PRODUCTIVE EFAs in Croatia

JOINT COMMITTEE MEETING FOR DIRECT PAYMENTS AND RURAL DEVELOPMENT
Brussels, 15.9. 2015

Ministry of Agriculture
Mirjana Kovačić, Direct Payments Unit
Used agricultural area: 1,24 mil ha

- Arable land: 65.4%
- Perm. pastures: 28.2%
- Orchards: 2.5%
- Vineyards: 2.1%
- Olive growes: 1.5%
Farm Register data of the Paying Agency

Number of farms: 191,000
- 96,5 % family farms
- Number of farms that submitted DP aid application 2015: 97,330

Total agricultural land: 1,071,000 hectares
- Number of hectares in the DP aid application 2015: 1,019,592

Average farm size: 6,4 ha

Majority of farms have less than 10 ha (= 89,7%)
small farms cultivate 36,7% of all hectares registered

Farms with more than 10 ha

cultivate 63,3 % of all agricultural land registered
Farm structure
DIRECT PAYMENTS BUDGET

Maximum annual envelope 2015-2019

= 432,425,125 EUR =

373,000,000 DP envelope
9,600,000 Special de-mined envelope
49,825,125 flexibility between pillars (from EAFDR)

DP without flexibility: 382,600,000 EUR

Phasing in (EAGF 100% in 20122): 35% in 2015

- possibility to „top-up” the EAGF amount to 100% from the national budget
Direct payments envelope
Basic Payment Scheme 43%, VCS 15%
# CAP REFORM - LPIS UPGRADES

<table>
<thead>
<tr>
<th>No</th>
<th>Legal basis</th>
<th>LPIS requirements</th>
</tr>
</thead>
</table>
| 1  | 1305/13, art 28-34 | - NATURA 2000  
- Nitrate Vulnerable zones  
- Sanitary protection zones (The Water Protection)  
- RD measures  
- ANC areas |
| 2  | 1306/13, art 67 par 4(b) | Permanent grassland and Pro-rata system - reduction coefficient |
| 3  | 640/14, art 5 par (2d) |  |
| 4  | 640/14, art 10 | Greening  
EFA  
Crop diversification  
Permanent grassland maintaining |
| 5  | 1307/13, art 43-47 |  |
Campaign 2015
EFA layer and geo-spatial aid application

Development of the EFA layer
1. Initial vectorization (entire national territory)
   - LF automatically added to the EFA layer + buffer strips along forest and water courses (as lines) digitized
2. Verification through meetings with farmers
   - 8,600 farmers (with arable land > 15ha) met in person by PA in order to verify all stable EFAs in the LPIS
   - total of 21,249 ha of stable EFAs verified = 76% of required 27,800 ha EFAs
   - it is planned to complete the EFA layer in 2016 with the farms <15 ha!

Development of the GSA and „EFA calculator”
- DP aid applications 2015: GSA with EFA calculator
  - „farmer’s block”: delienation of different crops within one parcel for the sake of crop diversification
  - farmers were filling-in the AA on-line + using help of 3 institutions
EFA layer initial data

1) Ttl Farms no - 8,631
2) Ttl Area – 532.632 ha
3) Ttl RP no – 225.810

- All other potential EFA elements will be registered - 2016/2017

Distribution of RP arable land >15ha / EFA subjects
Greening general features

No equivalent practices (art. 43.3)

PERMANENT GRASSLAND

- Permanent grassland ratio (art. 45.2) at the national level
- No additional sensitive areas (art. 45.1, II)

CROP DIVERSIFICATION

- Cultivation period: May 15 to August 15

GREENING AMOUNT: % of the total value of the PE under BSP

BPS: convergence (art. 25.4.); IUV according to art. 26.2
EFA-obligation subjects 2015

- number of farms in the Direct payments: 97,330
- total agricultural area: 1,019,592 ha
  - arable land: 808,326 ha
- number of farms subject to EFA (> 15 ha): 8,906
- total area of farms > 15 ha: 557,133 ha
- number of farms that registered EFA in 2015: 8,588
- total required EFA (5% of 557,133) = 27,856 ha
ECOLOGICAL FOCUS AREAS
national choice_2015

