

**BIOTECHNOLOGY, PROPERTY RIGHTS AND THE ENVIRONMENT:  
TOWARDS A NEW LEGAL ORDER?****Gerard M.F. Snijders\*****II D****1 Introduction**

□Differences of opinion will be the final blow for Avebe transgenic potato□, so reads the heading of a detailed background article in the *Agrarisch Dagblad* of Saturday 4 August 2001. This article describes the demise, after ten years, of a project by the Avebe potato group which aimed to achieve large-scale cultivation of a potato developed in 1989 as the result of genetic modification. This potato no longer contained amylose starch, only amylose pectin starch. This was to simplify the processing of the potato considerably, resulting in a substantial reduction of costs. Initially cultivation was permitted - after just a few years about 200 Dutch farmers were growing a total of some 1200 hectares a year - but, after the scientific committee of the European Union had called the safety of the potato into question in 1998, cultivation of the potato was banned in the year 2000. There was the fear that because of the genetic modification used, the potato, once released into the environment, could lead to resistance to kanamycine, an essential antibiotic in the health care industry, and the chemical amykacine derived from it. Both these products play an important role, particularly in the treatment of serious pulmonary disorders and blood poisoning. There is considerable debate among scientists about the legitimacy of this fear. Stopping the project resulted in (direct) loss to Avebe of more than 8,000,000 Euro.

The media often report on problems to do with genetic modification. In the *Agrarisch Dagblad* of 26 June 2001, for instance, we can read that the Dutch action group □*De Razende Hazen*□ had destroyed two experimental plots growing genetically modified sugar beet. It concerned the variety *Roundup-Ready*, cultivated in a field trial by the multinational Monsanto. On 29 June 2001, the magazine *Oogst*, the mouthpiece of the Confederation of Agriculture and Horticulture *LTO-Nederland*, reported that the Minister of Housing, Spatial Planning and the Environment had rejected all 21 Dutch requests for field trials with genetically modified crops, since the plots of land on which the trials were to take place had not been sufficiently identified. The industries concerned considered appealing against the decision in court. They objected to giving precise details of the plots of land where the field trials were to take place, fearing that this would lead to the destruction of the cultivated crops.

Genetic modification arouses strong emotions, but also leads to measures in the form of legislation. This legislation may concern food safety, the labelling of products produced with the aid of genetic modification, the protection of the environment in general, and private property in particular.

This report takes the protection of the environment as the central theme. It contains a summary of prevailing Dutch law in this area, whereby a distinction is made between public and private law. Public law contains regulations for the

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protection of the general interest in a clean and liveable environment. Private law protects the property rights of individual citizens.

## **2 Public law**

### *2.1 Legislation*

The central legislation under public law in this context is formed by the Genetically Modified Organisms Decree (*Besluit genetisch gemodificeerde organismen*), hereafter referred to as the BGGO, which is based on Section 24 of the Hazardous Substances Act. The decree includes, among other things, the implementation of the Council Directive 90/219/EEC of 23 April 1990 on the contained use of genetically modified micro-organisms (OJ 1990, L 117, p. 1)

and the Council Directive 90/220/EEC of 23 April 1990 on the deliberate release into the environment of genetically modified organisms (OJ 1990, L 117, p. 15). Sections 2 to 22 inclusive concern the contained use; the introduction of genetically modified organisms into the environment is provided for in Sections 23 to 35.

Under the terms of Section 23 of the BGGO, in principle the production, use, transport, possession, making available to others, or disposing of genetically modified organisms is prohibited without a permit from the Minister of Housing, Spatial Planning and the Environment. Apart from contained use, there is an exception to this basic rule where the Minister, according to an announcement in the Government Gazette, on the grounds of a risk analysis as referred to in Section 24 subsection 2 of the BGGO, has established that the activities concerned cannot have any undesirable effects on man and the environment. In so far as aspects concerning the protection of the environment are at issue, for which the Minister of Agriculture, Nature Management and Fisheries is responsible, the latter must also have agreed with this assessment. Furthermore, an exception is made for activities with genetically modified organisms which, after a specific risk assessment has been carried out as stipulated in accordance with part C of Council Directive 90/220/EEC concerning contained use, have been marketed within a member state of the European Union or another state that is party to the European Economic Area Agreement, or with products that must undergo a specific risk assessment under the terms of community legislation as referred to in Section 10 subsection 1 of the directive.

