



**Pesticide
Action
Network**
Europe

Which Common Agricultural Policy after 2013? PAN Europe position paper

[Two page summary](#)

June 2010

Pesticide Action Network (PAN) Europe believes in the creation of a Common Agricultural Policy encouraging farmers to look for long term sustainable solutions. The way forward is a CAP encouraging pioneers and compensating farmers for delivering health and environmental benefits through introduction of sustainable agricultural practices and use of natural alternatives, where possible.

1. Why are citizens concerned about pesticides?

People who are most exposed to pesticides are farmers and farm workers as they are in direct contact with the chemicals, sometimes daily. However, we are all exposed indirectly to pesticides and other agrochemicals. The rural population experience direct exposure when pesticides are sprayed in open fields, people walking along public footpaths, children playing in gardens within spray drift range, waiting for the bus on rural roads, etc. Urban dwellers may experience direct exposure, e.g. when taking children to play in recently treated public areas. Pregnant and nursing mothers can be exposed directly through food, occupational use, gardening and household use, the house being exposed near sprayed fields, or indirectly through their partner's professional or amateur use. Pesticides matters to us all.

Studies in the UK and Germany have conservatively estimated annual external costs of pesticides use to be US\$257m and \$166m, respectively, paid by sufferers of pesticide-related poor health, the environment and citizens (Pretty & Waibel, 2005). It is therefore not only economic but also moral feasible that the CAP complement positive moves for IPM in the private sector with concrete policy support and effective new CAP measures to encourage the concept of sustainability.

2. A post 2013 CAP able to boost sustainable practices in the EU

A new CAP should build on the already existing environmental and public health directives, and especially kick off sustainable agriculture in the EU building on the fact that the EU Directive 2009/128/EC on the sustainable use of pesticides makes it mandatory for all EU farmers to apply Integrated Pest Management (IPM) as from 2014. Article 14 of this directive says *"professional users of pesticides switch to practices and products with the lowest risk to human health and the environment among those available for the same pest problem, and stresses that "Member states shall take all necessary measures to promote low pesticide-input pest management, giving wherever possible priority to non-chemical methods"*.

The future CAP must aim at a transition to sustainable agricultural practices, away from monoculture, standardisation and unsustainable intensive production **enabling farmers to shift to safer farming methods and alternatives treatments**, to reach the longer term objective where only sustainable agriculture receives public funding.

A shift to more sustainable systems has of course already started with the introduction of

organic farming. A concept which needs to be developed further. However, time has come also to develop the concept of sustainability in conventional farming.

In a post 2013 CAP, farmers wishing to receive public funding should be obliged to provide **individual project plans** identifying how they will **apply sustainable agricultural practices in an approach of 'prevention first'**, and how - for the farmers who wishes to - to move towards more natural agro-ecosystems. CAP support must be offered to the farmer/land manager as a package of measures to match development of a sustainable agricultural project.

It is also the time to change the spirit of the CAP, by **enabling pioneers**, away from an approach of business as usual and into an approach of rewarding and motivating those farmers who 'go the extra mile' and encourage the rest to take the first steps up the IP ladder to safer and more sustainable farming.

The traditional 'pillars' approach of the CAP should be redesigned into effective **building blocks**, where **support is granted not on historical output, but on current practices** and offered to farmers developing **sustainable practices in an approach of prevention first**.

Farmers should be compensated for employing agricultural practices avoiding monoculture, rotating crop systems, smaller plots, setting up buffer zones, buffer strips, hedges etc. in a spirit of **'the more you deliver sustainable practices, the more public funding you get'**. Achieving this objective will require a mixture of mandatory and voluntary approaches, and where possible also defining banned practices (or at least define unsustainable practices which in the longer run should not be entitled to receive public support).

Also, in accordance with the EU Directive 2009/128/EC on the sustainable use of pesticides, it should be **mandatory** for EU and Member States **to offer farmers**, at least temporary, **public funding for use of non chemical alternatives**. Use of non chemical alternatives is of benefit for citizens (farmers, workers and bystanders), consumers and the European economy when, so it must be considered a public good worth investing in the future.

