

# IS UKRAINE READY TO COMPLY WITH THE EU SUSTAINABILITY REQUIREMENTS FOR BIOMASS?

COMPARISON OF THE EU RED REQUIREMENTS AND UKRAINIAN LEGAL FRAMEWORK



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# Outline

- Comparison of the EU RED requirements with legal framework in Ukraine
  - Land-use change requirements
  - GHG emissions requirements and pilot calculations of the GHG emissions from biofuels produced from Ukrainian rapeseed and corn
  - Other environmental and social requirements
- Conclusions

# EU RED land use change requirements (1)

Producers must not convert land of **high biodiversity value**, namely:

- a) **primary forest**, i.e. forest and other wooded land of native species, showing no visible signs of human intervention and where ecological processes are not significantly disturbed;
- b) **protected areas**, i.e. land designated by law for nature protection purposes or for the protection of rare, threatened or endangered species or ecosystems;

**EXCEPTION:** Land use is permitted if cultivation and harvesting of biomass do not interfere with the nature protection purposes.

- c) **highly biodiverse grasslands**, either natural (would remain grassland in the absence of human intervention) or non-natural (would cease to be grassland in the absence of human intervention). E.g., savannahs, steppes, scrublands and prairies.

**EXCEPTION:** Use of highly biodiverse non-natural grasslands is permitted when biomass harvesting is necessary to preserve this grassland status.

**Cut-off date: January 2008**

# EU RED land use change requirements (2)

Producers must not convert land of **high carbon stock**, namely:

- a) **wetlands, i.e. lands that are covered with or saturated by water permanently or for a significant part of the year;**
- b) **continuously forested areas, i.e. land spanning more than 1 ha with trees higher than 5 m and canopy cover of more than 30%; land spanning more than 1 ha with trees higher than 5 m and canopy cover of between 10% and 30%, unless evidence is provided that the carbon stock of the area before and after conversion is within limits.**
- **Peatlands**

EXCEPTION: Peatland can be used if evidence is provided that cultivation and harvesting does not involve drainage of previously undrained soil.

**Cut-off date: January 2008**

# Land use and land use change requirements in Ukraine (1)

- Land should be used accordingly to land use category defined by legislation.
- Land of Ukraine is divided by land use purpose on the following categories:
  - a) agricultural lands;
  - b) land of residential and public buildings;
  - c) nature conservation areas and other land for nature protection purposes;**
  - d) land aimed for health improvement;
  - e) recreational land;
  - f) land of historical and cultural purpose;**
  - g) land for forestry purposes;**
  - h) land of water fund;**
  - i) land for industrial, transport, communications, energy, defense and for other purposes.

# Land use and land use change requirements in Ukraine (2)

- Land use category could be changed by executive authority or local administrative bodies;
- Resolution of the forestry and nature protection executive bodies should be taken into an account to change the category of areas defined for forestry purposes (Land Code, article#20).
- It is **forbidden to undertake any economic activities in the nature-conservation fund and other nature protection or cultural purposes** which negatively influence or could negatively influence conditions of natural or cultural complexes or objects or prevents their use for defined purposes. (Law on Nature conservation fund of Ukraine, article#7)
- **the notion of “highly biodiverse grasslands” is not present in Ukrainian legal framework =>** should have a status of nature protected area to be protected

# Land use and land use change requirements in Ukraine (3)

- **The notion of “high carbon stock land” is not present in Ukrainian legislation...**
- **BUT** wetlands could be preserved for water or biodiversity protection purposes, in particular, wetlands
  - could fall under category of water fund where plowing and agrochemicals use is forbidden (Land Code, Ch #12);
  - could be included within nature protected area;
  - could be fall under Ramsar Convention category as “wetlands of international importance”.
- Ukrainian legal framework does not contain special provisions for preservation of peatland... but peatland could be also considered as a land of water fund in some cases or could have the status of protected area

# GHG emissions requirements

## EU RED Requirements

- Biofuels should guarantee greenhouse gas emissions saving of at least 35% (50% from 2017 and 60% from 2018);

## Legal framework of Ukraine

Ukraine does not have a binding emissions reduction target => no emission reduction requirements for any sectors or products

