

To the editor:

Your editorial “Drugs in crops—the unpalatable truth” (*Nat. Biotechnol.*, 22, 133, 2004) points out that the use of nonfood crops for the production of pharmaceuticals, preferably under contained (greenhouse) conditions, would add an extra dimension of safety to transgenic production systems. I concur that this is a far more sensible way forward to develop this potentially very useful technology.

I would also like to point out, however, an error of fact that was made in the text. In your penultimate paragraph, you note that there are plans to grow pharmaceutical barley in Iceland, where this food crop is not grown at present. In fact, barley is already being cultivated in Iceland. According to the translated application by ORF Genetics (Reykjavik) to the Icelandic authorities for field testing of genetically modified barley containing a reporter transgene cassette:

1. “Several varieties of barley were/are used as hosts, but this method was chosen first using variety of which there was experience using this technique (in

Australia). This was followed by gene transfer into certain Icelandic varieties.”

2. “Iceland is on the northern boarder of grain growing in the world, but it is thought barley can be grown for use on half the farms in the country. During the summer of 2002, barley was grown on about 2000 hectares of land, which is only 0.23% of the crop land that is considered useful for barley crops.”

Indeed, a main objective of the field trials currently in progress in Iceland is to assess the extent of gene flow from GM barley into the environment and its possible contamination of the human-animal food chain.

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To the editor:

In response to your interesting editorial on molecular farming in plants (*Nat. Biotechnol.*, 22, 133, 2004), I would like to clarify why

ORF Genetics has chosen to exploit transgenic barley as the system of choice for the production of pharmaceuticals in Iceland.

Right from the beginning of our project, the decision was made that containment would be the cornerstone of our approach. Therefore, we chose barley as our main production host because of its built-in biological and ecological containment when grown in a remote, arctic and species-deprived area, such as Iceland. Not only is our molecular farming geographically isolated from major international food production, but it is also efficiently contained locally, within this remote area. The choice of barley as an expression system was a considerable technical risk because transformation of the crop had proven very challenging; however, I'm pleased to say that this is no longer an obstacle for us. Efficient containment is achievable as long as it is set as a priority from the start.

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