

Do GM Salmon Have Legs?

with Dr John Thorogood (Principal Ecologist)

12 November 2010

The potential release of genetically modified salmon in the US has re-ignited the Genetic Modification (GM) debate, but haven't we heard it all before?

Genetic engineering is not new. Man has been modifying the genetics of domesticated plants and animals for millennia through selective breeding. True genetic engineering simply fast tracks this process by allowing us to directly introduce new genetic material (often from another species) into a breeding program. Some argue that it allows us to develop hybrids that would never have developed through selective breeding. As with many GM crops, the lure of GM salmon (pun absolutely intended...) is faster growth rates and higher yields. That is, higher returns to investors, increased capacity to feed a growing world population (ok, so that argument may not have 'legs' when we're discussing salmon), and a reduced environmental footprint.

Concerns held by a significant proportion of the community focus on the safety of the resulting new variety (is it safe to eat?); and equally on the potential for new varieties to 'contaminate' (breed with - although GM also offers the potential to produce sterile varieties) or compete with natural varieties. With crops, these concerns are relatively easily addressed (and yet the issue remains controversial). GM varieties are planted in that field (well set back from the fields growing 'natural' grain), and thus (at least in theory) can be grown, harvested, handled and marketed apart from 'natural' grain. The initial opportunity for GM salmon involves injecting growth hormone genes into the fertilised eggs of salmon, trout and Arctic char. These fish will then spend their entire lives in ponds and grow-out cages before harvest (just like captive bred and reared 'natural' salmon). At least that's the plan. Between 1991 and 2001, it's estimated that 400,000 salmon escaped cages in British Columbia alone.

Once in the wild, GM fish would compete with wild stocks for food and habitat, and perhaps for mates.

Given the accelerated growth rate of these fish, they could be very potent competitors, markedly changing ecosystems and diminishing biodiversity. Of course, as with any emerging science, there are more unanswered questions than answers, and a great deal of uncertainty. But the ecological principles underlying community concern are beyond debate (heard that claim elsewhere recently?), so the onus is very much on the proponents of GM salmon to allay the growing raft of concerns.

And if this is on the table in the US, you can bet Australian salmon farmers are keeping a close eye on the outcome.

frc environmental

P 07 3286 3850

F 07 3821 7936

E info@frcenv.com.au

www.frcenv.com.au



Disclaimer

This communication including any attachments may contain information that is either confidential or otherwise protected from disclosure and is intended solely for the use of the intended recipient. If you are not the intended recipient please immediately notify the sender by e-mail and delete the original transmission and its contents. Any unauthorised use, dissemination, forwarding, printing, or copying of this communication including any file attachments is prohibited. The recipient should check this email and any attachments for viruses and other defects. The Company disclaims any liability for loss or damage arising in any way from this communication including any file attachments.