

crops and robbers



# food rights

re-writing trade rules

The Food Rights Campaign is an ActionAid initiative that works with women and men to secure their right to food at local, national, regional and international levels. The campaign works in thirteen countries across Asia, Africa, Latin America and in the United Kingdom.



## how patents jeopardise global food security

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#### Pirates charter

"Biopirates" - in the form of corporations and individuals - are on the loose. Their targets include the plants and food crops of the world's poor. They operate under a mask of legality; the global patent system.

Today's pirates are cheating the poor and are now emerging as a threat to peoples' right to food.

They take plants from the fields and forests of developing countries - sometimes literally - and apply for exclusive legal rights to them in the form of patents.

Patents give "intellectual property rights" to the holders. They were designed for industrial innovations - such as electrical appliances - and they give the owner exclusive rights to an invention for 18-20 years.

To be patentable, an invention should be novel, useful and non-obvious. But in the US, Europe and Japan, patents are now being won on plant varieties where there is little evidence of novelty or 'invention'.

Many people find it hard to believe that companies can patent plant varieties and plant DNA.

Control over crops, plants and their DNA is one of the defining issues of the early 21st century. It will determine who wields power over farming and the global food system.

The current patent system is now giving agrochemical corporations unprecedented legal control over the food chain.

The number of patents on the five crops that account for 70 per cent of the world's food supply is rising steadily by the month. And six corporations now hold the lion's share.

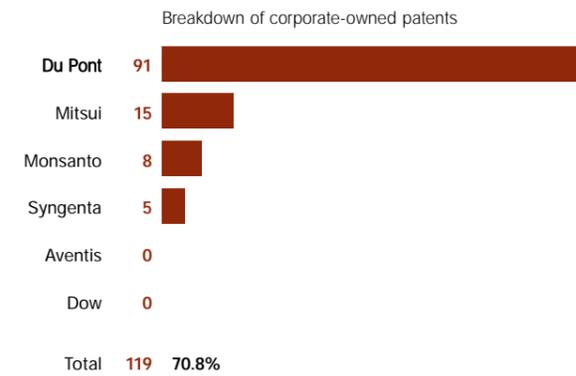
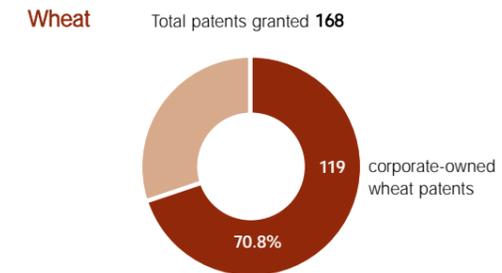
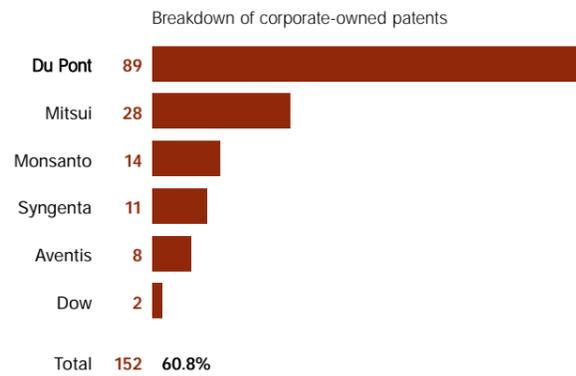
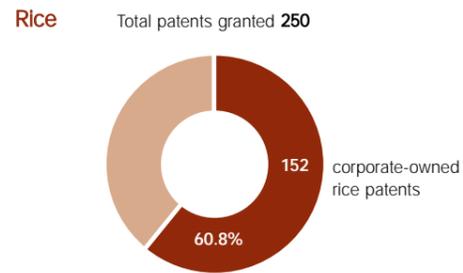
This jeopardises peoples' ability to feed their families and threatens to further marginalise the world's poor.