- land lying fallow
- 7 landscape features within GAEC
- buffer strips along watercourses
- strips of eligible hectares along forest edges without production
- areas with short rotation coppice
- areas with catch crops or green cover
- areas with nitrogen-fixing crops

Conversion and weighting factors according to Annex II of Reg. 639/2014
<table>
<thead>
<tr>
<th>EFA</th>
<th>Number of farms</th>
<th>Activated EFAs in 2015_ha</th>
<th>Application of red.coeff.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land laying fallow</td>
<td>3.064</td>
<td>18.528</td>
<td></td>
</tr>
<tr>
<td>Hedges (LF)</td>
<td>545</td>
<td>408</td>
<td></td>
</tr>
<tr>
<td>Isolated trees (LF)</td>
<td>1.958</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Tress in line (LF)</td>
<td>516</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>Group of trees (LF)</td>
<td>1.834</td>
<td>339</td>
<td></td>
</tr>
<tr>
<td>Ponds (LF)</td>
<td>49</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Ditches (LF)</td>
<td>837</td>
<td>157</td>
<td></td>
</tr>
<tr>
<td>Traditional stonewalls (LF)</td>
<td>6</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Border strips along watercourses</td>
<td>2.640</td>
<td>2.917</td>
<td></td>
</tr>
<tr>
<td>Border strips along forest without production</td>
<td>2.033</td>
<td>158</td>
<td></td>
</tr>
<tr>
<td>Short rotation coppice</td>
<td>9</td>
<td>114</td>
<td></td>
</tr>
<tr>
<td>Catch crops and cover crops</td>
<td>34</td>
<td>80</td>
<td>24</td>
</tr>
<tr>
<td>Nitrogen fixing crops</td>
<td>6.610</td>
<td>89.092</td>
<td>62.364</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>85.074</strong></td>
<td></td>
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# EFAs declared by farmers in aid applications 2015

<table>
<thead>
<tr>
<th>Category</th>
<th>ha</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td><strong>TOTAL</strong></td>
<td>85.074</td>
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<tr>
<td>NFC</td>
<td>62.364</td>
<td>73.31</td>
</tr>
<tr>
<td>Fallow</td>
<td>18.528</td>
<td>29.70</td>
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<tr>
<td>Strips along water</td>
<td>2.917</td>
<td>15.75</td>
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<tr>
<td>Hedges</td>
<td>408</td>
<td>13.99</td>
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<tr>
<td>Bushes</td>
<td>339</td>
<td>83.09</td>
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<tr>
<td>Strips along forest</td>
<td>158</td>
<td>46.61</td>
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<tr>
<td>Ditches</td>
<td>157</td>
<td>99.37</td>
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<tr>
<td>SRC</td>
<td>114</td>
<td>72.61</td>
</tr>
<tr>
<td>Trees in line</td>
<td>61</td>
<td>53.51</td>
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<tr>
<td>Cover crops</td>
<td>24</td>
<td>39.34</td>
</tr>
<tr>
<td>Ponds</td>
<td>3</td>
<td>12.50</td>
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</table>
Over-declared EFAs in 2015 versus „required EFAs”

- required EFAs in 2015 = 27.856 ha
- declared EFAs in 2015 = 85.074 ha
  - NFC = 73%, fallow = 21% (=94% of all declared EFAs)
  - all declared EFAs but NFC and fallow: 4.181 ha

- difference „required NFC + fallow”: 23.675 ha
  - „required” NFC” = 77% of 23.675 = 18.253 ha
  - required fallow = 23% of 23.675 = 5.422 ha
Simulation of EFAs 2015 without over-declaration