EU Directive 2009/128/EC on the sustainable use of pesticides makes it mandatory for Member States to provide necessary technical support in the form of: early warning systems for key pests and diseases; IP advisory systems and training for farmers and agronomists etc. The way forward is building on this to **establish a technical, financial and moral support framework** guiding farmers into delivering more sustainable practices.

Finally, to booth sustainable agriculture among conventional farmers in the EU it is time to **developing a specific new EU regulation for Integrated Production**.

For further information:

Henriette Christensen, senior policy advisor, PAN Europe Brussels office
tel: + 32 2 503 08 37; email: henriette@pan-europe.info

Pesticide Action Network Europe (PAN Europe) was founded in 1987 and brings together consumer, public health, and environmental organisations, trades unions, women's groups and farmer associations from across 19 European countries. PAN Europe is part of the global network PAN working to minimise the negative effects and replace the use of harmful pesticides with ecologically sound alternatives.



**Pesticide
Action
Network**
Europe

Which Common Agricultural Policy after 2013? PAN Europe position paper

June 2010

Pesticide Action Network (PAN) Europe believes in the creation of a Common Agricultural Policy encouraging farmers to look for long term sustainable solutions. The way forward is a CAP encouraging pioneers and compensating farmers for delivering health and environmental benefits. www.pan-europe.info

1. What do citizens expect from a European agricultural policy?

- According to the European public, **the main priority for the CAP** should be ensuring agricultural products that are of good quality, healthy and safe (59%). Ensuring reasonable food prices (49%), protecting the environment and ensuring a fair standard of living for farmers (both 41%) (**Eurobarometer Survey 336/2009** on 'Europeans, Agriculture and the Common Agricultural Policy', p. 5).
- According to **Eurobarometer Survey 314/2009** on 'European attitudes toward chemicals in consumer products: risk perception of potential health hazards' EU citizens consider pesticides to be the chemicals posing most risk to the user (70% of respondents, p.6).
- According to **Eurobarometer Survey 238/2006** on 'Risk issues', the main concern of EU citizens is the issue of pesticide residues in fruit, vegetables or cereals (63% of respondents, p.15)

2. Why are citizens concerned about pesticides?

Continual, low level exposure to hazardous substances: Pesticides are toxic chemicals designed to be deliberately released into the environment to kill or disrupt the health of a particular pest, disease organism or weed. This does not change that fact that a large percentage of pesticides applied reach a destination other than their target and therefore enter air, water, soil, sediments and even end up in our food and drink, homes and workplaces. Particular concerns include the contamination of groundwater and foodstuffs, and the continuing accumulation of certain pesticides in plants and animals. The long-term effects of very small quantities of pollutants that accumulate in human bodies are also poorly understood. There is consequently a need to protect vulnerable groups such as children and the elderly, as recognised by the 6th EU Environmental Action Plan, and in the Directive 128/2009/EU on sustainable use of pesticides.