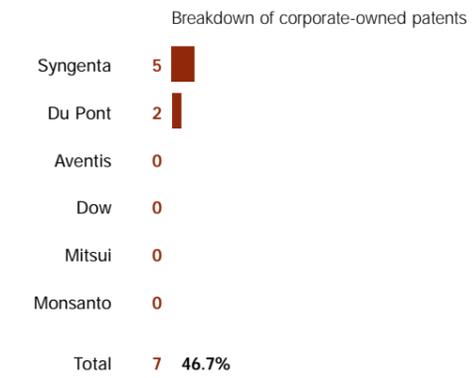
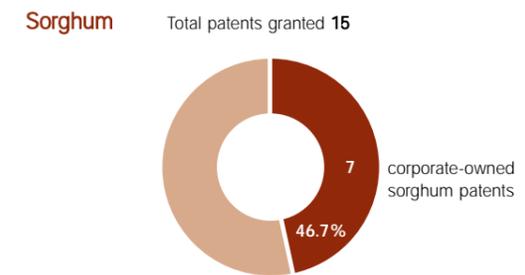
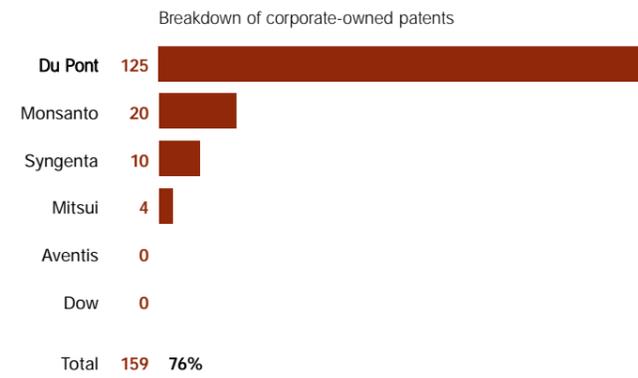
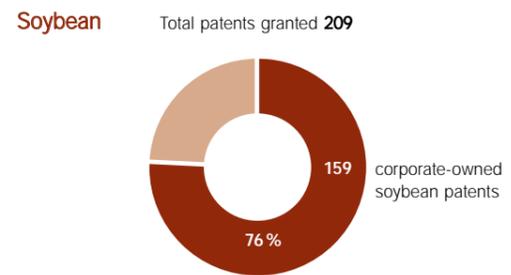
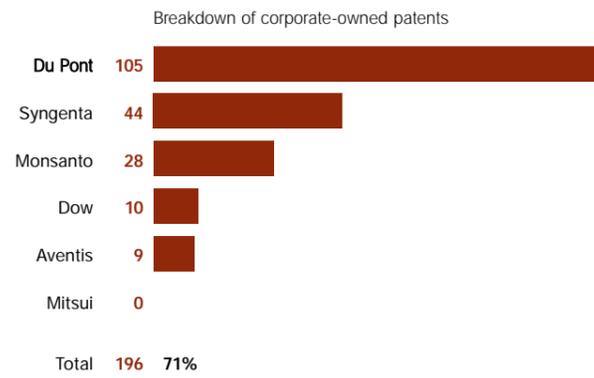
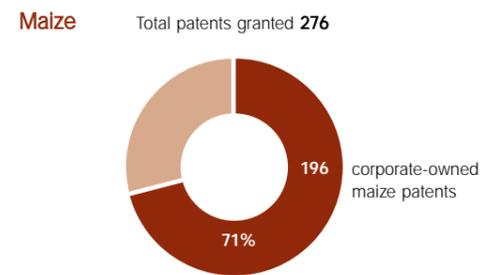
Corporate takeover

Six corporations (see tables right and overleaf) – **Aventis, Dow, Du Pont, Mitsui, Monsanto and Syngenta** - are buying up local seed markets in the developing world and are cornering global markets. They control:

- 98 per cent of the global market for patented genetically modified (GM) crops
- 70 per cent of the global pesticide market
- 30 per cent of the global seed market

Staples Cornered <sup>1</sup>

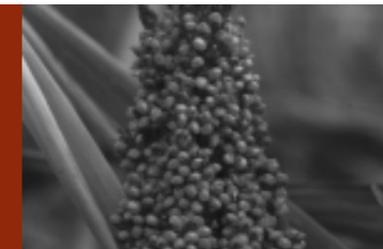




There are now 918 patents on rice, maize, wheat, soybean and sorghum. The six major agrochemical corporations hold the vast majority - 633 patents, or nearly 69 per cent – on the staples that are vital for the poor. In the case of soybean that figure is 76 per cent.