A permit must be applied for from the Minister of Housing, Spatial Planning and the Environment. Under the terms of Section 24 subsection 2 of the BGGO, a risk analysis must be submitted with the application concerning the proposed activities. This analysis must contain the following information at any rate - as summarized in Appendix 3:

- A. Concerning the mechanisms involved:
  - a. A description of the organism or organisms, with information on:
    - the harmfulness to other organisms,
    - the epidemiology,
    - the formation of toxic compounds and
    - the formation of surviving structures;

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- b. the method of construction of the organism or organisms;
  - c. the origin of the DNA and RNA introduced, with a description of the function and characterization of that DNA and RNA;
  - d. the genetic stability of the organism and the possibility for transfer of genetic material to other organisms;
  - e. information on organisms that are the ultimate target of the process, and the effects of the host on these target organisms;
  - f. a description of the abiotic factors relevant to the survival of the organism or organisms;
  - g. a description of the biotic factors that are important for the growth and survival of the organism or organisms, and the anticipated effect of the modified DNA on this;
  - h. information concerning any changes that are aimed at affecting the survival of the organism or organisms or the transfer of genetic material.
- B Concerning the activity:
- a. a description of the location where activity is carried out, with details concerning the situation and access for persons and animals;
  - b. a description of relevant changes that can be expected in the near future in the vicinity of the location where the activity is taking place;
  - c. a description of the dispersal route of the organism or organisms;
  - d. a description of the ecosystem in which the activity is carried out, and the anticipated effects on that ecosystem;
  - e. the method and duration of the activity;
  - f. the way in which the growth and survival of the organism or organisms and the information referred to under 1d and 2d can be monitored over time;
  - g. the way in which emergency measures can be taken, should harmful effects of the activity arise in the environment.

If the Minister believes that, in order to obtain insight into the potential dangers for man and the environment, certain information may be required, he may order the applicant to supply such information as specified by him concerning the proposed activity.

The assessment framework is formed by that which is laid down in Section 26 subsection 2 of the Hazardous Substances Act: "The permit maybe refused only to protect the interests of man and the environment". The BGGO does not elaborate further on this criterion, so that the Minister has to make decisions on a case-by-case basis.<sup>1</sup>

Under the terms of Section 26 subsection 3 of the Hazardous Substances Act, subsections 3.5.2 to 3.5.5 inclusive of the General Administrative Law Act and Section 13.2 of the Environmental Management Act apply to the preparation of the decision on the application. Briefly, the relevant provisions of the General Administrative Law Act stipulate that the draft decision must be sent to the applicant and the administrative bodies concerned within twelve weeks of the application,

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1. H.J. Bronkhorst en W.J.E. van der Werf, *Genetische modificatie in de landbouw* (Genetic modification in agriculture), *Land- en Tuinbouw Bulletin*, 2001/0 1, p. 19.

after which it must be made available for general inspection within two weeks. This will involve publishing it in one or more national daily newspapers, free local papers, and in the State Gazette, after which the administrative bodies concerned may give their recommendations in relation to the decision to be taken, while anyone may lodge their objections to the draft decision in writing within four weeks of its publication. During this period, everyone has the opportunity to exchange views on the draft and express their objections verbally upon request. If this opportunity is taken up, the applicant must also be invited. Then the decision is taken - in principle within six months of the application - whereby the Minister is also required to state his considerations regarding the objections raised.

Restrictions and other types of regulations may be attached to the issue of a permit (Section 26 subsection 4 of the Hazardous Substances Act). Acting of his own accord or at the request of the permit holder or other interested parties, the Minister may amend, add to or revoke restrictions and regulations, impose additional restrictions or attach regulations to the permit at a later date, or revoke the permit as such (Section 24 subsection 4 BGGO). If such a decision is not made at the request of the permit holder himself, the Minister will only proceed with such a decision in the interests of protecting man and the environment.

