brazilian beef import quota by one-third in December 2007. Because of that, Brazilians have no choice but to intensify into cattle ranches because it is the only way to control diseases".

Apples and oranges

Mr. Zuurbier acknowledges that Brazil has a problem with deforestation. He also sees the displacement of soybeans, in favour of sugarcane and he also sees cattle and soybean production appearing near or in the Amazon region. What he however doesn't see, is sugarcane being the direct cause of this chain of events. "The solution has to come from a clear system of land titles, strict legislation on both illegal timber trade and the production of crops near sensitive biomes, intensification of cattle breeding and sustainable development of 10-30 million hectares in the Cerrado region. At the end, it is also a farmer's decision what he is going to cultivate. In fact, I've spoken to some farmers who will switch back to producing oranges next year, simply because ethanol prices are forecasted to be even lower than last year."

Peter Zuurbier is director of the Latin America Office of Wageningen University and research center. The office is located at the University of São Paulo's campus in Piracicaba (SP). He is an Associate Professor in Business Administration focusing his research, training and consulting activities on food chain development domestically and internationally. In particular his research centers on internationalization strategy in the Americas. He co-developed the Agri Chain Competence Center in the Netherlands, managed food chain projects, participated in congresses and published extensively on the subject. Between March and September 2006 he was visiting professor at the University of São Paulo.

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