APAC Agricultural Policy Analysis Center
The University of Tennessee

PolicyPennings by Dr. Daryll E. Ray

Application of nineteenth century laws to twenty-first century technologies?

Let us suppose that over the winter, while getting his equipment ready for the next year's harvest, a farmer took his Case International Harvester combine apart to clean it and while he was doing that figured out how to reproduce its Axial-Flow® technology. And not only that, he figured out how to use that technology to make a combine in his welding shop that he could sell to his neighbors for less than they could buy a combine at the county Case I-H dealership. If he then decided to actually make that combine and sell it, no one would be surprised when Case took him to court for patent infringement.

In fact that is exactly the kind of case that comes to mind when we think about the issue of patent infringement. The farmer had full knowledge that the technology is the patented property of the implement manufacturer. He also had to engage in a deliberate series of actions to reverse engineer, manufacture, and sell a knock-off combine using a technology that was owned by someone else. Case closed! If he engages in a set of actions like that, a court is likely to find him guilty.

In another situation, let us imagine a dairy farmer who has an average herd of cows that she usually impregnates with the old bull that has been around for a while. Her neighbor, however has a prize herd that ranks among the top herds in the nation. One day the neighbor's prize – one that commands a substantial sire fee - gets out and impregnates our farmer's average cow. Does she owe the neighbor a fee for the adventitious (accidental or unusual) services of his bull? Does the neighbor own the calf that is born to her cow or can she sell it for a premium based on its lineage?

While the actual law varies from state to state, in general the farmer with the average herd does not owe her neighbor a cent. Likewise she fully owns the calf and can try to sell it at a premium or keep it to improve the genetics of her herd. In addition, it is possible that she can sue her neighbor for damages. It is incumbent upon the owner of the prize bull to control his property and he is liable for any damages that may arise out of his failure to exercise that control.

Having looked at these traditional cases of property rights, let us take a moment and look at two different cases involving genetically modified (GMO) crops. In the first case we have a farmer who for reasons of her own prefers to grow a heritage variety of open pollinated corn, while her neighbor grows the latest Bt variety of corn. After a couple of years, she begins to notice that she is having less trouble with corn borers and suspects that her heritage variety has become cross-pollinated with her neighbor's GMO corn. She suspects that there is what is called the adventitious presence of the GMO genetics in her corn.

In another situation, a farmer decides to try out a herbicide resistant variety of canola. In doing so he pays the tech fees and signs all of the paperwork required by the company. He fully follows the requirements of the contract selling all of the crop into the prescribed channels. The next spring he decides to buy a non-GMO variety because the GMO variety did not perform up to his expectations. When the time comes, he plants the canola back in the same field that he had the GMO canola in last year. As the canola comes up, he notices that there is some volunteer canola coming up between the rows.

Is the situation of these two farmers more like the case of the workshop manufacturing farmer or the dairy farmer with the average herd? Most of us, we suspect, would say that they are more like the dairy farmer. In these last two cases the farmers have not deliberately engaged in any deliberate action to capture the intellectual property of the seed company. In the first case the farmer has done nothing and in the second, he tried out the seed and after trying it out decided that the technology was not worth the price.

And in both cases, lawyers familiar with current US case law tell us we would be wrong. So far, the courts have held that the patented genetic material is the property of the seed company and anyone who suspects that there is the adventitious presence of GMO material in their crops are required to call the seed company and request that the seed company retrieve their genetic material. Failing to do, that they can be sued by the GMO patent holder.

It seems to us that in this situation we have the application of nineteenth century law to twenty-first century technology. If the farmer decides to sell his Case and buy a John Deere, he does not have to worry that patented Axial-Flow® combine parts will make their way into his shop and reproduce themselves. The violation of Case's patented technology requires a deliberate act.

One of the most serious problems that has come about with the decision to allow for the patenting of life forms is the potential for the adventitious presence of patented genetic material in fields where it has been carried by the wind. In fact, in 2001, following the StarLink™ debacle, some seed companies had to pull seed because it had become adventitiously contaminated with their competitors' patented genetic material.

So far, patent protections have been granted to the researchers who heavily invest in developing new GMOs. This part of the patent regimen has been brought up to date. The problem is that the rules by which those patents are enforced are still stuck back in the nineteenth century when there was no such thing as the adventitious presence of a patented plow.

Daryll E. Ray holds the Blasingame Chair of Excellence in Agricultural Policy, Institute of Agriculture, University of Tennessee, and is the Director of the UT's Agricultural Policy Analysis Center. (865) 974-7407; Fax: (865) 974-7298; dray@utk.edu; http://agpolicy.org. Daryll Ray's column is written with the research and assistance of Harwood D. Schaffer, Research Associate with APAC.