These figures demonstrate that the basics of the food chain are being cornered by a handful of corporations. People in developing countries are concerned that farmers will be at the mercy of corporations and lose control over their food supplies.

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#### Bad TRIPs

Whilst 90 per cent of biological wealth is found in developing countries, corporations and groups from the industrialised world (who own 97 per cent of all patents) are privatising what is overwhelmingly a resource from the developing world.

Countries and communities should have sovereign rights to their genetic resources, but in 1995 the World Trade Organisation (WTO) agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs) came into force. This effectively globalises the patent system. Until then, patents were a matter for national policy and were only recognised in the countries where the application was made.

TRIPs was “primarily drafted with corporate interests in mind and failed to reflect the legitimate concerns of the poor,” says Ruchi Tripathi, ActionAid’s Food Trade policy officer. The agreement grants corporations the right to protect their patents in all member countries of the WTO – currently 142.

The consequences for small farmers in developing countries could be profound. 1.4 billion people in the world depend on saved seed. However, patents take away control from farmers.

- Farmers who grow patented crops may have to sign contracts and pay royalties to the patent holder
- Farmers may be denied their right to save, grow, exchange or re-sell seed
- Farmers may become dependent on agrochemical corporations – ie forced to buy specific chemicals to go with patented seeds



#### Biopiracy rules ok

Patent systems also fail to recognise community rights and indigenous knowledge. This knowledge is often considered a collective resource and is sometimes held orally and not codified – this leaves it open to biopiracy.

This means corporations are scouring the earth looking for plant-based 'green gold' or 'green oil' to patent and then exploit commercially.

Today there are 'biopiracy' patents on basmati rice (see page 10), aloe vera, broccoli, kava (a Fijian drink), Indian neem and black pepper, the hoodia cactus from the Kalahari desert (see page 9), the nuña bean of the Andean people, Zimbabwe's snake-bean tree, the endod berry from Ethiopia, the ilang-ilang plant from the Philippines, Borneo's bintangor tree and Madagascar's rosy periwinkle plant, amongst others.

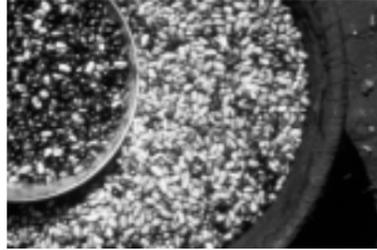
The current patent system is leading to the "silent theft of centuries of knowledge from developing to developed countries," states the UN Human Development Report 1999.<sup>2</sup>

In response, the UN Sub-Commission on Human Rights is now investigating whether TRIPs violates basic human rights and the right to food.<sup>3</sup>

"Patents undermine peoples' control over their resources and livelihoods and pirate the collective knowledge systems of local communities," says Genetic Resources Action International, a Spanish-based research group.

But peoples' movements across the world– such as the pan-Asian campaign 'No Patents on Rice! No Patents on Life!' – are mobilising and fighting back. We highlight five patents causing anger across the globe.

free the bean



#### Free the bean

When American businessman Larry Proctor, the president of a Colorado-based seed company, Pod-Ners, brought some yellow bean seeds home with him at the end of a holiday in Mexico, he had more than a souvenir in mind.

Proctor planted the beans in his greenhouse and felt that US consumers might appreciate their different colour. Proctor applied for an exclusive monopoly patent on the seeds and was granted a US patent (US 5,894,079) in 1999. He called the beans "Enola" - his wife's middle name.

The patent provided protection for any yellow dried beans and makes it unlawful for them to be grown in the US or imported without royalty payments to the patent holder.<sup>4</sup>

When they received the patent, Pod-Ners wrote to all importers of Mexican beans in the US, warning that this bean was their property, and that if they planned to sell it they would have to pay royalties to Pod-Ners.

Yellow beans have been grown and eaten in Mexico for generations and are known locally as 'Mayocaba' beans. In the mid-1990s, Mexican farmers began stepping up their exports to the US.

