

ENDURE Policy Brief: The potential role of supermarket procurement strategies as drivers of IPM

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SUPERMARKETS: MAJOR PLAYERS IN THE AGRO-FOOD SYSTEM

“Member States shall establish or support the establishment of necessary conditions for the implementation of integrated pest management.” (Directive 2009/128/EC, Art. 14.2).

In support of this objective, the European Network of Excellence ENDURE brings insights into the conditions for successful implementation of integrated pest management (IPM).

Changing farmer practices depends not only on the initiative of individual farmers but also on the knowledge, economic and social networks to which they belong.

Supermarkets are major players in the agro-food system. They represent up to 75% of the food retailers in European countries. The ENDURE social sciences team explored the potential role of supermarket procurement strategies as IPM drivers.



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Our fieldwork, which focused on apple production, was conducted in France, United Kingdom, The Netherlands, Italy, Switzerland, Poland and Hungary. Apple production, retail and consumption was particularly interesting to study because apple is a popular fruit often consumed fresh, symbolising the risks associated with pesticides.

We conducted a document analysis and 83 comprehensive interviews of food chain stakeholders including growers, producer organisations and supermarket buyers. The way in which consumers connect production processes with the issue of fruit quality was explored through eight focus group discussions in France, Italy, The Netherlands and the United Kingdom.

Main findings:

- 1. Consumer demand can evolve in favour of IPM. Educational campaigns in favour of relaxed visual standards and acceptance of varietal diversity on the shelf would create favourable conditions for the marketing of IPM-produced food.**
- 2. Supermarket procurement strategies can contribute to reducing risks. They could go a long way towards achieving reduced reliance on pesticides and advanced forms of IPM if they were to include relaxed visual standards and acceptance of resistant varieties.**
- 3. Genuine partnerships between farmers, buyers and suppliers based on a common interest in reducing dependence on pesticides are needed. Such partnerships would result in broad and sustained support for IPM from farmers, but would entail rewarding farmers for their efforts and ensuring their access to the advisory and monitoring support which is required for IPM.**

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1. Consumer demand can evolve in favour of IPM

Our study challenges several common assumptions regarding consumer demand and the extent to which it constrains supermarket procurement strategies.

Assumption 1: Consumers are interested in the quality of the final product, not in the production process.

There are indications, however, that there is increasing consumer interest in the way food is produced, regarding both the environmental and social impacts of food production. Part of the motivation for consumers of organic and fair-trade food is associated with support for reduced chemical dependence and decent incomes for producers. Evidence of such interest can also be found in new local food networks such as the French Association pour le Maintien d'une Agriculture Paysanne (AMAP), which is similar to the Community Supported Agriculture model found in the United States. These networks bring together consumers who are interested in the way their food is produced (see Box 1). According to Alliance Provence, a federation of AMAPS, urban demand for the creation of new AMAPs is currently so high that it cannot be satisfied.

Box 1: Associations pour le Maintien d'une Agriculture Paysanne (AMAP)

AMAPs were launched in southern France in 2001 and by 2008 had grown to 500 local consumer groups. In this scheme, consumers enter into six-month contracts with one or more producers who supply them with a weekly box of fresh produce. This commitment aims to guarantee the viability of the farms and establish fair relationships between producers and consumers. In some AMAPs, negotiations over crop protection practices were observed. In one case studied, the producer warned consumers of a weed outbreak. As they were against the use of herbicides, and other techniques were excessively time-consuming for the producer, the consumers decided to manually weed the field themselves.

Assumption 2: consumers require perfect visual quality and supermarket procurement strategies respond to this demand.

The reason we investigated the feasibility of changes in quality standards in favour of relaxed cosmetic requirements is that they significantly contribute to pesticide use. For apples, supermarkets demand perfect visual standards: no stains or insect damage, and uniform skin appearance. These requirements drive apple growers to use pesticides against codling moth, apple scab and pathogen-caused russetting. According to



Apple scab drives fungicide use, particularly in humid areas. © Paul Bondoux, INRA, France.