If the applicant or permit holder learns of new information concerning risks that the genetically modified organisms or their treatment may cause for man and the environment, he must inform the Minister immediately. In addition, he must also take measures straight away that are necessary to protect man and the environment (Section 25 BGGO).

Section 26 of the BGGO obliges the permit holder to inform the Minister of the risks to man and the environment once the activity has been completed.

There is a Committee for Genetic Modification (COGEM), which advises the Minister on the risks associated with the manufacture of and activities with genetically modified organisms, as well as on the ethical or social aspects relating to activities with such organisms.

The Dutch government considered submitting a proposal to the States-General in the spring of 1992 for a specific Act to deal with all legally relevant aspects of genetically modified organisms. The wish for this was largely the result of the importance of proper harmonization of the legislation concerning this as a subject considered important. However, based on an extensive analysis carried out by the ministries involved, this was decided against. Ultimately the government felt it better to acquire experience first with the legislative frameworks already in place and those in preparation in the area of genetic modification.<sup>2</sup> Meanwhile the plan for separate, integral legislation would appear to have been abandoned.<sup>3</sup>

The above shows that the introduction of genetically modified organisms and crops

2. See here the Explanatory Memorandum to the Decree for the amendment of the BGGO dated 3 July 1992, *Bulletin of Acts and Decrees* 1992, 376. For the results of the analysis, see the *Parliamentary Documents II* 1991/1992, 22300 XI, no. 11.

3. S.J.R. Bostyn & co., *Moderne biotechnologie en recht*, (Modern biotechnology and law), *Recht en Praktijk* 85, Kluwer, Deventer, 2001, p. 22-23.

in the Netherlands is regarded as a problem in terms of environmental law, for which a solution is being sought - whether justified or not<sup>4</sup> - based on legislation concerning hazardous substances. The law concerning spatial planning does not play a role within this framework.

## 2.2 *Case law*

Case law as a result of Sections 23 to 35 of the BGGO is scarce. In a decision of 13 January 2000,<sup>5</sup> the Administrative Law Division of the Council of State gave a limited interpretation of the scope of the BGGO, to the extent that products [ ] such as milk and meat - originating from animals fed on genetically modified maize plants do not fall under the BGGO since these products in themselves are not genetically modified organisms. The damaging consequences to man resulting from the consumption of products originating from animals fed with genetically modified maize, as feared by the plaintiffs, could not be regarded as detrimental to man and the environment because of the release into the environment of genetically modified organisms, so that these consequences could not lead to an overruling of the decision to grant the disputed permit.

## 3 **Private law**

### 3.1 *Legislation*

Dutch legislation has no specific regulations relating to the recognition and protection of private property interests e.g. those of neighbouring property owners where GMO technology is introduced on a farm. This means that as far as this subject is concerned, we have to resort to (mutually coherent) general rules regarding statutory property rights between adjoining properties on the one hand, and unlawful acts on the other hand.<sup>6</sup>

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4. In his note to the decision of the Chairman of the Administrative Law Division of the Council of State of 22 March 1994, *AB* 1994, 446, Drupsteen put the question whether the Hazardous Substances Act indeed provides an adequate basis for the BGGO, since organisms (as part of the animate world) cannot be regarded as belonging to the substances and preparations (as part of the inanimate world) for which rules may be set under the terms of Section 24 of the Act. See also H.E.J. van der Meulen, *Biotechnologie en het Besluit genetisch gemodificeerde organismen* (Biotechnology and the Genetically Modified Organisms Decree), *Milieu en Recht*, 1997, p. 127-128.

5. Published in *AB* 2000, 95.

6. In theory, other bases for a claim are conceivable. In particular, reference can be made in this context to the regulations of product liability in Sec. 6:185 to 6:193 inclusive of the Dutch Civil Code, whereby Council Directive 85/374/EEC (OJ 1985 L 210, p. 29) was implemented. However, generally speaking these regulations will not provide much consolation, since genetically modified organisms that have given rise to damage as discussed here have not usually been [ ]put into circulation[ ] within the meaning of the directive, while there need not be defective products, nor a form of damage against which the directive aims to offer protection. Moreover, a claim has a substantial chance of failing against the plea of [ ]state of the art[ ] permitted under Dutch law. For a