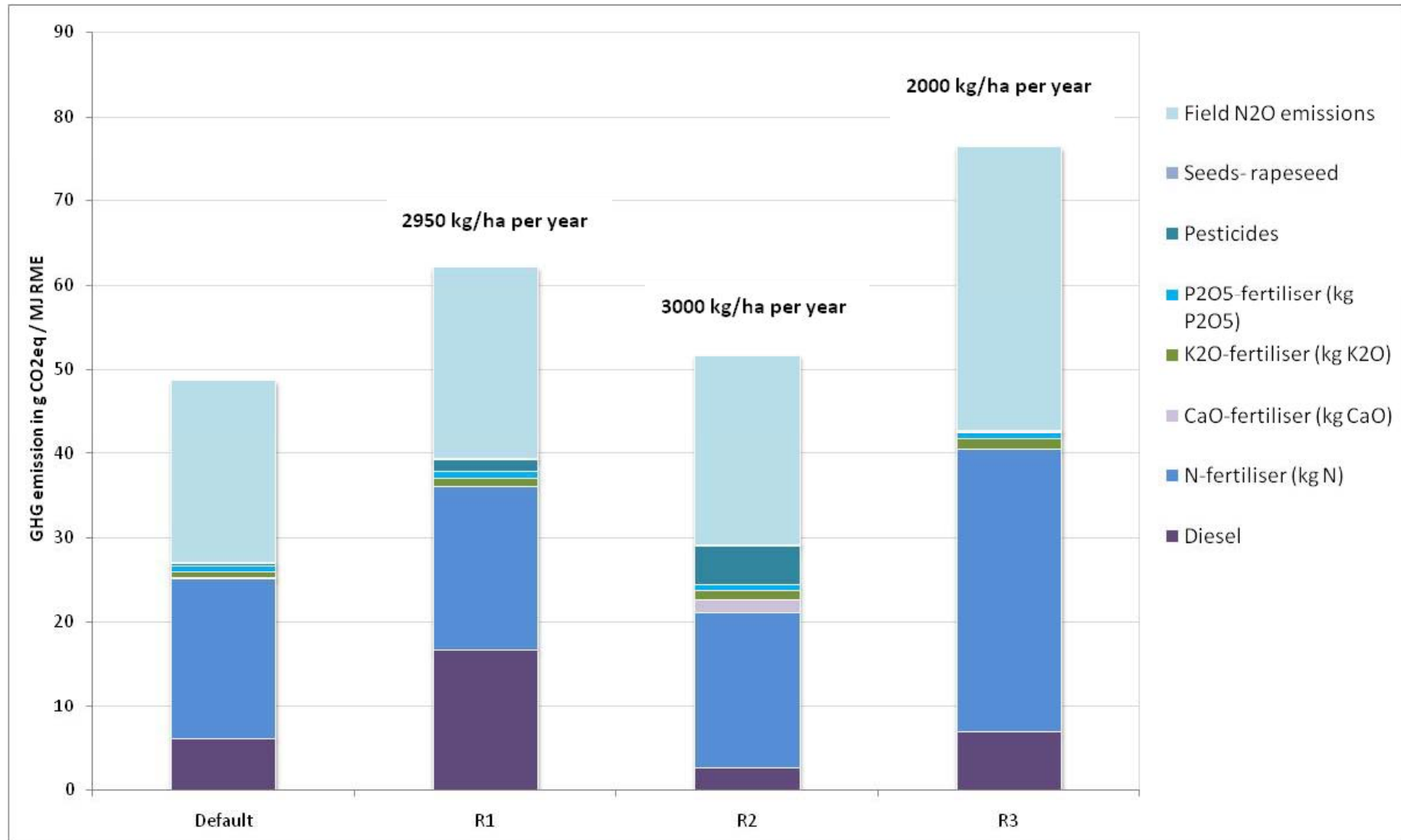


# GIZ Pilot calculations in Ukraine:

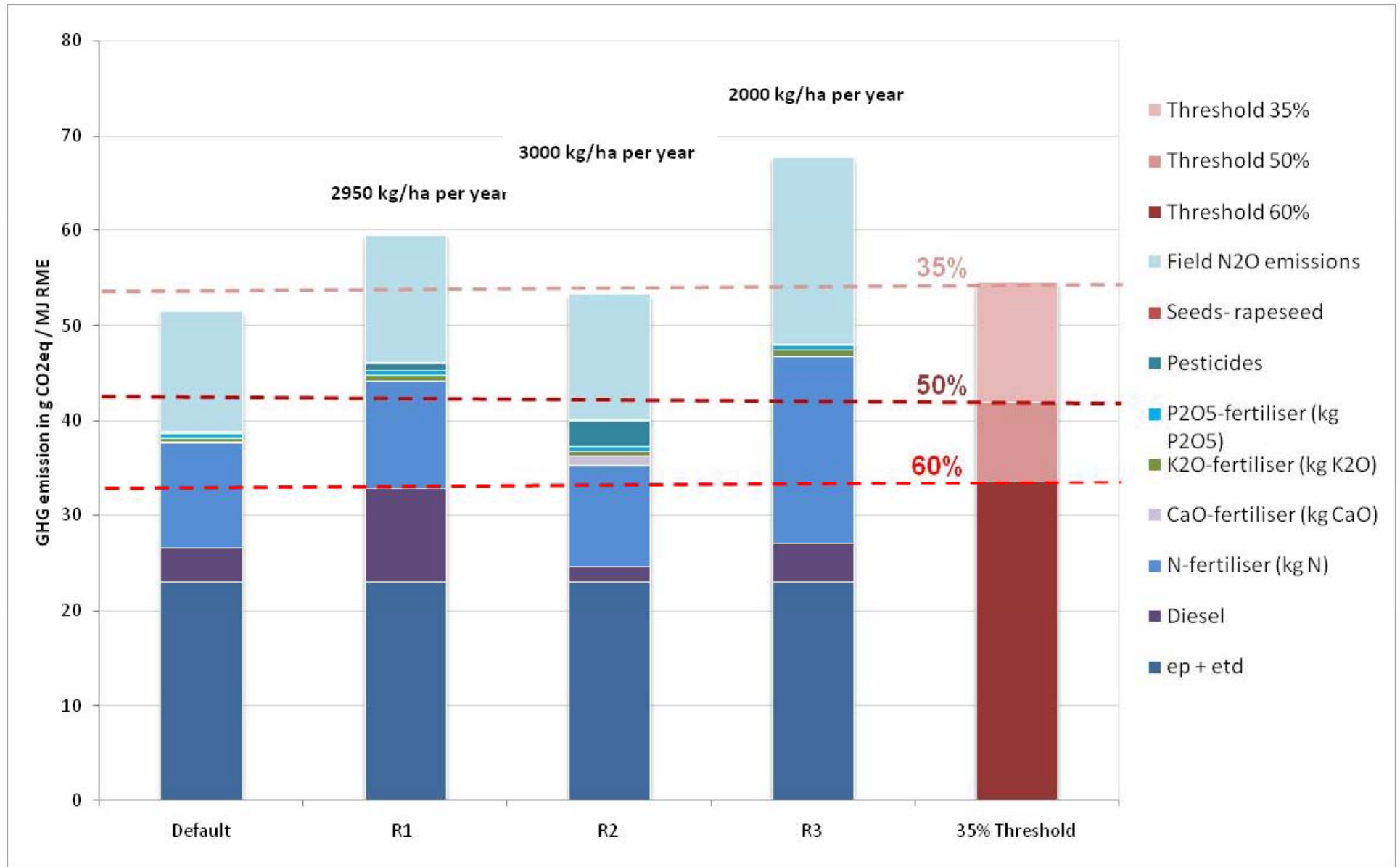
## Data and tool used

- Data sources:
  - direct contact to farmers
  - Representative sample from UCAB data base (Agribenchmark)
- Calculations tool BIOGRACE (EU RED compliant methodology), used with GHG experts (IFEU)
- Assumptions for calculations
  - no land use change emissions
  - Reduction potential calculated with default values for transport and processing and for the production of rape methyl ester (RME)/corn ethanol