To their dismay they learned of the patent and heard that no yellow beans could be exported into the US without payment of 15 cents a kilo in royalties to Pod-Ners. For Mexican farmers, such a fee made exporting the beans uneconomic.

"This patent has caused great economic hardship for farmers in northern Mexico," says Miguel Tachna Felix, spokesperson for the Agricultural Association of Rio Fuerte in Sinoloa which represents 22,000 farmers. "We have been exporting this yellow bean and others to the United States for years." He said the patent "meant an immediate drop in export sales - over 90 per cent - which affected us tremendously."<sup>5</sup>

Proctor is suing two US seed importers who tried to do business with Mexican farmers. But the Colombian-based International Center for Tropical Agriculture (CIAT) - a research centre and holder of 27,000 samples of dry bean seeds - is legally challenging the enola patent.

"The patent business is a fraud," says Rodolpho Soto, a Mayocaba bean farmer from Sinoloa. "It shouldn't be like that. It's a kind of biopiracy."



### Bushmen robbed

What do a cactus and the San bushmen of southern Africa's Kalahari desert have to do with the world's overweight people? Quite a lot if the cactus happens to be the hoodia variety which grows in the Kalahari, a desert which stretches over Botswana, Namibia, Angola and South Africa.

For thousands of years the bushmen have eaten the cucumber-like cactus stems to keep thirst and hunger at bay when they were hunting (rock paintings by their ancestors date back 27,000 years). But now hoodia is being used for another food-related purpose. A UK-based company, Phytopharm, believes that it could be a potential cure for obesity. As this affects 150 million people in the West, the market could be huge - as much as \$3 billion a year.

The bushmen deserve some of the benefit. It was they who showed over many centuries that hoodia had appetite suppressant qualities. Phytopharm isolated that suppressant and entered into a licensing agreement with a public research institute, CSIR in South Africa. A drug known as "P57" was duly patented (WO 9846243). The rights to develop and market P57 were sold to Pfizer, one of the world's largest drug companies, for \$21 million. It is claimed that the drug will have none of the side effects usually associated with slimming aids because it is derived from a natural product.

Richard Dixey, Phytopharm's chief executive, claimed that the people who discovered the plant had disappeared.<sup>6</sup> But this is not the case.

The San bushmen – the Khomani, Kwe, !Xung, !Xoo and others - today number more than 7,500. In June 2001 their tribal leaders met for an annual meeting near Cape Town where they were angry that their knowledge had been stolen.

"It feels like someone has stolen their family silver," says Richard Chennells, a lawyer for the bushmen. "The bushmen do not object to anyone using their knowledge to produce a medicine, but they would have liked the drug companies to have spoken to them first and come to an agreement."<sup>7</sup>

Now they are demanding a share in the drug's royalties.

For health services in Western countries treating overweight people who are suffering from heart problems, diabetes and other associated problems, P57 could save millions of pounds. For the overweight it could give a new lease of life. But will it give a new lease of life to the San bushmen? South Africa's CSIR says it is committed to sharing financial benefits, but "no proportion of projected royalties has been earmarked for conservation nor for benefit sharing with holders of traditional knowledge about the plant."<sup>8</sup>

As a result of international campaigning involving ActionAid, Pfizer are now talking with the bushmen.

the rice has grown for centuries in the himalayan region, with farmers selecting and maintaining the varieties



#### Basmati takeaway

Basmati - the 'crown jewel' of South Asian rice - commands a premium price in international markets. Approximately 1million hectares in India and 0.75million hectares in Pakistan are planted to basmati varieties. Cultivated by more than 1million small farmers, the rice has been grown for centuries in the Himalayan region, with farmers selecting and maintaining the varieties.

In 1997 a Texas-based company, RiceTec, won a patent (US 5,663,484) on novel basmati rice lines, seeds, grains, plants and their progeny. The patent included a total of 20 broad claims on a number of varieties. The Canadian-based Rural Advancement Foundation International (RAFI) protested that the patent "capitalises on the genius of South Asian farmers".<sup>9</sup>



The scope of the patent extended to varieties grown anywhere in the western hemisphere and farmers believed export markets to the US were threatened when RiceTec sold US-grown basmati rice in the US under the brandnames of Texmati and Kasmati.