<table>
<thead>
<tr>
<th>Type</th>
<th>ha</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFC</td>
<td>18.253</td>
<td>65.53</td>
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<tr>
<td>Fallow</td>
<td>5.422</td>
<td>19.46</td>
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<tr>
<td>Strips along water</td>
<td>2.917</td>
<td>10.47</td>
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<tr>
<td>Hedges</td>
<td>408</td>
<td>1.46</td>
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<tr>
<td>Bushes</td>
<td>339</td>
<td>1.22</td>
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<tr>
<td>Strips along forest</td>
<td>158</td>
<td>0.57</td>
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<td>Ditches</td>
<td>157</td>
<td>0.56</td>
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<td>SRC</td>
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<tr>
<td>Cover crops</td>
<td>24</td>
<td>0.09</td>
</tr>
<tr>
<td>Ponds</td>
<td>3</td>
<td>0.01</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>27.856</strong></td>
<td><strong>100.00%</strong></td>
</tr>
</tbody>
</table>
Comparison of LPIS EFA-layer data and declared EFAs 2015

<table>
<thead>
<tr>
<th>Feature</th>
<th>Registered in LPIS</th>
<th>Declared as EFA 2015</th>
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</thead>
<tbody>
<tr>
<td>strips along water</td>
<td>18.329</td>
<td>2.917</td>
</tr>
<tr>
<td>field woods</td>
<td>830</td>
<td>340</td>
</tr>
<tr>
<td>strips along forest</td>
<td>628</td>
<td>158</td>
</tr>
<tr>
<td>ditches</td>
<td>527</td>
<td>157</td>
</tr>
<tr>
<td>hedges</td>
<td>525</td>
<td>408</td>
</tr>
<tr>
<td>trees in line</td>
<td>276</td>
<td>61</td>
</tr>
<tr>
<td>solitary trees</td>
<td>37</td>
<td>0</td>
</tr>
<tr>
<td>stonewalls</td>
<td>24</td>
<td>0,06</td>
</tr>
<tr>
<td>ponds</td>
<td>7</td>
<td>3</td>
</tr>
</tbody>
</table>
1. Land laying fallow

**Production requirement**
- without the use of plant protection products
- fallow period = February 15 to August 15

**EFA (over-)declared:** 18.528 ha by 3.064 farms

**FAQ by farmers**
- can the autumn crop be sown after fallow?
- use of pesticides? tillage? plowing the fallow land?
- fields inundated with water in spring…to leave as fallow land?
- obligation to have fallow at the same parcel again?
- percentage of fallow within total agricultural land?
2. LANDSCAPE FEATURES

*inside GAEC*

968 HA EFA DECLARED BY 5.745 FARMS

- **hedges or wooded strips**
  - max width 2m + 4 m between parcels, min length 10 m

- **isolated trees**
  - crown diameter min 4m

- **trees in line**
  - crown diameter min 4m (5m max between crowns)

- **trees in group**
  - max 0.2 ha, min 100m2

- **ponds**
  - max 0.1ha

- **ditches**
  - max width 2 m

- **traditional stone walls**
  - max width 2m + 4 m between parcels
LANDSCAPE FEATURES - EXAMPLE

DECLARED LF

GROUP OF TREES

DECLARED LF

TREES IN LINE

NON DECLARED LF

TREES IN LINE

DECLARED LF

SOLITARY TREES
3. Buffer strips along watercourses

Size and production requirement
- min width 3m; max width 10m
- **grass strips without production**
- can be grazed or mowed

**EFA declared:** 2.917 ha
by 2.640 farms

**FAQ by farmers**
- strips not accessible to mechanization
- small, scattered parcels, relations between neighbors,…)
- strips adjacent to parcels, but not parts of farmer’s block
- lessees of (state owned-) land cultivate only the area under contract
4. Strips along forest edges without production

Size and production requirement:
- min width 3m; max width 10m
- No agricultural production
- can be grazed or mowed

Number of EFA hectares: **158 ha** by 2.033 farms

FAQ by farmers:
- difference between the strips with production and without (prior to decision in March 2015 to leave out the strips with production)
- agrotechnology; use of the grass
- strips on the parcel or adjacent strips
5. Short rotation coppice

Species

- willow (Salix spp.)
- poplar (Populus spp.)
- European ash (Fraxinus excelsior)
- alder (Alnus spp.)
- silver birch (Betula pendula)
- sweet chestnut (Castanea sativa)
- European hornbeam (Carpinus betulus)

