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**1. How Member States are promote Integrated, Pest Management, Integrated Production and use of non chemical alternatives within the current Common Agricultural Policy**

Member States can, but are not obliged, to included elements of integrated pest management into their (regional or national) rural development programs or in their National Framework for Environmental Actions under the fruit and vegetables market organisation in the budget programming period 2006-2013.

**1.1 Overview of actions supported by Member States**



Source DG AGRI, 2010

2012 figures from DG AGRI indicate that following member states today are supporting IP as part of their rural development policy: **AT, CY, CZ, EE, DE, HU, IT, LT, PO, SI, SL, ES**.

Though, only very few Member States, like Austria and Italy (Emilia Romagna), seem to develop a full and **holistic approach to IP**. And even Austria and Emilia Romagna have difficulties in updating the IPM baseline on a regular basis (updating with introduction on new biocontrol products for instance available on the market!)

|  |  |  |  |
| --- | --- | --- | --- |
| Country/Region | CAP – instrument | What | Amount €/ha |
| IT/Emilia Romagna | F&V CMO | selected pesticides combined with an integrated production system (incl. crop rotation, fertilisation plan, soil protection measures) | € 100/ha (arable)  €300/ha (vegetables),  €550/ha (fruit) |
| Austria | Agro-envir. in Rural Development | crop rotations (annual crops), restrictions on fertiliser and pesticide use, training and record-keeping | €150/ha (potato/turnip),  €250/ha (strawberries), €300/ha (fruit/hops), up to €400/ha (vine) |
| France | AE | elaboration of a strategic plan on alternative solutions; explaining crop rotation and repeating techniques (l’itinéraire technique), mechanical or/and thermic weeding | €196/ha (arable crops),  € 298/ha vegetables,  € 332/ha fruit trees  €341/ha grapes |

**Several member states co-finance IPM though rural development funding, but some take a single component approach:**

For instance, **the German state of Rhineland-Palatinate pays farmers** **€500/hectare for crop rotation**, Belgium pays €250/ha for mechanical weeding, and the German state of Thuringia offers an annual subsidy of €35/ha for establishing flowering strips for biodiversity purposes.

**Some examples of how Member States promote non-chemical alternatives:**

|  |  |  |  |
| --- | --- | --- | --- |
| Country/Region | CAP – instrument | What | Amount €/ha |
| France | AE | biological control agents; introduction of beneficiaries; or use of sexual confusion on the agricultural fields, in tunnels or in the field | Arable crops: 64€/ha; Vegetables: 105€/ha, Fruit trees: 70 €/ha; Grapes: 79€/ha |
| Luxembourg | AE | biological control agents to fight Cochylis et Eudemia on grapes. | 120 or 200 €/ha depending on the exact intervention needed |
| Belgium, Flandre | AE | sexual confusing against the codling moth in pipfruit | 250 euro/ha |

**Though, the fact that Member States offer farmers financial compensation for implementing IPM, does not necessarily mean that farmers do so:**

A recent UK study shows that most British arable crop farmers use only a partial set of the full range of IPM techniques.

**Adoption of pest control methods in a sample of 571 UK arable farms during the 2007 cropping season**

|  |  |  |
| --- | --- | --- |
| Used by 50% or more farmers | Used by 20-35% | Used by less than 10% |
| Crop rotation | Some element of mechanical weed control | Using pheromones to monitor pest levels |
| Improved field margins | Flower strips to encourage natural enemies | Sowing a mixture of crop cultivars in the same field |
| Timing field operations to reduce risk of pest, disease or weed problems | Beetle bank strips in large fields to shelter ground predators for aphid control | Introducing predators for pest control |
| Sowing disease or insect resistant varieties |  | Using pheromone traps to control pests |
| Hand pulling problem weeds |  | Using trap crops to attract pests away from the cereal crop |
| Sowing different cereal varieties in different fields |  |  |
| Spot spraying |  |  |

Source: 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)

**Questions: Any tools to ensure that member states encourage farmers to apply holistic approaches to farming, based on a solid crop rotation?**

**2. The Sustainable Use Directive and IPM**

**Article 14 specifies on Integrated pest management**

1. Member States **shall** take all necessary measures to promote low pesticide-input pest management, giving wherever possible priority to non-chemical methods, **so that** **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.** Low pesticide-input pest management includes integrated pest management as well as organic farming according to Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products.