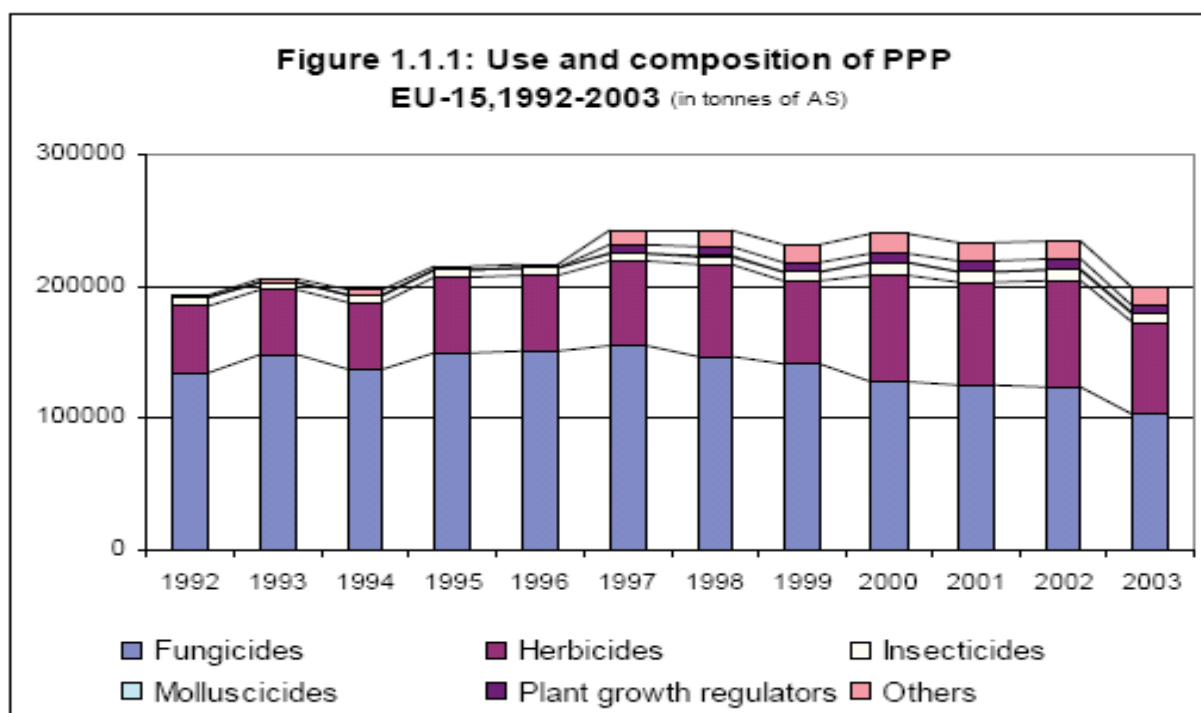
The people who are most exposed to pesticides are farmers and farm workers as they are in direct contact with the chemicals, sometimes daily. However, we are all exposed indirectly to pesticides and other agrochemicals. The rural population experience direct exposure when pesticides are sprayed in open fields, people walking along public footpaths, children playing in gardens within spray drift range, waiting for the bus on rural roads, etc. Urban dwellers may experience direct exposure, e.g. when taking children to play in recently treated public areas. Pregnant and nursing mothers can be exposed directly through food, occupational use, gardening and household use, the house being exposed near sprayed fields, or indirectly through their partner's professional or amateur use.

Complex, long-term and poorly understood health impacts: Exposure to harmful pesticides during pregnancy has been associated in the peer-reviewed scientific literature with birth defects, since the foetus, infants and children are much more susceptible to pesticide side-effects, both quantitatively and occasionally qualitatively (because their bodies are still developing and their systems for protecting the body from toxic chemicals are therefore still immature). Birth defects that later affect reproductive ability, so-called 'delayed functional toxicity', may not manifest until adulthood.

Other possible chronic and often delayed health effects include: immunological effects, endocrine disrupting effects, reproductive and neuro-behavioural disorders and cancers. There is concern about the high prevalence of reproductive disorders in European boys and young men and the rise in cancers of reproductive organs, such as breasts and testes. Research indicates a strong connection with environmental pollution and the continuous exposure to low levels of a large number of endocrine disrupters which can act in concert. Many of these chemicals, drugs or natural products are regularly found in human tissues and in breast milk and their interactions unknown.

