Royal Society wants genetics watchdog

[LONDON] The Royal Society has called on the British government to set up a regulatory body to oversee all aspects of developing genetically modified food. The society also wants an end to the use of antibiotic-resistance marker genes in genetically modified food products.

The recommendations are made in a report assessing the science and regulation of genetically modified food products. Released today (3 September), the report was written by an expert group set up by the society to address the current public controversy over genetically modified food.

The report is broadly enthusiastic about the potential of genetic modification to address future food requirements. But it voices concerns about the lack of coordination of regulations in Britain, and says, as had been expected (see *Nature* **394,** 207; 1998), that there should be a single, "over-arching" body to monitor all safety and regulatory aspects of genetic engineering in agriculture and food production.

Companies wishing to grow or sell genetically modified produce must currently comply with a stepwise set of regulations governing laboratory studies, research and commercial field trials, and entry into the food chain. Regulations are set and monitored by different government departments, which are in turn advised by their respective scientific advisory committees.

The proposed body would oversee the enforcement of these regulations, keep track of the whole "life history" of a genetically modified crop plant, and monitor research questions such as the transfer of genes between crops. The report urges the government "not to delay further action in taking this direction".

Public concerns about genetic modification are also covered in the report. However, it does not advocate a labelling scheme for all food containing genetically modified organisms. In line with European Union regulations, it "strongly supports" labelling "where the new foodstuff is substantially changed from that of its conventional counterpart".

The report recognizes the difficulties faced by retailers who want to buy non-genetically modified food where suppliers do not segregate modified and non-modified varieties. It says research is needed to develop "scientifically validated testing methods" that can recognize an agreed minimum level of proteins produced by modified genes.

It also draws up a list of issues on genetic modification that need further research. These include using alternatives to antibiotic-resistance marker genes and assessing the impact of virus-resistant and insect-tolerant plants on ecosystems.

However, the report does not support a moratorium on the commercial release of genetically modified crops. A moratorium pending the outcome of research issues is advocated by community pressure groups and environmentalist and consumer organizations, as well as by the government's wildlife advisory body, English Nature.

The society says it considers the risks of genes spreading from genetically modified crop plants to wild species to be slight. It adds that there is little evidence from field and laboratory studies that such crops have an adverse impact on other plants or on insects.

The report does, however, acknowledge the scarcity of research data on the environmental impact of genetically modified herbicide-tolerant crops, as such crops have been grown commercially only since 1995 (in the United States and Canada, but not in the United Kingdom). **Ehsan Masood**

China brings in regulations to put a stop to 'genetic piracy'

[SHANGHAI] China has adopted a broad set of regulations on the collection and use of its 'human genetic resources' in an attempt to restrict their exploitation by foreign biotechnology and pharmaceutical companies.

China is becoming increasingly aware that its large population and relatively high number of distinct ethnic groups provide fertile ground for the search for disease genes that could hold the key to profitable diagnostic and therapeutic techniques.

Foreign companies have reportedly been obtaining data from studies carried out in China in collaboration with local researchers without obtaining official approval or ensuring any significant return to Chinese research institutions.

But, under the new regulations, official authorization will be required for any research project that seeks to "sample, collect, merchandize or export" human genetic resources. These are defined as "any materials of and from human beings that contain human genome, genes or gene products, or parts thereof".

The regulations also specify that, if valuable genetic information emerges from a collaboration between a Chinese research institution and a foreign organization, profits from the resultant patents should be shared in proportion to the contribution of the two bodies concerned. Requests for the approval of individual projects and for the export of genetic material will be examined and issued on a quarterly basis. Collaborative projects already established will also be required to apply for approval.

Those who helped draft the regulations, which will be administered through a new Administration Office of National Human Genetic Resources of China, say they tried to ensure that the regulations are not too rigid or restrictive on collaborative projects.

Boqin Qiang, for example, first vice-president of the Chinese Academy of Medical Sciences and leader of the Beijing Human Genome Research Centre, emphasizes that Chinese scientists are keen to establish such projects with foreign research groups, and that the regulations are not intend to act as a barrier.

The regulations also require that proper informed consent should be obtained from all those who provide samples of genetic material for researchers, or, where appropriate, from their family members. This will bring Chinese research procedures in line with those in Western countries. "Obtaining informed consent in this way is an important part of the process," says Zhu Chen, director of the Shanghai Human Genome Research Centre, who has also been closely involved in drafting the regulations.

Chen says he strongly supports clauses in the regulations on the equitable sharing of intellectual property rights. "If people in China do some of the work involved in collecting and processing samples, then they should share in the commercial benefits in recognition of their contribution," he says.

In addition to the genome centres in Beijing and Shanghai (see *Nature* 394, 109; 1998), China currently has about 30 laboratories involved in human genome research. Work is under way to study the genetic basis in the Chinese population of various diseases, including cancers, leukaemia, schizophrenia and cardiovascular diseases. David Dickson