**Production requirement:**
ban on use of mineral fertiliser and plant protection products
new crop in Croatia

**Number of EFA hectares:** 114 ha by 9 farms

**FAQ by farmers**

- non-eligible crops (Paulownia, Miscanthus, ..., Robinia pseudoaccacia)
- eligibility of natural willow reeds, ..., forests, ...
- productive plantation-SRC or any type of woods of eligible spec...
6. Catch crops or green cover

Type of crops:
1. „catch crop“ or „stubble-crop“
   - sown after the main crop and present in the field till winter
2. „cover crop“
   - remains in the field throughout winter, latest till spring next year
3. under-sown grass crop

Wintercrops sown to be harvested or grazed next year cannot be declared as EFA catch crop!

Sowing period: 1.6. – 1.9.

Number of EFA hectares: 80 ha (= 24 EFA) by 34 farms
Eligible species in the mixture (of at least 2 sp)

**CEREALS:**
- rye (Secale cereale), oat (Avena sativa), Triticale, barley (Hordeum vulgare)

**GRASSES:**
- Annual ryegrass (Lolium multiflorum), Sudan grass (Sorghum sudanense), Sorghum-sudangrass (Sorghum bicolor X S. sudanense), Festuca spp., Poa spp.

**BRASSICA GENUS CROPS:**
- Mustards (Sinapis alba, Brassica juncea, Brassica nigra), oilseed radish (Raphanus sativus), fodder radish-Rauola (Raphanus sativus L., var. oleiformis Pers), Canola (rapeseed) (Brassica napus or B. rapa), winter rapeseed-Perko (Brassica rapa L., cv. Perko).

**LEGUME CROPS:**
- Vetches (Vicia spp.), Crimson clover (Trifolium incarnatum), Berseem clover (Trifolium alexandrium), red clover (Trifolium pratense), fodder pea (Pisum sativum), lupin (Lupinus spp.), Persian clover (Trifolium resupinatum), vine pea (Lathyrus sativus).

**OTHER CROPS:**
- Phacelia (Phacelia tanacetifolia) and buckwheat (Fagopyrum esculentum)
### Benefits of a catch crop/green cover

<table>
<thead>
<tr>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>• absorbes nutrients from the soil (especially nitrates), saving them from washing out and delivering to the next crop</td>
</tr>
<tr>
<td>• provides land cover, reducing the risk of soil erosion</td>
</tr>
<tr>
<td>• improves soil structure (increasing the organic mass); contributes to the accumulation of humus; improves the mobility of organic matter in the soil</td>
</tr>
<tr>
<td>• competes with weeds; reduces health problems caused by allergenic weeds</td>
</tr>
<tr>
<td>• preserves soil moisture (crucial to the survival of the main spring crop) in terms of more frequent extreme droughts</td>
</tr>
<tr>
<td>• encourages the development of beneficial soil fauna (especially earthworms) increasing the biological value of the soil</td>
</tr>
<tr>
<td>• larger number of crops can be grown and used for various purposes: grain and silage, green forage, green manure,…</td>
</tr>
<tr>
<td>• some cultures, such as buckwheat and phacelia, are especially beneficial for pollinators</td>
</tr>
<tr>
<td>• farms already own necessary farm machinery (or can easily hire it in the time of sowing)</td>
</tr>
<tr>
<td>• livestock breeding farms can use the summer-surplus of farm slurry to incorporate it into soil for the catch crop</td>
</tr>
</tbody>
</table>
Problems encountered with EFA CC

Main factor that prevented farmers from declaring more CC as EFA is a need to grow a crop mixture

- farmers have to make a choice of at least two species with similar seed diameter so as to avoid double seeding operations
  - numerous passes in the fields should be avoided (also in line with „EFFICIENT20“, European project aimed at encouraging farmers to contribute to the EU target of 20% energy savings compared to the projections by 2020)

- lack of quality-seed In Croatia (no breeding programs, no seed production); availability of imported seeds not always satisfactory; higher cost of seed

- fluctuation of meteorological conditions: majority of farms that grow CC and NFC are situated in Slavonian region (continental part, lowlands) stuck by summer drought and very high air and soil temperatures!
EFA catch crops 2015

