



Shared Innovation Space for Sustainable Productivity of Grasslands in Europe

Project Acronym: Inno4Grass

Project Number: 727368

Deliverable No. 5.2

Within the Inno4Grass website- one stop shop for grassland tools/methods for grazing management supports

Responsible partner: Teagasc

Submission date: 29/11/2018



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 727368

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Introduction

The following link can be used to access the One-Stop Shop for the Inno4Grass grassland tools: https://inno4grass.eu/images/dokumenty/Overall_rankings_grassland_tools.pdf (inno4grass.eu), https://www.encyclopediapratisensis.eu/wp-content/uploads/2018/11/I4G_D5.2_Overall-rankings-grassland-tools_20181107.pdf (IMS).

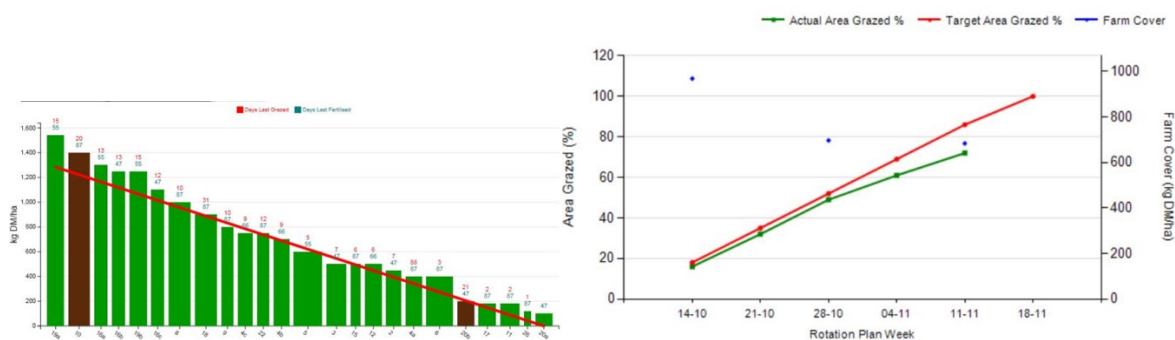
Teagasc Inno4Grass representatives made contact with each member state to gain an insight into grassland tools being practiced in used in each country to increase efficiency in grassland. Each country provided tools that are widely (and also not commonly used) for their own nations. There was a wide variation in tools (and languages) so it was difficult to gain an insight into every tool. Some tools were on systems unavailable to outside parties, so it was difficult to form an understanding on these tools.

Following identification of the tools, each tool was categorised and ranked in terms of its relevance to the project. Each tool was identified as an “extension agent” or “farmer tool” and were categorised into the following categories:

- Grassland Hardware
- Budgeting
- Grassland Decision support
- Grass Quality
- Fertiliser
- Weather
- Grassland Renovation
- Feed costs
- Ecology

Each tool was ranked on a scale of 1-5 based on their “usefulness” to their relevant category.

Each stakeholder was then asked to provide contact details for the coordinator of their representative tools.



Tools Outline

Grazing Tools Identification:

Table 1: Grassland Tools and Countries

| Country | Grassland Tool |
|---------|---|
| Ireland | Spring rotation Planner |
| Ireland | Grass Wedge |
| Ireland | Grass budget |
| Ireland | GrassHopper |
| Ireland | Pasturebase Ireland |
| Ireland | Manual Plate meter |
| France | Pasture plan |
| Belgium | Herbometre |
| Belgium | Pasture calendar |
| Italy | webGRAS (potential forage quality) |
| Austria | Rotation planner |
| Austria | Grass Wedge |
| Austria | Grass budget (Stocking rate in continuous variable stocking) |
| Germany | Hinweisdienst Grünland |
| Germany | Grünlandreifepfung (regional sampling from grassland to help farmers if they want to determine the best point for harvest) |
| Germany | ISIP (timing of fertiliser application) |
| Germany | Grünland online |
| Germany | Wetterfax |
| Italy | webGRAS (potential forage quality) |
| Poland | Grassland renovation calculator |
| Sweden | Grazing Calendar |
| Sweden | Beteskalle (multilingual - 7 languages, AutoGrassMilk). A digital planning tool which calculates grazing costs and grass production |
| Sweden | Harvest prognosis for ley |
| Sweden | Slurry value calculator |
| Sweden | Grovfoderkalkylen (<i>Forage Calculation</i>) includes cost calculations of producing forage as ley, maize or cereal whole crop. The farmers' or advisors' figures are stored online. |
| Sweden | Räknehjälpen (<i>Help Figuring</i>) includes about 15 excel files for calculating separate issues, e.g. cost of transporting slurry or forage, demand of nitrogen to reach a given amount of crude protein, cost of different storage systems, cost of additives, cost of forage handling in the feeding system on farm level, prize model for ley or maize when selling between farms. |
| France | Patur'IN |
| France | Pâtur'Plan |