# Rape seed: farm data results



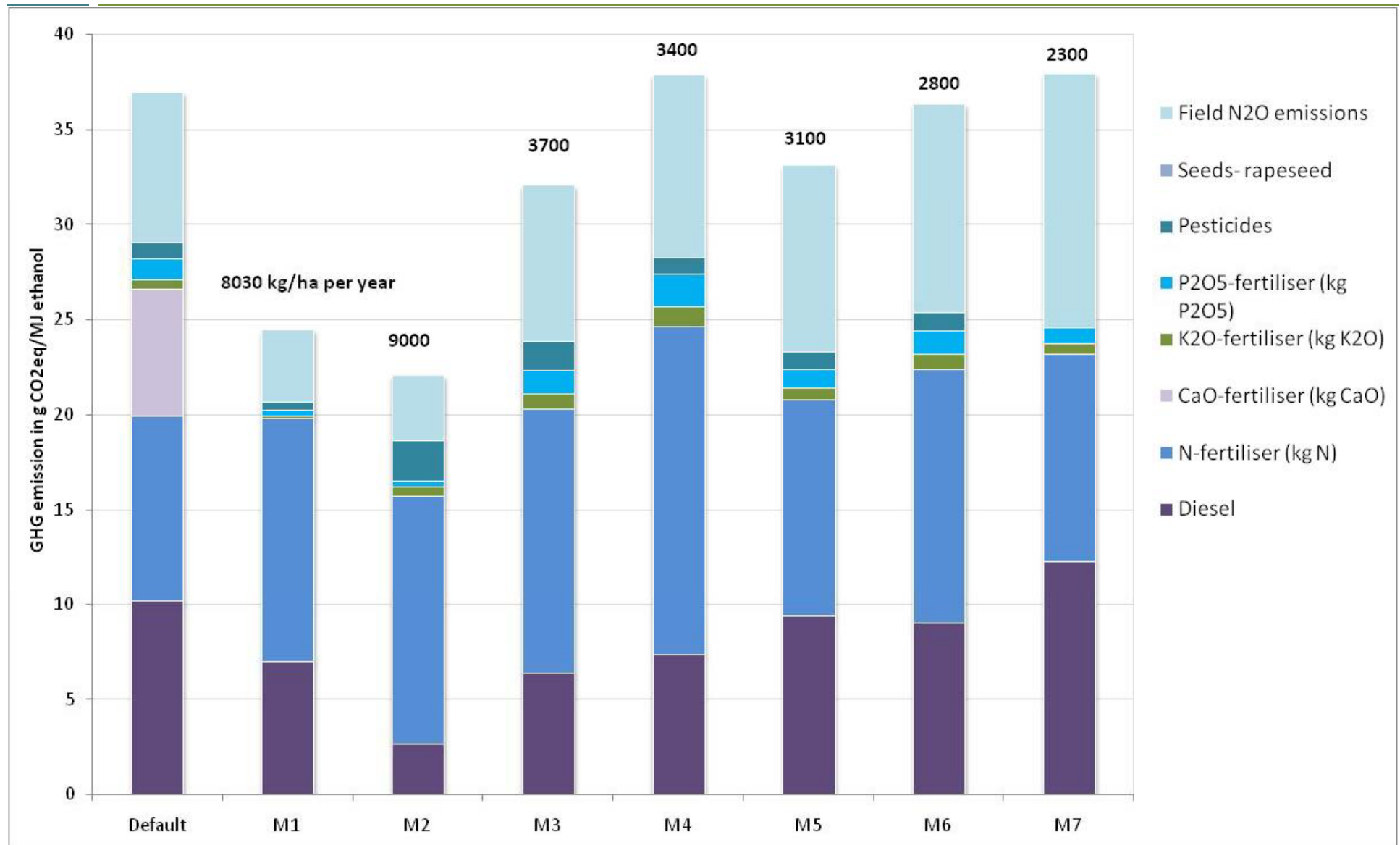
# Rape seed: GHG reduction potential



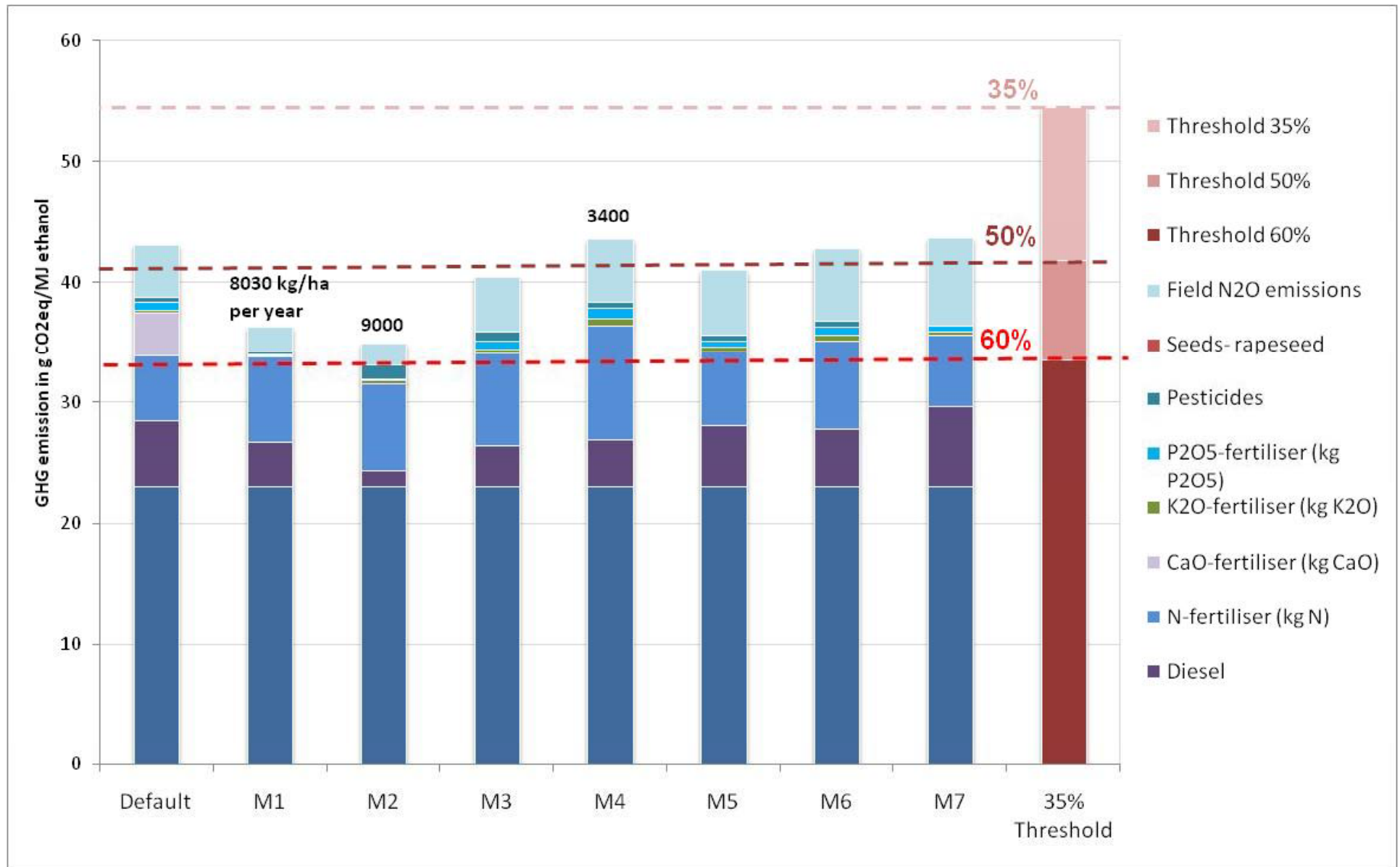
# Rape seed: GHG reduction potential

- Reduction potential is insufficient, hardly reaches 35% (ranges between 19 and 37% (68 -53gCO<sub>2</sub>e/MJ))
- Until end of 2016 producers under 35% can use the default value **BUT**
- From 2017 onwards, producers have to improve their performance in order to reach the 50% reduction goal
- Main GHG emissions sources: diesel, fertilizer and pesticides emissions
- The amount of emissions that need to be reduced in the chain equals about the amount of emissions that arise from the entire processing step!
  - Max emissions for 50% goal: 41,9gCO<sub>2</sub>e/MJ → Reductions necessary between approx. 11 – 26gCO<sub>2</sub>e/MJ
  - Max emissions for 60%: 33,52gCO<sub>2</sub>e/MJ → Reductions necessary between approx 20-34gCO<sub>2</sub>e/MJ
  - For comparison: processing default value: 22gCO<sub>2</sub>e/MJ; production dv: 29gCO<sub>2</sub>e/MJ

# Corn: farm data results



# Corn: GHG reduction potential



# Conclusions: GHG Reduction potential

- Reduction potential is almost sufficient, reaches 50 but not 60%. Ranges between 47 and 58% (44-35gCO<sub>2</sub>e/MJ)
- Producers cannot use the default values, they must calculate
- From 2017(18) onwards, some producers have to improve their performance in order to reach the 50 (60)% reduction goal
- The amount of emissions that need to be reduced in the chain
  - Max emissions for 50% goal: 41,9gCO<sub>2</sub>e/MJ → little or no reduction necessary
  - Max emissions for 60%: 33,52gCO<sub>2</sub>e/MJ → Reductions necessary of up to 10gCO<sub>2</sub>e/MJ
  - For comparison: processing default value: 21 gCO<sub>2</sub>e/MJ; production dv: 20gCO<sub>2</sub>e/MJ

# EU RED environmental and social requirements



- EU RED does not require feed stock producers from third countries to prove compliance with environmental and social requirements...
- **BUT** these requirements are already covered by most certification schemes =>
- => Ukrainian producers have to comply with environmental and social requirements to prove compliance with the EU RED.