Under statutory property rights between adjoining properties, the proprietor of a piece of land is prohibited from causing a nuisance to proprietors of other pieces of land to an unlawful degree, such as the spreading of noise, vibrations, odours, stench or gases, by withholding light or air or withdrawing support (Section 5:37 of the Dutch Civil Code). Infringement of a right, and acting or failing to act in conflict with a statutory obligation or that which is socially customary in unwritten law, is regarded as an unlawful act, all this subject to the existence of a ground for justification (Section 6:162 subsection 2 of the Dutch Civil Code). The literature also points out that "nuisance" also means interference in the enjoyment of one's own property, whereby – leaving aside cases of damage to property – normally speaking there would be no case of an infringement of a right (namely: the property right) of the aggrieved party, but a violation on unwritten rules; nuisance in general is unlawful under Dutch law, because causing such nuisance contravenes an unwritten standard of due care.<sup>7</sup>

Depending on the circumstances, unlawfulness may also originate from the violation of a statutory obligation. This situation arises, for instance, where an owner of a piece of land experiences nuisance as a result of the fact that the owner of an adjacent property has infringed the prohibition as contained in Section 23 BGGO, and has sown his land with a genetically modified crop without possessing the necessary permit. A violation of a condition attached to a permit also constitutes a violation of a statutory obligation.<sup>8</sup>

According to the basic rule of Section 6:162 subsection 1 of the Dutch Civil Code, a person who is guilty of committing an unlawful act is required to compensate for the damage or loss that has consequently been caused to another person. However, there is no obligation for compensation, if the purpose of the standard contravened was not to protect against damage as or loss suffered by the aggrieved party (Section 6:163 of the Dutch Civil Code).

In particular, not all cases of unlawful nuisance lend themselves to claiming monetary compensation. However, instead of compensation for damage or loss already or yet to be suffered, a prohibition may be claimed on an unlawful act. An injunction on undertaking a future act that is regarded as unlawful tends to be pronounced upon penalty of a fine. Incidentally, a demand for such a prohibition can be refused by the court, if such conduct, unlawful in itself, should be tolerated for

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detailed discussion of this, see L. Bergkamp, Allocating unknown risk: Liability for Environmental Damages Caused by Deliberately Released Genetically Modified Organisms, *Tijdschrift voor Milieu Aansprakelijkheid*, 2000, p. 104-105. See also liability for faulty goods (Sec. 6:173 Dutch Civil Code), hazardous substances (Sec. 6:175 Dutch Civil Code) and animals (Sec. 6:179 Dutch Civil Code). In relation to this, see E.A. Messer, *Aansprakelijkheid voor genschade* (Liability for gene damage), *Nederlands Juristenblad*, 1992, p. 285-293.

7. W.J.M. Davids, *Burenrecht* (statutory property rights between adjoining properties), Monographs in the New Dutch Civil Code B26, Kluwer, Deventer, 1999, p. 20-21. See also Asser-Hartkamp 4-III, no. 38-40 and Asser-Mijnssen-Davids-Van Velten, no. 39-43.

8. Incidentally, the reverse does not automatically apply; under Dutch law an act causing damage or loss is not lawful by definition, simply because the person committing the act had the necessary permit to do so. A permit holder too must continually ask himself to what extent due social care restricts his freedom of action. See Asser-Mijnssen-Davids-Van Velten, no. 42.

reasons of important social interests (Section 6:168 subsection 1 of the Dutch Civil Code). Such a refusal does not affect the claims for compensation of those who are disadvantaged as a result of the unlawful act. The court can impose a prohibition at a later stage, if an order to pay compensation is not complied with (Section 6:168 subsection 3 of the Dutch Civil Code).

Although Sections 5:42, 5:44 and 5:45 of the Dutch Civil Code contain provisions relating to statutory property rights between adjoining properties that concern the presence of plants, these are not relevant to the problem of genetically modified organisms; the issue there is the distance from the plants to the property boundaries (in relation to the height of such plants), overhanging branches, penetrating roots and the ownership of fallen fruit.