2. Member States **shall establish** or support the establishment of necessary conditions for the implementation of integrated pest management. In particular, they **shall ensure** that professional users have at their disposal **information and tools** for pest monitoring and decision making, as well as **advisory services** on integrated pest management.

3. By 30 June 2013, Member States shall report to the Commission on the implementation of paragraphs 1 and 2 and, in particular, whether the necessary conditions for implementation of integrated pest management are in place.

4. Member States shall describe in their National Action Plans how they ensure that the general principles of integrated pest management as set out in Annex III are implemented by all professional users by 1 January 2014.

Measures designed to amend non-essential elements of this Directive relating to amending Annex III in order to take account of scientific and technical progress shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 21(2).

5. Member States **shall establish** appropriate **incentives to encourage professional users to implement crop or sector-specific guidelines** for integrated pest management on a voluntary basis. Public authorities and/or organisations representing particular professional users may draw up such guidelines. Member States shall refer to those guidelines that they consider relevant and appropriate in their National Action Plans.

**ANNEX III identify the General principles of integrated pest management to be :**

1. The prevention and/or suppression of harmful organisms should be achieved or supported among other options especially by:

- crop rotation,

- use of adequate cultivation techniques (e.g. stale seedbed technique, sowing dates and densities, under-sowing, conservation tillage, pruning and direct sowing),

- use, where appropriate, of resistant/tolerant cultivars and standard/certified seed and planting material,

- use of balanced fertilisation, liming and irrigation/drainage practices,

- preventing the spreading of harmful organisms by hygiene measures (e.g. by regular cleansing of machinery and equipment),

- protection and enhancement of important beneficial organisms, e.g. by adequate plant protection measures or the utilisation of ecological infrastructures inside and outside production sites.

2. Harmful organisms **must** be **monitored** by adequate methods and tools, where available. Such adequate tools should include **observations in the field** as well as scientifically sound **warning, forecasting and early diagnosis systems**, where feasible, as well as the use of advice from professionally **qualified advisors**.

3. Based on the results of the monitoring the professional user has to decide whether and when to apply plant protection measures. Robust and scientifically sound **threshold values** are essential components for decision making. For harmful organisms threshold levels defined for the region, specific areas, crops and particular climatic conditions must be taken into account before treatments, where feasible.

4. Sustainable biological, physical and other non-chemical methods must be preferred to chemical methods if they provide satisfactory pest control.

5. The pesticides applied shall be as specific as possible for the target and shall have the least side effects on human health, non-target organisms and the environment.

6. The professional user should keep the use of pesticides and other forms of intervention to levels that are necessary, e.g. by reduced doses, reduced application frequency or partial applications, considering that the level of risk in vegetation is acceptable and they do not increase the risk for development of resistance in populations of harmful organisms.

7. Where the risk of resistance against a plant protection measure is known and where the level of harmful organisms requires repeated application of pesticides to the crops, available anti-resistance strategies should be applied to maintain the effectiveness of the products. This may include the use of multiple pesticides with different modes of action.

8. Based on **the records on the use of pesticides and on the monitoring of harmful organisms the professional user** should check the success of the applied plant protection measures.

**NB ! IPM is according to the SUD a two step approach for both farmers and MS:**

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**1) Général principle of IPM is mandatory, mandatory for farmer to apply, and after defined at Ms level to be part of GAEC (a condition set by the European Commission) and**

**2) Crop specific IPM voluntary for farmers to apply, but need to be defined and incentive developed, and could be part of RDR, COM for fruit etc.**

**2.2 How does MS target these challenges in the NAPs?**

**2.2.1 The Czech NAP recognises the need to adjust GAEC, but lacks action :**

**Say regarding cross compliance:**

* Recognizes the need to harmonise the legislative conditions in the framework of cross-controls (Cross compliance) and the standards for the maintenance of GAEC with the measures for compliance with the general principles of integrated pest management.

**Might propose something useful in 2015 regarding both 1 and 2 pillar of the CAP:**

* Give a lot of explanation regarding the importance of good agronomic practices, but measure success on IPM measured exclusively on number of trainers, of advisers etc, though regonizes the need to evaluate real impact of agriculture, especially those farming in the buffer zones of water sources, and, according to the results, amend the subsidy policy of the CR (e.g. financial support for restricted land use) by 2015.

