

Summary

Animal feed or energy?; Governance issues in the use of biomass

The most important issue in the animal feed sector in recent decades has been the safety of feed for humans and animals. In recent years, this has been joined by the food-feed-fuel debate. Biofuels are primarily regarded as a rival to the animal feed sector when it comes to the availability of raw materials and arable land for the production of those raw materials. Increased demand for organic raw materials may lead to a sharp rise in prices. Even where there is no direct competition for land for food/animal feed and bioenergy production, there may be indirect effects, such as the recent price fluctuations of sugar and maize, commodities which also play an important role in the production of bioethanol (made from sugar and starchy crops) and biodiesel (made from vegetable oils). Although the degree to which bio transport fuel production leads to higher food prices is still open to discussion (Banse et al., 2008), policy is being developed on various fronts to combat undesirable effects of 'food-versus-fuel'. At the European level, a number of sustainability criteria are being developed for bio-fuels: these are criteria which biofuels must meet in order to be able to be marketed as such. One of these criteria is the requirement that the use of fertile arable land for the production of biomass for energy purposes remains limited, in order to prevent biomass from pushing out other land use.

The increasing production of sustainable energy from biomass will lead to a restructuring of organic food and non-food product streams which will impact on other sectors, including the animal feed sector. We are seeing a complex of developments, which are difficult for the government to influence, whereas undesirable effects are certainly possible. New by-products will be generated from the production of bioenergy which may be less suitable as animal feed and may carry new risks in terms of food safety. It is also conceivable that large areas of arable land will be used for the production of bioethanol and biodiesel, displacing food crops, so that fewer resources will remain available for food and animal feed. New environmental problems may also be created, because when the entire life cycle of biofuels is considered, from the vegetable production of the raw materials to their use as a source of energy, biofuels are not by definition envi-

ronmentally-friendly. Finally, other aspects of bio-energy production deserve attention, such as socio-economic effects and effects on biodiversity.

We are seeing a complex of developments which are difficult for the government to influence, whereas undesirable effects are certainly possible. These are the availability of raw materials, sustainability and food safety, which cannot be sufficiently guaranteed in a completely free market. It is therefore important that the government is able to deploy instruments in a focused manner if necessary, in order to adjust for any undesirable developments.

The institutional theory reveals that our society is steered by a broad range of institutions. Politics plays a special role, because the political process also influences the other institutions. In order to be able to influence the responsible use of biomass for the production of animal feed and bio-energy, the government must therefore not limit itself strictly to its own steering mechanisms such as regulations and subsidies, but must push for action across a broad range of institutions. This is all the more true because biomass developments occur in a very international market, in which a multiplicity of actors and stakeholders are involved. The Ministry of Agriculture, Nature Management and Fisheries (LNV) and the government in general would do well to push hard for the development of 'global governance'. However, in complex international markets, management is a very difficult task for the government, not least because any legislation and regulations end at the Dutch border. The challenge for the government could therefore be to reflect critically on new developments in the market for animal feed and the market for bio-energy, and to create support for them.

There are a large number of existing institutions in the animal feed and energy sectors, which are able to exercise influence via various instruments. Especially important in these sectors are the national government, in particular the ministries of agriculture and the environment, international government bodies (EU, WTO), public-private organisations (PDV, GMP+), NGOs like Greenpeace and the Netherlands Society for Nature and Environment and 'business NGOs' like LTO, Nevedi and FEFAC. A recent development is that of Round Tables – for example the Round Table for Sustainable Palm Oil Production – international consortia of companies, governments and NGOs whose goal is to stimulate the sustainable production of green raw materials. The agriculture ministry will be best placed to manage developments by engaging in intensive collaboration with many of these actors. Naturally, working with the ministry of Economic Affairs will be part of that. In many cases, the government itself has only limited scope for management, but it can certainly exercise indirect influence through

involvement in private initiatives and/or the development of public-private institutions.

The fact that two different sectors, the animal feed sector and the bioenergy sector, are becoming ever more intertwined poses a new challenge for government, NGOs and business, namely to develop an integrated approach for the production of both animal feed and bioenergy. Existing 'partitions' between these two sectors will have to be removed in order to achieve an integrated policy. This would enable, for example, the development of certification systems for sustainable biomass, currently still in its infancy, to better match existing certification systems in the animal feed sector.

Conclusions and recommendations

The government, and in particular the agriculture ministry, has different opportunities for institutional management in the production of animal feed and bioenergy. The first conclusion is that the government's own scope for management is limited. However, there are plenty of opportunities to indirectly exercise influence through private and public-private institutions. To that end, the government should push for diverse institutions, including 'global governance'. Three important recommendations for the government follow from these conclusions:

- choose a long-term approach in dealing with business, in order to allow a kind of self-regulation to develop (Hazeu, 2007);
- reflect critically on new developments in the market for animal feed and the market for bio energy and create support for those reflections;
- tackle government control of regulation of non-participating companies in a serious manner if private initiatives are supported in so-called Supervision of Control arrangements.

The second conclusion is that the government needs to develop an integrated approach because the animal feed sector and the bio-energy sector are becoming increasingly intertwined.