Risk assessment is totally inadequate for 21st century: Many policy makers are arguing though that food safety was regulated in the 1999 CAP-reform, and that the recently finalised review process for all active ingredients used in plant protection products within the EU, together with the introduction of the new pesticides package (with the main elements being a regulation on authorisation and marketing of plant protection production and a directive on sustainable use of pesticides) means that all pesticides on the markets are now safe when used correctly. Pesticide regulation is only in its infancy. Industry succeeded in delaying the 1991-regulation for more than 17 years by doing only minimal testing and by spending time on huge court cases. Now the pesticides on the market are tested on a minimum level and on the basis of 20-year old criteria. Also many pesticide gained approval on the political process of voting while the effect were in fact not acceptable. Critical new scientific evidence documenting endocrine disruption and defective developmental effects are still not being taken into account, and society, especially the unborn child, is put at great risk because of this. Also the cocktail effects are not calculated which means the residues of pesticides in food are far from safe. Finally, **nowhere it is considered that many pest problems can be overcome by applying sustainable agricultural practices.**

3. Pesticide use in the EU



Source: Eurostat

The figure clearly shows that, despite a shift to lower doses, total volumes used have not decreased over time. We are only at the beginning of the road to reduce pesticide dependency in the EU.

It is time to support farmers, technically and financially, by offering farmers a wider range of Integrated Pest Management (IPM) techniques, so they can gain the benefits from a holistic Integrated Production approach¹.

4. Integrated Pest Management- it can be done!

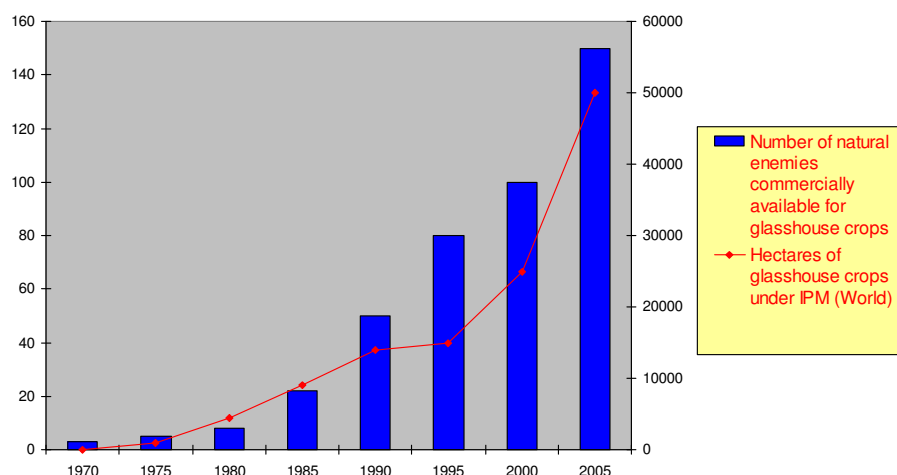
The first description of use of biological control dates from around 300 AD, when predatory ants were used for the control of pests in citrus orchards in China, a method which is still used today in Asia. “Modern” application of biological control started in 1888, when an entomologist set sail from San Francisco for Australia to collect natural enemies for the control of the exotic cottony cushion scale insect in citrus².

Use of biological control (natural ‘enemies’ which prey on or parasitize pest insects) in greenhouses first took off in the Netherlands in the 1980s, triggered by growers’ increasing problems of pests developing resistance to commonly used insecticides. Biocontrol in greenhouses and protected cropping has now expanded to many EU countries, mainly in high value salads, fruit and vegetables, even in places with notorious pest pressures, such as Spain.

¹ A recent government-funded evaluation of the success of IPM implementation in the UK arable sector concludes that the introduction of agri-environmental schemes as part of rural development has helped to encourage more environmentally-friendly farming but UK arable farmers still need to start using a much wider range of IPM techniques in order to obtain full advantage of natural (and free) pest control processes (Overcoming market and technical obstacles to alternative pest management in arable systems. Rural Economy & Land Use Programme Policy Note 10. Oct 2009 (www.relu.ac.uk).

² Boller, van Lenteren, Delucchi, International Organisation for Biological Control of noxious animals and plants (IOBC), History of the first 50 years (1956-2006), page ix

IPM/BC IN GLASSHOUSES (Van Lenteren, 2006)



The welcome expansion of biocontrol, however is so far, a direct result of food supply chains, markets and consumers driving change so far³, NOT of the few, often weak policy measures from national or EU levels to promote IPM and biocontrol⁴.