*By 2015, the MoA, in cooperation with the MoE and the SPA, shall prepare the principles of management in a WRBZ for drinking water sources (in particular water reservoirs), primarily based on agricultural-technical measures (tillage, crop rotation) with a focus on principles for using PP products applied to soil (before sowing, before germination or shortly after germination), especially herbicides, in terms of the threat to surface and groundwater, that being on a sloping terrain or in areas with increased risk of rapid infiltration of water into the soil in relation to agricultural drainage systems. The above will be linked with the approval for applicable PP products by using the provisions of Section 38b of the Plant health Act. By 2015, the MoA, in cooperation with the MoE, shall carry out an economic analysis of the impact of the proposed measures in the WRBZ on the entities working there and draw up a proposal taking into account these impacts into the subsidy policy of the CR.*

**2.2.2 The German NAP explains the problem of crop rotation very nicely, proposes no actions of importance regarding conventional farming.**

***‘****In part, narrowed crop rotations have been a consequence of the increased level of specialisation among farms, the increase in cultivated area, economic necessities and market-policy requirements, as well as economic incentives favouring certain crops. A narrower crop rotation can thus lead to a greater use of certain plant protection products, because such a rotation encourages certain harmful organisms.*

*The introduction of new harmful organisms can trigger off an additional need for use of plant protection products, in different cultivated areas or sectors or on non-farmed land, in order to eliminate or to repel the organisms, or to stem the infestation. Preventive measures (e.g. changing the crop rotation) and non-chemical alternatives must be developed and used on a preferential basis or - if available - integrated plant protection systems must (where applicable) be adapted.*

*Other essential factors to be particularly emphasised with regard to continuous efforts to secure yields and quality, in harmony with the conservation of biodiversity, are the extension of crop rotation in order to broaden diversity within and between species, as well as the plant breeding and the growing of a greater diversity of resistant varieties within the individual crops.*

*Organic farms require particularly intensive consultation on plant protection matters. Funding instruments held by the Federal Government and the Länder should also be used for this. Of crucial significance here are the complex interactions between the crop-related choice of location and of variety, crop rotation, plant protection, tillage and fertilisation.’*

**2.2.3 Finland will update their legal base for offering CAP support to farmers:**

* Make it mandatory for all farmers to report pesticides use (now mandatory to obtain RDR funding)
* Increasing attention to and CAP support for crop rotation, but not allowed by the European Commission
* Introduce 1-3 m periannual grass cover (grass cutting, no pesticides)
* Introduce 10 m field margin water courses, well, lakes (grass cutting no pesticides)

*The objective is also to favour crop rotation in the next EU programming period. Adequate crop rotation prevents the accumulation of pests in fields, the formation of resistance caused by repeated use of single plant protection products and, in particular, the adverse effects caused by continuous use of persistent and leaching plant protection products. Crop rotation also assists the farmer in observing the environmental restrictions for plant protection products.’*

**2.2.4 The Slovakian NAP is based on local label system, but their ambition level is low:**

* They intend to: use RD support for establishment of farm advisory services
* **Incorrect:** argue that IPM system is based on IOBC rules, but many loopholes and derogations!!!
* **Ambigious:** Highlight it is important to encourage rational and precise pesticide use, as well as appropriate crop rotation practices!!

***Precautionary measures***

*crop rotation – classic crop rotation ‘cereal – leguminous plant (root crop) – cereal – animal feed’ is applied less nowadays, but a procedure as close as possible to this should be followed. In this context, it is necessary to have a clear, stable and sustainable production plan, an analysis of the land cultivated in terms of its potential and the areas of the plots of land and the largest possible number of main and secondary crops, including catch crops; a multiannual sowing procedure should be drawn up that respects soil fertility, the availability of irrigation, and, especially, optimal crop rotation, while land blocks should split into smaller plots in order to stabilise the area of each crop over several years.*

**The Slovenian NAP also based on local label system:**

* more crops (cereals) to be included
* measures to protect aquatic area and drinking water to be included in RDR
* decision support system will be upgraded to inform also about alternatives

**Though the Slovenian NAP speaks about crop rotation:**

*On farms included in the integrated production, an appropriate crop rotation should also be considered (e.g. in arable farming, 5-year crop rotation), fertilisation should be applied only on the basis of soil analysis and detailed records of all operations carried out should be kept.*

**Hungary – really bad – also based on local label system intends to:**

* AE scheme conditions on farmer reporting on spraying (13000 farmers)!!!!
* Introduce crop rotation in organic farming!!!!
* Forecast and/or warning systems in guidelines for organic farming!!!