| | |
|-------------------------------|---|
| France | Herb'Avenir |
| France | Herb'Valo |
| France | Herbe Book |
| France | Date N'Prairie |
| The Netherlands | Beweidingswijzer |
| The Netherlands | WeideKompas |
| The Netherlands | Grip op Gras |
| The Netherlands | Grass growth prediction |
| The Netherlands | Graasvisie |
| The Netherlands | Digitale graslandgebruikskalender |
| The Netherlands | Vers gras dashbard |
| The Netherlands | |
| Luxembourg / Autograssmilk | Beteskalke (multilingual - 7 languages) |

Table 2: Functionality of the Grassland Tool: Tool User, Season, Enterprise, Web Based

| Grassland Tool | Tool User | Season | Enterprise | Web Based |
|--|--------------------|----------------------|-----------------------|------------------------------|
| Spring rotation Planner | Farmer/advisor | Spring | Dairy/Sheep/Beef | Yes |
| Grass Wedge | Farmer/advisor | Summer/Autumn | Dairy/Sheep/Beef | Yes |
| Grass budget | Farmer/Advisor | All year | Dairy/Sheep/Beef | Yes |
| GrassHopper | Farmer/Advisor | All year | Dairy/Sheep/Beef | No |
| Pasturebase Ireland | Farmer/Advisor/Res | All year | Dairy/Sheep/Beef | Yes |
| Manual Plate meter | Farmer/Advisor/Res | All year | Dairy/Sheep/Beef | No |
| Pasture plan | farmer/advisor | all year | Dairy/Sheep/Beef | no |
| Herbometre | Farmer/advisor | All year | Dairy/beef | No |
| Pasture calendar | Farmer | All year | Dairy/beef | No |
| webGRAS (potential forage quality) | Farmer/advisor | First cut of meadows | Dairy | Yes |
| Rotation planner | Farmer/advisor | March-October | Dairy | No |
| Grass Wedge | Farmer/advisor | Grazing season | Dairy | No |
| Grass budget (Stocking rate in continuous variable stocking) | Farmer/advisor | March-October | Dairy | No |
| Hinweisdienst Grünland | Farmer | all year | all grassland farmers | no |
| Grünlandreifepfung (regional sampling from grassland to help farmers if they want to determine | Farmer/Advisor | Spring | all grassland farmers | published online/print media |

| | | | | |
|---|-----------------|----------------------|--|----------------------|
| the best point for harvest) | | | | |
| ISIP (timing of fertiliser application) | farmer/ advisor | Spring | ISIP (Informationssystem Integrierte Pflanzenproduktion e.V.) provides different decision tools related to year (weather conditions) and site (soil conditions) for all kinds of agricultural production | yes |
| Grünland online | Farmer | all year | grassland farmers | yes |
| Wetterfax | Farmer/Advisor | all year | agricultural weather forecast and respective recommendations for farmers | no |
| webGRAS (potential forage quality) | Farmer/advisor | First cut of meadows | Dairy | German/Italian/Ladin |
| Grassland renovation calculator | Farmer/Advisor | All year | Dairy/Beef | Yes |
| Grazing Calendar | Farmer/Advisor | Grazing season | Dairy/Sheep/Beef | No |
| Beteskalles (multilingual - 7 languages, AutoGrassMilk). A digital planning tool which calculates grazing costs and grass production | Farmer/Advisor | Grazing season | Dairy | Yes |
| Harvest prognosis for ley | Farmer/Advisor | First harvest | Dairy/Sheep/Beef/Horses | Yes |
| Slurry value calculator | Farmer/Advisor | All year | Dairy/Sheep/Beef | Yes |
| Grovfoderkalkylen (<i>Forage Calculation</i>) includes cost calculations of producing forage as ley, maize or cereal whole crop. The farmers' or advisors' figures are stored online. | Farmer/Advisor | All year | Dairy/Sheep/Beef | Yes |