The patent shocked South Asian farmers and it was condemned as 'biopiracy' by a worldwide coalition of 90 civil society organisations, including RAFI, ActionAid and the Swiss-based Berne Declaration. A global campaign was launched; ActionAid ran an advertising campaign in British newspapers to publicise the issue.

**"The RiceTec claim to inventing basmati is clearly false," said Vandana Shiva, director of the Indian-based Research Foundation for Science, Technology and Ecology. "But it is also ethically and morally outrageous." <sup>10</sup>**

The government of India challenged the patent. In August 2001 the US Patent & Trademark Office (USPTO) struck down 15 out of the 20 original claims.

The USPTO said the rice lines, plants and grains that RiceTec claimed were basically identical to basmati grown in the Himalayan region of South Asia – there were records which described the characteristics as 'prior art' - and therefore could not be claimed as 'novel' and patented.

Five claims, however, on three specific varieties still stand. On hearing the ruling, MPs stormed the floor of the Indian lower parliament and ministers from India and Pakistan met to plan their next steps.

Campaigners worldwide are urging the USPTO to strike off the last remaining claims and take measures to outlaw patents that pirate the knowledge and resources of farmers and indigenous people.

blowing in the wind

### Blowing in the wind

Canadian farmer Percy Schmeiser has grown canola (rapeseed) on his land for 40 years. He's experimented with the crop and developed his own varieties, using his own seeds. But when a neighbouring farmer planted Monsanto's patented GM canola seed in an adjacent field, his life became a nightmare. Schmeiser - a former mayor of his town in Saskatchewan - wasn't growing the GM canola because his own seeds suited him fine.

In 1997, the year after the GM seeds were planted next door, Schmeiser noticed some stray canola plants in a ditch, which herbicide failed to kill. The GM canola that had drifted onto Schmeiser's farm was engineered to be immune to Monsanto's Roundup weedkiller. This killed weeds but not the GM crop.<sup>11</sup>

The following year came a day that Schmeiser describes as one he'll "never forget". He learned that Monsanto was suing him for C\$400,000 (about £182,000) for growing their patented GM canola without a licence.

Under Canadian patent law, it is illegal for farmers to reuse patented seed, or to grow Monsanto's GM seed without signing a licensing agreement.

It seems that, without his consent, Monsanto's Pinkerton agent "gene police" had entered Schmeiser's farm and took away seed samples. He counter-sued and launched a C\$10 million lawsuit against the company, accusing them of libel, trespass, callous disregard for the environment and contamination of his fields.

Monsanto claims that Schmeiser's fields contained over 90 per cent of the GM crop. Schmeiser said the fields varied from "nearly zero to 68 per cent" of the Monsanto product, none of it knowingly acquired by him.

But when Monsanto's claim came to court, Schmeiser lost - and farmers around the world who have no interest in planting GM crops lost with him. Schmeiser said: "It was a very frightening thing because (Monsanto) said it does not matter how it gets into a farmer's field, it's their property."

The court ordered that Schmeiser must pay Monsanto around C\$10,000 for licensing fees and up to C\$75,000 in profits from his 1998 crop.

Percy Schmeiser is appealing against the judgement. He believes he is a victim of the patenting system and of genetic drift from GM crops. A negative ruling against him could have implications for farmers everywhere. It could establish a precedent that farmers may be forced to pay royalties on patented GM seeds found on their land, whether they buy the seeds or not.

Today it's Canada, tomorrow it could be Brazil. Today it's canola, tomorrow it could be the food crops of the poor. No farmer may be immune from the fate suffered by Percy Schmeiser.

### Sprouting off

Sprouts may seem an unlikely candidate for a patents and “right to grow” battle. But when scientists at Johns Hopkins University in Baltimore in the US discovered that three-day old broccoli sprouts contain 20 to 50 times the amount of sulforaphane (a cancer-preventive compound) found in mature broccoli, they patented the sprouts.

They said that instead of eating almost a kilo of broccoli, a person need only consume a handful of broccoli sprouts to obtain the same amount of sulforaphane, and that the sprouts therefore reduce the risk of cancer.