**Though the Hungarian NAP speaks about crop rotation in IPM saying:**

*The compulsory requirements concerning IPM to be introduced under this Directive are drafted in the Decree 43/2010 FVM as fundamental plant protection obligation. The changes in consumption demands and market conditions necessitate introducing integrated production with certified trademark the implementation of which is possible only at high professional level and, therefore, only on a voluntary basis.*

*The following elements make integral part of it: Selection of area and reasonable choice of crops that can be successfully grown on the particular place of production. Well established crop rotation: diseases, pests and weeds of the consecutive crops should be different. It is important to consider the value of preceding crops and the time of new sowing.*

**UK – only based on private branded work, including:**

* Environmental Stewardship Schemes - with financial support for under-sowing spring cereals, use of winter cover crops) and 6m or 12m buffer zones to protect watercourses.

**Examples of NAP focused on organic:**

**The Swedish NAP makes 8 references to crop rotation, saying among others:**

*‘The use of integrated pest management involves preventive measures, such as well-planned crop rotation and appropriate cultivation techniques, choosing tolerant or resistant varieties, protecting and encouraging beneficial organisms etc.*

***Calculations covering several years which demonstrate the profitability of new crop rotations or cultivation systems are required in order to ensure that they gain acceptance among farmers.***

*Swedish Board of Agriculture must continue to ensure that preventive measures and alternatives to chemical plant protection products are used first and foremost, such as mechanical controls, chemical-mechanical controls, crop rotation, choice of variety, seed density, fertiliser and different treatment times.*

*In organic farming, preventive measures are the main method of combating harmful organisms and weeds, for example varied crop rotation, tillage methods and resistant varieties. Chemical plant protection products are not used in organic production.’*

**Lithuania:**

* the area of utilised agricultural land used for organic to increase by up to 2 per cent in 2017, as compared to the average in 2008–2011;
* prohibited to use pesticides in protected wetland reserves, soil reserves, animal, bird and fish reserves as well as in certain karst area, and
* when speaking about IPM - does recognise that ‘Professional users of plant protection products shall observe the following requirements’ including’ To follow crop rotation’, but nothing spécial is being proposed.

**Examples of NAP which could be of interest relating to sensitive areas:**

**Bulgaria intends to (making no specific reference to CAP support):**

* ban use of any pesticide on protected territories, pasture and meadows
* pest diagnosis, bulletins, establishment of national data base on pests, and to develop mathematic simulation models

**Cyprus – really bad on CAP measures - intends to:**

* ban on use pesticides Toxic, very toxic, cartagen, mutagen or toxic for reproduction from 30/6/13 in public parks, schools etc+ in water bodies +conservation areas (details probably sent to SANCO, still not published)
* by 30/6/13 a list of practices and products to replace chemicals will be produced (probably send to SANCO, still not published)
* CAP support: investigate promote the use of low-drift nozzle
* CAP support: possibility to use liguid waste management systems (eg biobeds)

**Denmark intends to develop decision support system (included into CAP):** monitoring, warning and decision support systems to be developed further, including environmental consequences and economic gains

As part of the nitrate implementation, establishment of 10 meter not farmed (and not fertilized and sprayed) land, next to water courses.

**My first evaluation: Generally MS are starting to consider actions needed especially in sensitive areas, while actions in the fields are less obvious!**

**Questions regarding IPM and RDR:**

* **Low drift nozzles and bio-beds** are they to be considered IPM, as no explicitly mentioned in IPM annex on SUD (CY)?
* Is **training, information and advises enough to show fulfil IPM annex of SUD** (MA, CZ…)?
* Why does MS not target crop rotation though it is first principle of IPM according to annex? Some member states like Ireland only mention crop rotation when speaking about the role of the adviser, others Lithuania and Bulgaria speaks about crop rotation when reference to the IPM annex of the SUD, but **Germany, Hungary** and I think by mistake **Finland only speaks about crop rotation as part of organic - Is it really acceptable?**
* **Czech and Slovakia** makes a lot of references to the importance of soil fertility in their NAPs, would it be possible to ask why not do more to **promote crop rotation, and a more holistic approach to farming under rural development? Will it be possible to make a link to IOBC IP guidelines?**
* Many MS (**Bulgaria, Slovenia, Slovakia, Germany, Hungary, Malta, ..) refers to private labels standards** to become the sector specific IPM guidelines? Does MS need to **present their** sector specific IPM guidelines? Will some kind of minimum **evaluation** be done? Will it be possible to check if these guidelines has **been updated?**
* Will **other DGs** be involved in analyzing the IPM answers that SANCO has asked MS?