- buckwheat + barley on July 10, 2015
  - sown on July 3, 2015 after oil Rape

- the same crop on 10.9.2015
  - barley surpressed by buckwheat
Catch crops 2015_1

- green cover 10.9.2015: rauola and oat (sown on July 30 after barley)

Courtesy of Croatian Extension Service
Catch crops 2015_2

annual ryegrass + oat + fodder pea

vetch + oat
Catch crops and green cover 2015
feed-back by farmers and Extension service

- high EFA reduction coefficient (0.3) in comparison to fallow land
- seed mixture can not be sown in one operation (farmers opt for cover crops as the „last EFA resort”)
- seed is scarcely available; low-quality seed

Traditional catch and cover crops:
- phacelia (pure)- e.g. beekeepers, after barley or oil rape
- sugar-beet producers used to sow white mustard (pure) after barley prior to sugar beet

- some farmers prefer to leave land lying fallow (cheaper, no inputs), lesser consumption of energy (smaller number of passes), no EFA reduction coefficient
Nitrogen-fixing crops_list of species

- Soya
- Alfalfa - Medicago sativa
- Bean - Phaseolus spp.
- Bean - Vigna spp.
- Chickpea - Cicer spp.
- Clover - Trifolium spp.
- Faba bean - Vicia faba
- Lentil - Lens culinaris
- Lupin - Lupinus spp.
- Pea - Pisum spp.
- Vetch - Vicia spp. (except Vicia faba)
- Birdsfoot trefoil - Lotus corniculatus
EFA NFC in 2015

<table>
<thead>
<tr>
<th>NFC</th>
<th>Declared_ha</th>
<th>With red. coefficient_ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>soya</td>
<td>69.196</td>
<td>48.437</td>
</tr>
</tbody>
</table>

Soya - dominant NFC, followed by alpha-alpha, clovers and peas

Production requirement for soya as EFA: use of the certified non-GMO seed

- in line with national policy to prevent unauthorized GMO hybrids production
- seed certificates and copies of seed invoices to be sent to the Paying Agency

FAQ by farmers:
- consequences of pure development of the crop in the field
Nitrogen-fixing crops in 2015

by courtesy of the Croatian Extension Service

- beans
- Italian clover
Communication with farmers

Preparation for the „Green reform”

- series of regional workshops for farmers spring/summer 2014 + winter/spring 2015
- on-line documents on greening requirements published in summer 2014 (before autumn sowing season 2014)
- direct contact provided to: contact telephone and e-mail made available for the greening issues (as of August 2014)
- publication of comprehensive „Greening booklet for farmers” in May 2015
- cooperation with the Extension service: weekly coordination, list of FAQ, sharing materials & knowledge
- cooperation with the Paying Agency and the Ministry of Environmental and Nature Protection
General comments by farmers (=different depending on farm size, education, experience)

- **bigger farms**: „no major obstacles in the implementation of greening obligations”
- **small farms**: „complicated obligations; lack of information and understanding; the reform could have been issued earlier; information had been coming in segments”
- elderly farmer population can not follow the news (farmers’ age structure is unfavorable!)
- decision not to apply greening obligation to small farmers is favorable
- support provided by institutions, especially EFA verification by the Paying Agency and EFA calculator was helpful

General FAQ by farmers

- mode of implementation of reduction coefficients to EFAs
- mode of calculation of greening penalties; impact of no-compliance
- ecological production and „conversion to ecological” *ipso facto green*
- what happens if a farmer has EFA on a parcel that for some reason becomes ineligible (consequence of coming under 5%)?
- crop diversification: what is a main crop; e.g. winter cereal cut earlier in the season – is it a main crop?
- landscape features and EFA…
Lessons learned

- timely information to farmers is crucial!
- cooperation & dissemination of information to all supporting institutions should be reinforced
- need to analyse 2015 data and eventually revise national EFA policy
- better understanding of the need to declare 5% of EFA
- need to work closer with DG AGRI services and other MS colleagues under the premise that „we are smarter together” 😊