The patent (US 5,725,895) triggered a battle with farmers who have grown broccoli sprouts for years - and who say that the techniques detailed in the patent are nothing new.<sup>12</sup>

Brassica Protection Products, a Baltimore-based corporation, was given an exclusive license to the patent. In May 1998, sprout growers across the US received a letter from Brassica, advising them about it. The company preceded to license 19 growers to sell their broccoli sprouts as “BroccoSprouts”.<sup>13</sup> It viewed unlicensed growers who continued to sell broccoli sprouts as violating the patent.

But the patentees did not invent broccoli sprouts, nor did they alter the broccoli. No plant breeding was done and no genetic engineering performed. The unlicensed sprout growers were furious. They point out that the use of broccoli seeds for sprouting had been documented in several books prior to 1994.

At a loss to understand how broccoli sprouts could be patented, many farmers continue to grow them. Seven farmers were sued in Maryland for alleged patent infringement - for growing their own broccoli and harvesting it while still young.<sup>14</sup> One was forced to settle out of court as he could not afford a lawyer.

A number of growers have started a “Right to Grow” campaign to defend the right to grow broccoli sprouts. “It doesn’t seem right for someone to come along and patent what nature has developed,” says Jay Louie, president of the International Sprout Growers’ Association.

The broccoli case is part of a trend that sees corporations trying to control the food chain. And it is not just the food chain of the US that the corporations are eyeing, but the food chain of the whole world.



actonaid believes the rights of the poor must urgently be protected. we believe:

- Patents on plants and crops for food and agriculture should be banned under TRIPs  
**This would protect farmers from corporate control over the crops they grow**
- Developing countries should support calls by the 'African Group' diplomatic block of countries in the WTO for a substantive review of TRIPs article 27.3(b)  
**This would be the first step at the WTO required to achieve a no patents on crops policy**
- Farmers' rights and the rights of indigenous communities must be recognised internationally  
**This would protect traditional rights over local knowledge and rights over seeds**



References

- <sup>1</sup> Ben Ayliffe, research for ActionAid on DGENE / GENSEQ database at <http://stnweb.fiz-karlsruhe.de/BASScgi/2/0-0019984004223-998400428?>
- <sup>2</sup> United Nations Human Development Report (1999), p.67.
- <sup>3</sup> [http://www.unhchr.ch/Huridocda/Huridoca.nsf/\(Symbol\)/E.CN.4.SUB.2.RES.2001.21.En?Opendocument](http://www.unhchr.ch/Huridocda/Huridoca.nsf/(Symbol)/E.CN.4.SUB.2.RES.2001.21.En?Opendocument)
- <sup>4</sup> "Enola bean challenged," Rural Advancement Foundation International, 1 May 2001.
- <sup>5</sup> Ibid.
- <sup>6</sup> "African cactus could help fight obesity," *Financial Times*, 11 April 2001.
- <sup>7</sup> "This plant keeps him alive. Now its secret is 'stolen' to make us thin," *The Observer*, 17 June 2001.
- <sup>8</sup> "Benefit sharing in South Africa: Fact or faction?" Rachel Wynberg, in *Biodiversity and Traditional Knowledge: Equitable Partnerships in Practice*, Ed: Sarah A. Laird; Earthscan, 2001.
- <sup>9</sup> "Basmati rice patent," RAFI, Genotype, 4 January 1998.
- <sup>10</sup> "Basmati biopiracy, RiceTec must withdraw all Patent claims for Basmati seeds and plants," Research Foundation for Science, Technology and Ecology, Dr Vandana Shiva, 20 November 2000.
- <sup>11</sup> "When a law is not enough: biotechnology patents in practice," *Biotechnology and Development Monitor*, No. 46, June 2001.
- <sup>12</sup> "Patent fight sprouts from broccoli's health claims," *American Lawyer Media*, 29 November 2000.
- <sup>13</sup> "Seeds of controversy," *Boston Herald*, 8 August 2001.
- <sup>14</sup> "Patent war sprouts up over broccoli," *Seattle Times*, 14 November 2001.

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