### 3.2 *Case law*

There is no case law known from Dutch courts containing decisions on the (un)lawfulness of sowing or planting genetically modified crops in relation to neighbouring proprietors or land users. However, a few court decisions can be mentioned that are important in this context.

The relevant - but very broad - criterion for assessing matters such as these was formulated in a ruling by the Supreme Court of 1 May 1991.<sup>9</sup> Tree nurseryman De Jong had a problem with weed seeds originating from the land belonging to his neighbour, Van Tol. De Jong suffered damage, since he had to weed the pots in which he cultivated the trees more frequently than would have been necessary if Van Tol had kept his land clear of weeds. Was this a case of unlawful nuisance, so that Van Tol was obliged to compensate De Jong for the damage? The Supreme Court considered that the answer to the question whether the causing of nuisance is unlawful - leaving aside any specific applicable statutory regulations - depends on:

□ the nature, the seriousness and the duration of the nuisance and the resulting damage in relation to the further circumstances of the case, including local circumstances □.

The Supreme Court then agreed with the view of the district court that Van Tol was not cultivating his land any differently compared to the period before De Jong set up business next to him. The district court had taken the nature, duration and seriousness of the nuisance into account, and had also considered the fact that the businesses of Van Tol and De Jong were in an agricultural area. In this context, the court had rightly judged that there was no unlawful nuisance - i.e. unlawful dispersal of seed - in this case.

For our subject, the formulated standard in particular is important. This standard was also applied after 1991 in judging, for instance, the damage caused by the contamination of greenhouses from neighbouring beehives.<sup>10</sup> In the Supreme

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9. Published in *NJ* 1991, 476.

10. Supreme Court 28 April 1995, *NJ* 1995, 513 and Supreme Court 18 September 1998, *NJ* 1999, 69.

Court's ruling of 15 February 1991<sup>11</sup>, following a case of damage by a colony of cormorants to fish farms, the standards were set out as follows:

"The answer to the question whether the causing of nuisance is unlawful - leaving aside applicable specific statutory regulations that are not relevant in this case - depends on the nature, the seriousness and the duration of the nuisance and the damage thus caused in relation to the further circumstances of the case whereby, among other things, account must be taken of the importance of the interests that are being served by the activity causing the nuisance, and the possibility, partly in view of the related costs, and the willingness to take measures to prevent damage or loss".

It is beyond doubt that the nature and (possible) seriousness of nuisance caused by the wind dispersal of seed from a genetically modified crop are of a completely different order to that of the dispersal of "normal" weed seed. It may be assumed that the court will adopt very strict standards of due care in the case of a cultivator of genetically modified crops, in view of (the lack of certainty of) the associated risks.

According to the ruling quoted here, in assessing the damage, account must also be taken of the interests served by the genetic modification on the one hand, and the possibility for preventive measures on the other hand. The fact that a grower possesses a permit as referred to in Section 23 BGGO does not imply that the dispersal of seed over his neighbours is permitted.<sup>12</sup>

There was indeed a case of unlawful dispersal of weed seed in the ruling of the Court of Appeal of The Hague on a case dated 18 February 1999.<sup>13</sup> The legal person under public law *Staatsbosbeheer* (the Dutch Forestry Commission) was the manager of *De Ganzey* nature reserve. In the interests of the nature development plan considered desirable there, the rough land was left unmown and the grazing of the rest of the land belonging to the nature reserve was reduced. As a result, owners of adjacent land experienced nuisance, including Breukink, the plaintiff in the proceedings. Breukink was confronted in particular with the dispersal of seed panicles from field thistles on to his land.<sup>14</sup> In order to combat the effects of this, he was forced to incur extra costs. The court ruled that Breukink had to tolerate the way in which *Staatsbosbeheer* managed the nature reserve, weighing up the nature interest entrusted to *Staatsbosbeheer* on the one hand, and the interests of Breukink on the other hand, *Staatsbosbeheer* could have decided in all reasonableness that the development of the nature reserve they wished for would take precedence. Consequently, the method of management was not prohibited in the future. Nevertheless, *Staatsbosbeheer* acted unlawfully towards Breukink, if and for as long as the organization failed to compensate him for the loss caused to him as a result of the management of the nature reserve. After all, the detrimental effects of a decision

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11. Published in *NJ* 1992, 639.