Studies in the UK and Germany have conservatively estimated annual external costs of pesticides use to be US\$257m and \$166m, respectively, paid by sufferers of pesticide-related poor health, the environment and citizens (Pretty & Waibel, 2005). It is therefore not only economic but also moral feasible that the CAP complement positive moves for IPM in the private sector with concrete policy support and effective new CAP measures to encourage the concept of sustainability.

5. Building blocks in a CAP encouraging sustainability

The future CAP must aim at a transition to sustainable agricultural practices, away from monoculture, standardisation and unsustainable intensive production **enabling farmers to shift to safer farming methods and alternatives treatments**, to reach the longer term objective where only sustainable agriculture receives public funding.

This shift has of course already started with the introduction of organic farming. While there is a need to develop the organic sector even further, time has come also to develop the concept of sustainability in conventional farming.

³ A good example is the influential campaign of PAN Europe member Greenpeace Germany for retailer action on high and illegal pesticide residue levels detected in greenhouse peppers and other crops grown in southern Spain and other Mediterranean countries. Few can deny the positive results which have emerged since 2007 -a huge upsurge in the use of biocontrol and IPM methods in Spanish protected horticulture and a reduction not only of dangerous residues for consumers, but a much healthier working environment for the thousands of immigrant farm workers and for Spanish natural resources and wildlife.

⁴ As part of current agri-environmental schemes under the CAP's Rural Development Programme, Member States can offer financial support for farmers applying additional quality standards into the agricultural practice, e.g. Integrated Pest Management (IPM) measures. However, an evaluation from Birdlife International (http://www.birdlife.org/eu/pdfs/Could_do_better_report_05_09.pdf) indicates that the CAP-funded IPM scheme often is being used to support farmers for doing nothing more than 'business as usual'. This is not a sustainable approach!

The shift needed in conventional farming should build on the EU Directive 2009/128/EC on the sustainable use of pesticides, which obliges EU farmers to apply Integrated Pest Management (IPM) as from 2014. Article 14 of this directive says *”professional users of pesticides switch to practices and products with the lowest risk to human health and the environment among those available for the same pest problem, and stresses that ”Member states shall take all necessary measures to promote low pesticide-input pest management, giving wherever possible priority to non-chemical methods”*.

The next step must be to introduce the concept of Integrated Production (IP), which will mean also reducing reliance on synthetic fertiliser which allows a more climate-friendly farming approach, including cutting carbon footprints, fossil fuel use and greenhouse gas emissions, though the development of a more holistic approach to farming.

In a post 2013 CAP, farmers wishing to receive public funding should be obliged to provide **individual project plans** identifying how they will **apply sustainable agricultural practices in an approach of ‘prevention first’**, and how - for the farmers who wishes to - to move towards more natural agro-ecosystems. CAP support must be offered to the farmer/land manager as a package of measures to match development of a sustainable agricultural project.

It is also the time to change the spirit of the CAP, by **enabling pioneers**, away from an approach of business as usual and into an approach of rewarding and motivating those farmers who ‘go the extra mile’ and encourage the rest to take the first steps up the IP ladder to safer and more sustainable farming.

The traditional ‘pillars’ approach of the CAP should be redesigned into effective **building blocks**, where **support is granted not on historical output, but on current practices** and offered to farmers developing **sustainable practices in an approach of prevention first**. Farmers should be compensated for employing agricultural practices avoiding monoculture, rotating crop systems, smaller plots, setting up buffer zones, buffer strips, hedges etc. in a spirit of ‘the more you deliver sustainable practices, the more public funding you get’. Achieving this objective will require a mixture of mandatory and voluntary approaches, and where possible also defining banned practices (or at least define unsustainable practices which in the longer run should not be entitled to receive public support).

In the current CAP success of transition in European agriculture depends to a large extent on Member States’ willingness to **establish a technical, financial and moral support framework** guiding farmers into delivering more sustainable practices, helping them to gain confidence in using less agrochemical input. However, in compliance with the EU Directive 2009/128/EC on the sustainable use of pesticides, Member States should provide necessary technical support in the form of: early warning systems for key pests and diseases; IP advisory systems and training for farmers and agronomists etc. We encourage Member States to start this transition now.