ENDURE scientists, the impact of skin standards on pesticide use is high. For example, in humid areas, up to 70% of fungicide use is to avoid apple scab blemishes.

“The retail industry created standardisation...With time, we selected our fruit so much that a single error is a shock for the consumer, even if historically it is supermarkets that created this demand.”

“Physical quality standards are perceived as a sign of modernity and development: ‘The richer you get, the more perfect you want the products.’”

In principle, one obvious way to facilitate reduced pesticide use would be for supermarkets to accept lower fruit skin quality.

Common wisdom says that supermarkets have their hands tied by consumer demand, but our study shows that originally it was supermarkets which constructed consumer demand for perfect-looking produce. As one supermarket representative acknowledged: *“The retail industry created standardisation...With time, we selected our fruit so much that a single error [a fruit with a stain for example] is a shock for the consumer, even if historically it is supermarkets that created this demand.”*



Friends of the Earth campaign on pesticide residues. © Friends of the Earth Netherlands.

Supermarkets assume that consumers now expect perfect visual quality and generally believe that their competitive position would be at risk if they didn't cater to this demand. Cosmetic fruit quality has become part of their competitive positioning relative to other retailers, hence a basic requirement of their procurement strategy. According to a supermarket manager, physical quality standards are perceived as a sign of modernity and development: *“The richer you get the more perfect you want the products”*.

Assumption 3: Consumers will not evolve regarding visual quality.

The question which remains is whether supermarket could play a role in redefining quality as it is perceived by consumers. The supermarket representatives we interviewed told us that IPM is too complicated to communicate to consumers. However, consumers could be much more flexible in their fruit choice than our supermarket interviewees suggest.

Our focus group discussions in France, Italy and the United Kingdom suggest there is consumer acceptance of apples with minor blemishes, russetting and irregular size and shape. This is reinforced when they are informed that such acceptance can help reduce pesticide use.

We can also observe that consumers continue to buy imperfect fruit at open-air markets or via direct marketing schemes. We also learned that large retail outfits will sometimes relax visual and damage specifications when there is an imperative to lower standards. This was the case in the UK when Tesco extended its specifications on hail damage tolerance to allow more fruit to be sold, and identified it with special labelling to explain the situation, as part of a campaign in support of British apple growers hard hit by hail in the spring of 2007.

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2. Supermarket procurement strategies can contribute to reducing risks

Current supermarket procurement strategies, not only those concerning appearance and varietal choice, but those concerning safety too, have a bearing on pesticide use. Procurement standards that primarily serve as insurance against food scares, including those due to pesticides, can contribute to reducing the risks associated with pesticide use.



Pheromone dispenser. ©Jean-Charles Bouvier, INRA, France.

GlobalGAP is a major business-to-business certification scheme, created in 1997 by northern European supermarket chains. It is used to ensure suppliers satisfy 'Good Agricultural Practices' (GAP) requirements, a field-level translation of the industry's Hazard Analysis Critical Control Point approach, which concerns three classes of hazards, including chemicals. In addition, supermarkets pay attention to comply with Maximum Residue Levels (MRLs).

With respect to advancing IPM however, the impact of GAP implementation and compliance with MRLs is modest. In the field, these usually translate to safer and more efficient use of pesticides. According to interviewed farmers, for example, complying with MRLs means carefully managing the spraying agenda to avoid spraying too close to harvest or using another product with a longer-lasting effect. The impact of these policies on actually reducing pesticide dependence is questionable.

We found a few supermarkets that had gone further by introducing more demanding standards. These translate to practices that range from foregoing use of EU-authorized molecules causing concern, extending pre-harvest spraying delays, foregoing post-harvest treatments, requiring the use of pheromone traps, reducing the area of herbicide application and limiting grass mowing between tree rows, many of which favour the build-up of beneficial organisms.

Nevertheless, the one step that ENDURE researchers consider key to creating a system less vulnerable to pests, and therefore essential to reducing dependence on pesticides, was systematically missing. We did not find any supermarket strategy encouraging the use of pest and disease-resistant varieties. It was disappointing to find out that new development projects in central Europe are devoted to planting large areas with Gala, a variety particularly susceptible to scab disease.

