## Interview with Pat Mooney

By Benedikt Haerlin, Berlin 25<sup>th</sup> October 2016 after a presentation and discussion at "Brot für die Welt"

**Benedikt Haerlin**: We have heard from you that we can still stop "Baysanto", Bayer's Monsanto takeover. Can you quickly explain how that could be done?

**Pat Mooney**: Sure. The shareholders are the one who make the decisions about the merger. If they don't see a profit in it they won't go with it. The emerging markets for the big pesticide companies are not in Europe nor in North America. The emerging markets are in Asia, Africa and Latin America. You can actually boil it down to four countries that make up 33% of the pesticide market and that's Argentina, Brazil, India and China. If any two of those countries, or any other combinations of countries that make up a significant part of the market, say no – and every country has the right to say no in their own jurisdiction – then there is no profit for the shareholders. The shareholders will just tell their managers "Forget it, go home, we are not doing this, we are going to lose money on this." So it is not finally what the EU Commission in Brussels says or what Washington says – although that would help – it is a matter of a few governments around the world saying "We don't want this."

**B.H.:** You also told us that it was probably only the beginning of a new merger wave, and a new battle which is about the digitalization of agriculture – what you called the "googlefication" of agriculture. What does it mean?

**P.M.:** Well, both on the genomic side and on the precision farming side, it is all about big data, it is all how do you manage data, how do you control and develop the algorithms. You either create new genomic structures, new DNA, if you are a seed or pesticides company. And on the other side you use sensors to be able to track what is happening to the seeds, the pesticides, the fertilizers, in the fields, at the harvest time. So we end up with a merger scene between the huge genomic and pharmaceutical company data on one side and the sensor data on the other side, which are controlled by the agricultural machinery industry. Once the present mergers result in three companies on each side being roughly the same scale, then the logic is – and they already recognized this – that they should come together. It would be more *profitable* to put all the data into the hands of one company. And naturally it leads to things we've already seen such as John Deere – the world's biggest farm-machine company – making deals with Bayer and Monsanto. They already made some arrangements there and realize that they can make the next step of mergers. They will use the same arguments they use now and say "World hunger requires we do this, climate change requires we do this, we must be able to scale up to respond to this crisis, let us take advantage of the (big data) technology to put it all together."

**B.H.:** You also gave us hope because you clearly said that leading edge technologies and leading edge resources to feed the world, even under the conditions we are facing now, are actually with the small farmers. How can you claim that?

**P.M.:** Well it is in two ways. One way, because the small farmers are in fact producing most of the food for most of the world's people already, that's very clear. It was initially doubted, but now that scientists and institutions such as the FAO investigated it more closely, they realized that this is exactly the case. One of the reasons why peasants are so successful at producing and providing food for the world, especially for hungry people, is because the industrial system is so bad at doing it. For every Euro that is spent by consumers in industrialized countries on the industrial food chain, they spend two more Euros in covering the damages, the health and environmental damages of that same industrial food chain. That is because 40% of the food does not make it to the table and another 25% of the food that makes it to the table is wasted. If you look at the overconsumption of the system plus the waste along the way and the environmental damages created by all of that, we talk about an 8 trillion Dollar bill every year. That is a huge cost. So the system is so terribly inefficient that with all that, it only produces 30% of the food for people. By default almost, we have to say that the peasant system is the best system. But beyond that of course the peasant system is the better system because it is the most flexible, it has the most diversity in it, it is the most able to adapt to changes quickly. The industrial model is just unable to adapt to the most important changes.

B.H.: So you think that we could also claim that the peasant system is the most innovative?

**P.M.:** Oh yes easily. The industrial system put 45% of all the research and development resources on just one crop: corn (maize). That is a terribly non innovative system – we can't just live on corn in the future. Peasants are working with 6,883 crops. They have much more diversity to work with. And we should recognize too, that the information technologies of the smartphone, and so on, do allow the farmers – and I see this all the time – exchanging information on pests and diseases, talking with each other about the joint planting of different crops, sharing seeds with each other, looking at how they can adapt to climate change. The history of the farmer's capacity to adjust to climate change is incredible. For example peasants in Africa in the course of a century, adapted corn as a new crop to 17 different microclimates around Africa – in only one century! And this, without local model, without any kind of current transportation systems, they just did it themselves. The ability to adapt rapidly to new conditions, to new species, is very high in the peasant system.

**B.H.:** In December, at the next CBD (Convention on Biological Diversity) meeting, a big issue will be the gene drives. You are credited for once having created the term "terminator technology". Gene drives are more than that, isn't it?

**P.M.**: It is, it is more powerful. It really jumps the fence and takes the pesticide idea out of the field by chasing the weeds and the insects of the forest. It really is an attack system that can't be controlled, and I think governments are now alarmed, that the gene drives are too dangerous to be allowed into nature. IUCN (International Union for Conservation of Nature), at its international conference in Hawaii in September, was faced with a resolution proposing to adopt gene drives as a strategy for conservation, defending ecosystems against alien species. They reverse that and the governments and the scientists and the civil society all together said "No, we want a moratorium on research and use of drives." And I think that same attitude is now coming back in Europe and also at the CBD, applying the precautionary principle and saying "No we can't jump into this system it is too dangerous". It think we have a chance.

B.H.: Thank you very much!