In the spirit of encouraging sustainability enabling farmers to shift to safer farming methods and alternatives treatments, it is of importance to highlight that as from 2014, in accordance with the EU Directive 2009/128/EC on the sustainable use of pesticides, it should be **mandatory** for EU and Member States **to offer farmers**, at least temporary, **public funding for use of non chemical alternatives**⁵ Use of non chemical alternatives is of benefit for citizens (farmers, workers and bystanders), consumers and the European economy when, so it must be considered a public good worth investing in the future.

Finally, while in strict economic thinking, all elements of food's intrinsic quality should be covered by the market price, imperfections in the food chain caused by the many suppliers and the few retailers, limits farmers' options for quality diversification as a tool to obtain a higher market price. We therefore think that the CAP needs contain elements allowing **quality diversification, boosting organic production and also developing a specific new EU regulation for Integrated Production**, to support change in mainstream farming that are overdue.

6. Key to success in an approach encouraging sustainability

Today's agricultural practices contribute to several persistent and serious environmental problems (e.g. climate change, water contamination and shortage, soil degradation and biodiversity loss), as recognised by the sustainable use directive and the 2008 UN International Assessment of Agricultural Science & Technology for Development (<http://www.agassessment.org/>)

Pesticide-supported loss of biodiversity is a major challenge in Europe and an issue that more and more Europeans are concerned about. The negative impact of pesticide on wild plant and animal species on European farmland has recently been documented by scientists from nine European countries, concluding that, *'If biodiversity is to be restored in Europe and opportunities are to be created for crop production utilizing biodiversity-based ecosystem services such as biological pest control, there must be a Europe-wide shift towards farming with minimum use of pesticides over large areas'*

(Geiger, F. et al. Persistent negative effects of pesticides on biodiversity and biological control potential on European farmland. Basis and Applied Ecology (2010), doi: 10.1016/j.baae.2009.12.001)

It is time for a smooth transmission in the CAP supporting farmers financially, technically and morally in using safer farming methods and alternative treatments. This will not only mean meeting the needs to produce healthy foods for Europe's citizens, but also help to addressing the serious environmental problems of climate change, water contamination, soil degradation, biodiversity loss and declining bee populations.

Such a transition is the best solution for the health of society and our farmers as it will contribute to create greater political stability, more active citizen support for the farming and rural sectors and help to build more resilient production systems which are less vulnerable to pests, diseases, and extreme weather and more climate-friendly - a win-win situation for all in the longer run

⁵ Some Member States have already begun, e.g. the Flemish Agency for Agriculture and Fisheries recently launched a new agri-environment measure for a 'confusion technique in apple and pear growing' against the codling moth pest, meaning that growers are incentivised to use insect sex pheromone technology which disrupts moth males from finding and mating with females, reducing pest population levels and damage and thus enabling growers to cut back, or even eliminate, insecticide use against this serious orchard pest which causes unacceptable damage to fruit ('wormy' apples)

For further information:

Henriette Christensen, senior policy advisor, PAN Europe Brussels office
tel: + 32 2 503 08 37 email: henriette@pan-europe.info

Rachel Sutton, Network Co-ordinator, PAN Europe London office
tel : + 44 207 065 0920 email :rachel@pan-europe.info

Pesticide Action Network Europe (PAN Europe) was founded in 1987 and brings together consumer, public health, and environmental organisations, trades unions, women's groups and farmer associations from across 19 European countries. PAN Europe is part of the global network PAN working to minimise the negative effects and replace the use of harmful pesticides with ecologically sound alternatives.



Pesticide
Action
Network
Europe

WHICH COMMON AGRICULTURAL POLICY AFTER 2013 ?

PAN Europe position paper

March 2012

“We can't solve problems by using the same kind of thinking that created them.” Albert Einstein.