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3. Genuine partnerships with farmers are needed

Farmers are directly affected by supermarket procurement strategies and it is useful to understand their view of these schemes. According to our interviews, growers perceive pesticide-related procurement strategies as prerequisites to market access or access to the preferred supplier category (the group of suppliers supermarkets will preferentially call upon).



Producing fruit to the standards demanded by supermarkets requires higher skill levels from growers, and incurs extra costs. © Jean -Weber, INRA, France

They do not actually consider them as pathways toward more environmentally friendly practices.

Additionally, their overall view of these programmes is not positive. They perceive the requirements as an imposition, a perception matched by the explanations of supermarket representatives, one of whom simply put it: “If they want to be our supplier, they are obligated to apply the standards.”

Growers pointed to several other drawbacks of these requirements: they require higher skill levels and incur extra costs (monitoring and certification, for example) and risks.

Some of them expressed the desire to step out of these schemes rather than accept higher levels of risk. And despite the extra burdens, supermarkets do not actually commit to buying crops produced according to specifications, except in some central EU countries where they may initially establish one-year contracts to secure their relationship with new suppliers capable of satisfying their standards. Some growers decide to invest their skills to produce for food chains that financially reward their efforts, for example the baby food or organic sectors.

Supermarket procurement strategies are not without social consequences. Only the most skilled and best trained growers can perform successfully within their guidelines. As one adviser said: “*These producers constitute a kind of elite among growers.*”

We confirmed this with interviews of advisers working with farmer groups who acknowledged that they select growers who will be able to perform according to the standards demanded and leave other growers to one side. We also observed that in central Europe, in contrast to the majority of growers, fruit growers working for supermarkets were university or college graduates. The social exclusion of a particular population of farmers due to supermarket procurement strategies is also documented in the sociology literature.

About ENDURE

ENDURE is the European Network for the Durable Exploitation of Crop Protection Strategies bringing together more than 300 researchers from 18 organisations in 10 European countries. ENDURE is:

- Building an international multi-disciplinary research community with a shared vision
- Interacting with advisers and extension services to ensure research advances become a field reality
- Providing scientific support to policy makers for the implementation of the European Union's new pesticide legislation.

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Avenues for advancing IPM

The results suggest several avenues for the advancing IPM:

1. Educate consumers on visual quality and varietal choice

Supermarkets and other institutions could play a role in educating consumers to change their expectations regarding visual quality and variety. This would open the way for quality criteria and varietal choices that enable pesticide use to be reduced.

In our work with focus groups in France and the UK, we observed that consumers are willing to support local and national food producers over imports from other EU and non-EU countries. Whether this is due to a demand for reduced food miles or a distrust of distantly produced food, it could offer a marketing opportunity in which relaxed visual standards and a diversity of varieties are taken advantage of.

2. Implement relaxed cosmetic requirements and develop and market a wider range of varieties including resistant ones

In parallel to consumer education on the desirability of a diversity of varieties and visual quality, procurement policies could be steered in favour of relaxing requirements and growing resistant varieties. Such a change would remove the current contradiction inherent in the attempts to introduce non-chemical strategies for susceptible varieties such as Gala. It would allow major progress in reducing dependence on pesticides. Several resistant apple varieties, such as Ariane, have been developed by a number of research institutes.

3. Avoid unwanted social consequences of the procurement policies on the farming community

Supermarket procurement policies could operate within genuine partnerships between buyers and suppliers. Rather than excluding particular strata within the farming community, it would ensure broad and sustained support for IPM from farmers. This would entail ensuring that the extra efforts associated with IPM implementation are rewarded and that all farmers gain access to the advisory and monitoring support that IPM requires. Several farmers we interviewed expressed their concern about the toxicity of their products and we found instances of pesticide-related accidents that triggered some farmers to move towards advanced forms of IPM. As supermarkets face increasing pressure from NGOs regarding MRL compliance, a partnership based on a common interest in reducing reliance on pesticides rather than on access to market.

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