12. See footnote 8.

13. Published in *NJ* 2000, 202.

14. The dispersal of the seed panicles of this weed have given rise to disputes on numerous occasions. For a similar case, see the Court of Appeal at 's-Hertogenbosch 5 February 1990, *NJ* 1990/645.

taken by a government organization must not be disproportionate in relation to the objectives served by the decision. The court ruled that the damage suffered by Breukink was disproportionate, in so far as it exceeded the damage that had to be attributed to normal business risk. Business risk included the damage that Breukink had to take account of in relation to general (social) developments.

The court subsequently considered that an owner of an agricultural business situated in an area such as the one in question must take account of the fact that, in view of current social developments, a nature reserve exists or is to be created in the (wider) vicinity, the management of which gives a higher chance of nuisance from weeds, but not that such management is carried out on the neighbouring plot of hand.

The significance of this ruling for our subject is difficult to judge. It does not constitute a ruling of the highest court in these types of matters, while the decision is dictated by a variety of factual circumstances. Furthermore, the dispersal of seed from the field thistle as a consequence of a certain method of nature management by a government organization (such as *Staatsbosbeheer*) cannot be compared automatically with [ ] for example - the dispersal of seed from a genetically modified crop as part of a field trial, whether by a government organization or a private seed breeder. However, the ruling does show clearly that there can be tension between the interests of the parties affected by seed dispersal. Such tension can be removed by allowing the one party to continue his trials [ ] in the public interest[ ], while the other party is entitled to compensation for the harm he subsequently suffers. In fact, the ruling provides an illustration of the system already discussed in the aforementioned Section 6:168 of the Dutch Civil Code (although there, nothing less than [ ] substantial social interests[ ] are referred to).

The case law quoted concerned particular cases, each of which involved an individual citizen or legal person acting as plaintiff. Dutch law, however, also allows for the possibility of collective action (Section 3:305a of the Dutch Civil Code). This means that in a case of unlawful nuisance, a body such as a nature conservation organization may appeal to the courts. In that case, the organization cannot claim monetary compensation; such a demand may only be made by an individual aggrieved party (Section 3:305a par. 3). The demand for a prohibition is an option although, as already discussed, it may fail against that which is laid down in Section 6:168 of the Dutch Civil Code.

In order to be successful in bringing any claim to court, by whichever plaintiff, each time the condition applies that the plaintiff must have sufficient interest in the matter; without sufficient interest, no-one will be granted a legal claim, according to Section 3:303 of the Dutch Civil Code.

#### **4 Summary and conclusion**

The Netherlands has no integral legislation regarding genetically modified organisms, only a number of regulations concerning specific aspects. In so far as there are regulations under public law that concern the protection of the environment, these encompass the implementation of the EC directives concerned. The regulations have been brought about within the framework of legislation in respect of hazardous substances.

As far as protection under private law is concerned, although in theory other possible legal bases can be cited, in effect we must fall back on the (mutually coherent) regulations concerning statutory property rights between adjoining properties and unlawful acts. The central question is, as always, whether a type of behaviour can be considered as unlawful nuisance. Leaving aside the case of malicious damage to property, unlawful nuisance is said to exist if written or unwritten law (i.e. a standard of due care) is violated. Whether a violation of unwritten law has occurred will depend on – in the words of the Supreme Court – the nature, the seriousness and the duration of the nuisance and the damage thus caused in relation to the further circumstances of the case, whereby account must be taken, among other things, of the importance of the interests that are being served by the activity causing the nuisance on the one hand, and the possibility, partly in view of the related costs, and the willingness to take measures to prevent damage or loss on the other hand.

Case law on this subject is scarce. In particular, no rulings are known of Dutch courts, in which a decision has been made on the (un)lawfulness of the sowing or planting of genetically modified crops in relation to neighboring proprietors or land users. It may be assumed that the court, in view of the (lack of clarity of the) associated risks, will apply strict standards of due care.

A case may arise where the causer of the unlawful nuisance is obliged to compensate for the subsequent damage or loss caused, while a demand for a prohibition will be refused for reasons of important social interests.