

INDUSTRY SEES ENDORSEMENT

SWISS PASS BIOTECH REFERENDUM

BASEL—Through a referendum on May 17, the citizens of Switzerland voted genetic technology onto their constitution for the first time in the federation's 701-year history. Swiss companies involved in biotechnology—including the three Basel-based pharmaceutical and chemical majors, Ciba-Geigy, F. Hoffmann-La Roche, and Sandoz—have perceived the “yes” vote in the current referendum as an endorsement of genetic engineering. However, a subsequent referendum could place a complete ban on transgenic animals and on all releases of transgenic plants in Switzerland.

Under the Swiss democratic system, the people are sovereign and, through frequent referenda, make known their views on how the federation's constitution should change. In due time, parliamentary process translates those wishes into law. Since 1874, the year it was established, the Swiss constitution has been changed 117 times to adapt to a variety of social and technical developments. Now it is the turn of genetic engineering.

Endorsing biotech?

In April 1987, the Swiss periodical, *Der Schweizerische Beobachter* (*The Swiss Observer*), initiated a public petition entitled “Against the Misuse of Reproductive Medicine and Gene Technology in Man.” The most relevant part of this “Beobachter Initiative” calls for the introduction of regulations to prevent the misuse of human embryo manipulation and gene technology (the European term which encompasses recombinant DNA and related work). Swiss citizens voted at a national level not only on this issue but simultaneously on six entirely unrelated ones, ranging from participation in the International Monetary Fund to environmental protection of waterways to altering the law on the age of consent for heterosexual intercourse.

Though the multiplicity of issues may have confused voters, Swiss industry is clear about the implications of the “yes” vote on gene technology: it represents an endorsement for genetic engineering, if only because the anti-genetic engineering activists were encouraging a “no” vote. Another positive outcome of the referendum, from an industry standpoint, is that it has stimulated active support for biotechnology in Switzerland from politicians led by the Christian Democrat Eva Segmueller from both economic and environmental standpoints.

Previously, there had been a worrying

political silence on the issue, one result of which had been that Ciba-Geigy decided last December to construct its Sfr. \$120 million “Biotechnikum” facility for biotechnology research and development (R&D) not in Basel, but 500 meters away on the other side of the Rhine River in Huningue, France. Ciba-Geigy's prime mover behind the Biotechnikum, Kaspar von Meyenburg, head of biotechnology R&D, feared that “fundamentalists” would use the entire variety of legal means at their disposal to delay construction in Basel. These groups include the Swiss Working Group on Genetic Engineering (Schweizerischen Arbeitsgruppe Gentechnologie, SAG), the World Wildlife Fund, and the Basel Appel against Gene Technology. “We feared that their

Industry believes a Swiss referendum endorses genetic engineering. Yet a future referendum could ban transgenic animals and plants.

basic concern—about certain industrial gene technology—would have held up this concrete example,” says von Meyenburg.

German and U.K. mistakes

It will probably take several years for the results of the May referendum to be translated into Swiss law. However, industry is concerned that, in enacting the Beobachter Initiative, the Swiss government should learn from experiences in the U.K. and Germany where the need to enact directives of the European Community (EC, Brussels, Belgium) on genetically engineered products resulted in regulations that were more restrictive or cumbersome than necessary. “What we absolutely do not want,” says Bernhard Puehler of the Swiss Society of Chemical Industries (Zurich), “is special laws for biotechnology and gene technology like Germany—because we see the problems they now have. Instead, parliament

should check whether articles in existing Swiss laws encompass the EC requirements. If not, then we should adapt our laws to encompass them.”

That will not satisfy industry critics. Daniel Ammann of the Swiss Federal Institute of Technology (Zurich), and the voice of SAG, believes “the existing laws are very inappropriate—they were drawn up to regulate chemical production.” Furthermore, the Beobachter Initiative brings only a ban on human genetic engineering, while Ammann believes that restrictions should be extended to other organisms. He regards the “yes” vote on the Beobachter Initiative as a direct call for new laws, the restrictive shape of which is made clear by a new initiative orchestrated by SAG and funded by the Animal Protection Organization (Zurich). As people emerged from the polling stations on May 17, representatives of 25 environmental and animal-welfare organizations started to collect the 100,000 signatures necessary to set in motion a second gene-technology referendum.

Second initiative

The new initiative calls for a complete ban on transgenic animals, a total ban on the release of transgenic plants, and a ban on patenting living genetically engineered products. It also calls for the inclusion of non-governmental organizations on expert committees to regulate products manufactured through genetic engineering. And it wants manufacturers to demonstrate not only efficacy, safety, and quality but to also demonstrate socioeconomic need and the absence of alternative production methods.

Stefan Ryser of Hoffmann-La Roche calls those measures “ridiculous” and predicts that, if enacted, they would mean the wholesale exodus of all biotechnology activities in Switzerland to neighboring countries. SAG's Daniel Ammann recognizes that the proposals for the second referendum are “probably too strong” to be accepted in their entirety, though he hopes “to end up with a compromise.” SAG's strongest ground, he feels, is on the patent issue, while its weakest is on transgenic animals, since there seems to be a general acceptance of the need for transgenic disease models. Compromises on the question of plant deliberate releases, however, are unacceptable, says Ammann. “Even an extensive case-by-case assessment of planned releases is no guarantee of safety. At the moment, we definitely need a total ban.”

—John Hodgson