

ANALYSIS

Swiss Federal Council sets June date for gene referendum

After several years of increasing acrimony over genetic engineering in Switzerland, the timetable, although not the precise date, of a referendum on "the gene protection initiative" has now been set. At a conference held in Bern at the end of October, Jean-Pascal Delamuraz, Switzerland's minister of economics, announced that the vote was expected to take place in June 1998. The initiative proposed "a universal protection of life and environment against gene modification." Translated into practical measures that means, in essence, a ban on the breeding and purchase of transgenic animals, a ban on the release of genetically modified organisms into the environment, and a ban on patenting of plants and animals. In order to pass, the initiative has to win both an overall majority and majority support in a majority of the Swiss cantonal districts.

The Swiss Federal Council—the government—which is broadly pro-biotechnology, is wrestling with the apparent difficulty of

altering public opinion to its way of thinking. According to an opinion poll organized by Novartis (Basel) this year, 59% of interviewees had "reservations" about the application of genetic engineering and 23% supported a total ban. Recognizing these doubts among a significant proportion of Swiss people, Delamuraz stressed at the conference that it was important "not to leave aside the extraordinary perspectives that are opened to us by genetic engineering." The government sees the referendum as a crucial point in shaping national attitudes to biotechnology.



Swiss Economics Minister, Jean-Pascal Delamuraz, announces the gene referendum.

The Federal Council is planning to tighten certain pieces of legislation to persuade voters not to support the bans. Swiss laws regulating genetic engineering currently conform approximately to international norms. They are "product-based," as in the United States, and generally do not consider genetic engineering a separate technology. The Swiss Parliament recently backed a motion making the Federal Council responsible for bring forward a set of decrees that would close what antigenetic engineering groups see as loopholes in Swiss legislation on environmental protection and environmental liability. Those proposals will be presented for comment at the end of 1997 to "all interested and concerned parties," including the strong anti-gene lobby. Any feedback must be received by March 1998.

If the referendum comes out against genetic engineering, there would be immediate economic and research consequences: The industry would be forced to give up transgenic animal research. On a strict interpretation, *Bacillus thuringiensis* (*Bt*) corn and herbicide-resistant plants would not be approved. And there would be a requirement to monitor genetically modified organisms over 10 or even a 100 years. Strangely, the cloning of animals would not be forbidden.

There would be international conse-

quences, too, at least in the area of intellectual property. Switzerland was a founding member of the European Patent Convention in 1973. If it withdrew, as it would have to in order to ban plant and animal patents, that might precipitate a similar move from other member countries, particularly the "greener" Nordic nations.

Unusually for Swiss referenda, the media and advertising campaigns of both sides have been radical and emotionally. The pro-genetic engineering lobby has, of course, stressed prospects for healing incurable illnesses. But they went too far, according to the national consumer group, the Foundation of Consumer Protection (Bern). The foundation said that industry had "unfairly" presented genetic engineering as the only way to approach these diseases.

The opponents of genetic engineering compare it with the more disastrous aspects of atomic power. If the initiative is rejected, they say, a second "Chernobyl" is possible. Leading the Swiss antigene lobby is the Swiss Working Group Genetic Engineering (SAG; Bern) which coordinates the activities of organizations such as Greenpeace, the World Wildlife Fund Switzerland, the Foundation of Consumer Protection, the Swiss Society for Prevention of Cruelty to Animals and the Association of Small Farmers.

The most prominent figure is Florianne Koechlin. She was a founder of the Basel Appeal Against Genetic Engineering and comes from one of the most respected families in Basel. Somewhat ironically, her grandfather and great-uncle once headed Geigy Pharmaceuticals (Basel). Her uncle, Samuel Koechlin, led the firm after its merger with Ciba. It is rumored—although vehemently denied—that her shareholding dividends finance SAG's campaign.

Opposing Koechlin, SAG, and the gene protection initiative are Forum Gen (Bern), comprising members of business, science, and politics, and Gen Suisse (Bern), mainly representing the academic community. According to Swiss press sources, the Swiss industry's fighting fund has raised SFR 35 million (US\$25 million). In the last few months, Forum Gen collected the signatures of 750 eminent university academics, researchers, politicians, industrialists, and business people, among them leading biologists Patrick Aebischer and Charles Weissmann, and the Nobel laureates Werner Arber and Rolf Zinkernagel. They are calling both for the rejection of the gene protection initiative and for a responsible use of biotechnology and genetic engineering.

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