# Soil protection requirements

## Common for certification schemes

Soil quality must be retained. This requires:

- measures to minimise soil erosion and maintain soil quality (soil organic matter)
- optimal use of residual products of biomass production in a way that does not disturb soil stability.

## Ukrainian legislation

- Main legal acts:
  - Land Code of Ukraine;
  - Law of Ukraine “On the protection of soils”
  - Law of Ukraine “On government control of land use and protection”
  - Law of Ukraine “On pesticides and agrochemicals”

# Ukrainian legal framework for soil protection

- “Land is the main national treasure which is especially protected by the government” Land Code, art.#1);
- Law of Ukraine “On the protection of soils” sets standards for soil protection and quality (e.g., maximum allowable concentration of chemicals; soil quality standards; optimal crop structure in different agricultural areas, etc.)

# Water protection requirements

## Common for certification schemes

- The quality of surface and groundwater must be preserved. Water preservation includes:
  - using adequate storage facilities for agrochemicals and other potentially damaging production inputs;
  - avoiding effluent and runoff in the application of such chemicals;
  - establishing buffer zones between surface and groundwater resources and the biofuel operation.
- The quantity of surface and ground water must not be reduced beyond repletion.

## Ukrainian legislation

- The Land Code of Ukraine (25 October, 2001)
- The Water Code of Ukraine (6 June, 1995):
  - Economic operators should use water in an efficient way, take measure for their replenishment and quality improvement (art. 44);
  - Irrigation should be done in a way to prevent flooding, waterlogging, salinization of soils (art. 65), etc.

# Air protection requirements

## Common for certification schemes

- Air pollution from field operations must be identified;
- waste management plan must be implemented =>
- restrictions on the burning of residues and wastes.

## Ukrainian legislation

- The Law of Ukraine “On the air protection” (16 October, 1992):
- economic operators should comply with air pollution standards (art. 10);
- economic operators should comply with legal requirements on transportation, storage and application of pesticides and agrochemicals in order to prevent air pollution (art. 18).

# Biodiversity protection requirements

## Common for certification schemes

- General requirement: biodiversity shall be maintained.
- Some schemes require to take steps to prevent harmful impacts on biodiversity resulting from application of agrochemicals, noise and invasion by exotic species.

## Ukrainian legislation

- Ukraine ratified all major international biodiversity conventions, a number of laws in place.
- The Law of Ukraine "On Nature Conservation Fund of Ukraine" (16 June, 1992).
- The Law of Ukraine "On the Red Data Book of Ukraine" (7 February, 2002)
- The Law of Ukraine "On the plant world" (9 April, 1999), etc.

# Labour and human rights

## Common for certification schemes

- Respect national laws;
- Do not allow
  - forced or slave labour;
  - child labour;
  - discrimination.
- Respect
  - workers' right to bargain collectively;
  - equal remuneration of workers for work of equal value;
  - workers' freedom of association and the right to organise.

## Ukrainian legislation

- Ukraine ratified all ILO conventions (specified in the EU RED)
- The Labor Code of Ukraine (10 December, 1971)

# Food security and local development

## Common for certification schemes

- Be able to report on the effects of production on local food security.
- Contribute to local well-being (environment, health)

## Ukrainian legislation

- Ukraine does not have specific laws on food security, only project law is currently being developed;
- certain foods are subject to state price control;
- special state agency is responsible for procuring state reserves of the specified foods;
- It **is not required** by the law to do any food security assessments.

# Conclusions

- Ukraine has one of the largest arable area => it is not likely that biofuels feedstocks cultivation would expand to non-agricultural areas. Land-use change legislation is rather stringent in Ukraine.
- **BUT** increased demand for biofuels feedstocks could influence crop structure and rotation requirements => legal issues could appear in this area.
- Ukrainian legal framework does not contain any GHG emissions requirements either to economic sectors or products.
- Ukrainian rape seed producers could have difficulties complying with 50% GHG reduction criteria after 2017 unless production efficiency is improved.
- Other environmental and social criteria are largely represented in Ukrainian legal framework. If the company complies with Ukrainian legislation it should not be difficult to obtain initial certification.
- **BUT** certification schemes require establishment of management plans and continuous improvement => better performance than required by legislation and efficiency improvements for the company...

which is a **BIG +** for the company