The challenge European agriculture is facing

... a reminder

The European model of agriculture is moving towards a increased level of standardization, both in terms of what we eat and what we produce in the field.

Monoculture means growing the same crop in the same fields year after year. It is widely used in industrial farming, because it allows large harvest, minimum labour and is considered the easiest to do. But monoculture has a number of drawbacks. Since all plants in monoculture are genetically similar, diseases spread faster. So monoculture requires more pesticide intensive cultivation. And other time beneficial organisms disappear, and intensifies biodiversity loss, so a really bad model to follow.

So while monoculture makes short-term economic sense for farmers, it is at the medium to long term detriment of the sustainability of their cropping systems. The monoculture is explicitly dominant in maize where 22% of all maize production produced in monoculture (Eurostat).

The EC's Standing Committee on Agricultural Research (SCAR) has stressed in 3rd foresight report that: *'A radical change in food consumption and food production in Europe is unavoidable to meet the challenge of scarcities and to make the European agro-food system more resilient in times of increased instability and surprise'*.

Why this position paper ?

On 12th October 2011, the European Commission published its legislative proposals for a reform of the CAP after 2013. PAN Europe has actively contributed to the debate on the CAP towards 2020 (for an overview of papers distributed so far, please see www.pan-europe.info/agriculture). The purpose of this position paper is to highlight key points in the legislative proposals which we consider of special importance, explaining which proposals we support and those where much stronger measures are needed.





A CAP proposal able to reduce pesticide dependency

The way forward for the European model of agriculture is to ask each EU farmer to take a holistic approach to farming away from trying to eradicate all pest, diseases and weeds, and instead start to manage them effectively.

According to the SUD, all farmers need to apply integrated pest management (IPM) as from 1 January 2014. This means the farmer needs to apply a set of agronomic techniques aimed at preventing pests, diseases and weeds from building up to levels that cause economic damage to the crop. When prevention methods alone are insufficient, preference needs to be given to non-chemical alternatives, such as biological control of insect pests, physical trapping, mechanical weeding. Farmers need to start use synthetic pesticides only as a last resort and take care to select the least toxic products and to target and apply these in ways that minimise exposure of non-target wildlife and contamination.

Integrated weed management

Around 200 wild plant species are known to grow in Danish cultivated fields, yet 80% of these are very weak competitors with crops and will not affect yields substantially in a well-managed farm. Rather than making 'blanket' sprays of herbicides to keep fields totally weed-free, farmers can target the 20% of weeds which are problematic. Widening crop rotations to include different crop types can help prevent these weeds from spreading out of control.



Some agronomic practices which minimise the risk of significant yield losses due to insect pests and fungal diseases

- ⇒ Wide crop rotation avoids rapid build-up of pests (e.g. sugarbeet cultivated 1 in 3 years protects against nematode build-up; cabbage family crops 1 in 5 years keeps cabbage disease pathogen levels low)
- ⇒ Choice of crop varieties fully or partly resistant to pests
- ⇒ Avoid excessive fertilisation which results in plant sap highly attractive to sucking pests
- ⇒ Reduced sowing density of crops to lower humidity discourages fungal disease



What needs to change in the current CAP proposals ?

The CAP proposals as they stand will not be sufficiently strong to make sure that each farmer starts applying IPM as from 2014.

Cross compliance (SMRs):

PAN Europe welcomes the proposal to include Water Framework Directive (WFD) and the Sustainable Use of Pesticides Directive (SUD) into the rules that all farmers need to respect to obtain the basic CAP payment. Though these need to apply as from 1 January 2014, rather than from when 'the last Member State has notified the implementation of the Directive to the Commission, including the obligations relating to integrated pest management all farmers implement these directives' (article 93 of financial, managing and monitoring regulation).



Cross compliance (GAEC): It is unacceptable that the specific reference to crop rotation in Good Agricultural and Economic Practice (GAEC) has disappeared. This criteria needs to be reintroduced, to prevent the agricultural baselines already applied at national level from falling, to avoid green washing (Annex II of financial, managing and monitoring regulation).

Green component – the package approach: It is positive that the reform proposes to introduce the idea of a green component, with each EU farmer to deliver a simple package of agricultural practices, a combination of measures as a mandatory requirement to obtain the basic payment as from 2014. Such an approach will help to ensure that farming gets back to take a more preventive approach (article 29 of direct payment regulation).

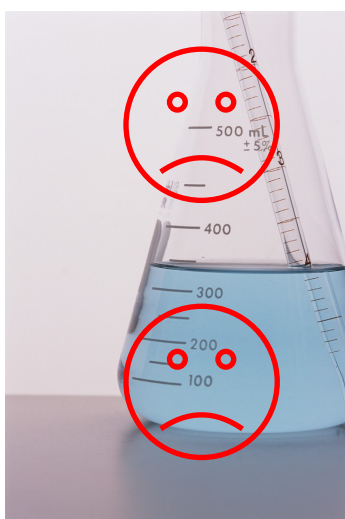


Green component – must include crop rotation: The proposed element of crop diversification with maximum 70% of one crop and minimum three crops is inadequate. It must be upgraded to a requirement of maximum 50% of one crop in a rotational system. It is important to highlight in the reform proposal that diversification should require cultivating crops from different plant families. Also it is important to add an element of cover cropping to avoid bare soil in the future (article 30 of the direct payment regulation).

The package approach which could have made a change

The principle must be that each farmer from 2014 will be asked to deliver a package of sustainable practices consisting of: something **within** the field (crop rotation); something **around** the field (e.g. buffer zones to protect water, floral strips to attract pollinators, hedges), something in summer; and something in winter (e.g. catch crops).

Rural Development - EIP: It is positive that the reform proposal establishes a European Innovative Partnership on Agricultural Productivity and Sustainability (EIP) and as part of this put emphasis on transmission of knowledge to farmers delivered as a bottom up approach at local level. However, this approach will only make sense if applied as local solutions for local problems, as an important step to encourage the necessary agro-ecological approach in the future giving a strong focus on the importance of new actors in the food chain (article 61 of Rural Development Regulation).



Rural Development – compensation natural disasters: PAN Europe’s position is that no public funding under these schemes should be paid to farmers who cannot demonstrate that they have taken a preventative agronomic approach to natural disasters, starting with crop rotation (article 37, 38, 39 of Rural Development Regulation).

Rural Development – investment scheme: the investment scheme needs to offer specific support to non-chemical methods, like bio-control agents (e.g. beneficial insects, mites, nematodes), bio-pesticides, insect pest pheromones and various substances of natural origin e.g. natural plant resistance inducers, to compensate farmers for the potentially higher price of using these (article 18 of Rural Development Regulation).

The main pros and cons of implementing crop rotations at the farm level :

PROS	CONS
<ul style="list-style-type: none"> • Improve or maintain soil fertility • Limiting erosion • Reducing the build up of pests • Spreading the workload on time • Mitigating risk of weather changes • Limiting dependence on agricultural chemicals 	<ul style="list-style-type: none"> • Requiring knowledge on building a crop rotation • Requiring performing farm practices and knowledge on a range of crops • Impacts variable according to farming practices, crops and local conditions • Risk related to crop change and management of a new crop • Decreasing profitability during the implementation

Source: (Environmental impacts of crop rotation in the EU, European Commission DG ENVI, page 38, 2010)

This leaflet was edited and published by PAN Europe using Microsoft © Office Publisher 2007. For further information: Henriette Christensen, senior policy advisor, PAN Europe Brussels office tel: + 32 2 503 08 37; email: henriette@pan-europe.info .

Pesticide Action Network Europe (PAN Europe) was founded in 1987 and brings together consumer, public health, and environmental organisations, trades unions, women’s groups and farmer associations from across 19 European countries. PAN Europe is part of the global network PAN working to minimise the negative effects and replace the use of harmful pesticides with ecologically sound alternatives.