| | | | | |
|---|--------------------|----------|------------------|---------|
| Räknehjälpen (<i>Help Figuring</i>) includes about 15 excel files for calculating separate issues, e.g. cost of transporting slurry or forage, demand of nitrogen to reach a given amount of crude protein, cost of different storage systems, cost of additives, cost of forage handling in the feeding system on farm level, prize model for ley or maize when selling between farms. | Farmer/Advisor | All year | Dairy/Sheep/Beef | Yes |
| Patur'IN | Farmer/Advisor/Res | All year | Dairy/Beef | No |
| Pâtur'Plan | Farmer/Advisor | All year | Dairy/Beef | No |
| Herb'Avenir | Farmer/Advisor | All year | Dairy/Beef | No |
| Herb'Valo | Farmer/Advisor | All year | Dairy/Beef | No |
| Herbe Book | Farmer/Advisor | All year | Dairy/Sheep/Beef | Yes |
| Date N'Prairie | Farmer/Advisor | All year | Dairy/Sheep/Beef | Yes |
| Beweidingswijzer | Advisor | All year | Dairy | Yes |
| WeideKompas | Advisor | All year | Dairy | Yes |
| Grip op Gras | Farmer/advisor | All year | Dairy | Yes |
| Grass growth prediction | Advisor | All year | Dairy | Not yet |
| Graasvisie | Advisor | All year | Dairy | No |
| Digitale graslandgebruikskalender | Farmer | All year | Dairy | No |
| Vers gras dashbard | Farmer/advisor | All year | Dairy | No |
| | Farmer/advisor | | Dairy | |
| Beteskalle (multilingual - 7 languages) | Advisor | All year | Dairy | No |

Grassland Tools - Categories:

- Grassland Hardware
- Budgeting
- Grassland Decision support
- Grass Quality
- Fertiliser

- Weather
- Grassland Renovation
- Feed costs
- Ecology



Table 3: Grassland hardware Category

| Grazing Tool | Ranking (1-5) |
|-------------------------|---------------|
| Grass-Hopper (Ireland) | 4 |
| PastureBase (Ireland) | 5 |
| Herbometre (Belgium) | 4 |
| Patur'IN (France) | 4 |
| Pâtur'Plan (France) | 5 |
| Herb'Avenir (France) | 4 |
| Herbe Book (France) | 4 |
| Date N'Prairie (France) | 3 |

Table 4: Grass Budgeting Category:

| Grazing Tool | Ranking (1-5) |
|---|---------------|
| Grass budget (Ireland) | 5 |
| Pasture plan (France) | 4 |
| Grassland renovation calculator (Poland) | 5 |
| Beteskalles (Sweden) | 3 |
| Herbe Book (France) | 4 |
| Grip op Gras (The Netherlands) | 5 |
| Grass growth prediction (The Netherlands) | 3 |
| Graasvisie (The Netherlands) | 3 |

Table 5: Grassland Decision Support Tools Category:

| Grazing Tool | Ranking (1-5) |
|--|---------------|
| Spring rotation Planner (Ireland) | 4 |
| Grass Wedge (Ireland) | 5 |
| Manual Plate meter (Ireland) | 4 |
| Pasture plan (France) | 5 |
| Herbometre (Belgium) | 5 |
| Pasture calendar (Belgium) | 3 |
| WebGRAS (Italy) | 4 |
| Grassland renovation calculator (Poland) | 5 |
| Grazing Calendar (Sweden) | 4 |

Table 6: Grassland Decision Support Tools Category (Continuation):

| Grazing Tool | Ranking (1-5) |
|---|---------------|
| Beweidingswijzer (The Netherlands) | 4 |
| WeideKompas (The Netherlands) | 4 |
| Grip op Gras (The Netherlands) | 5 |
| Grass growth prediction (The Netherlands) | 3 |
| Graasvisie (The Netherlands) | 3 |
| Digitale graslandgebruikskalender (The Netherlands) | 3 |
| Vers gras dashbard (The Netherlands) | 3 |
| Betesalle (multilingual - 7 languages) (Luxembourg) | 2 |

Table 7: Grass Quality Tools Category:

| Grazing Tool | Ranking (1-5) |
|--|---------------|
| WebGRAS (Italy) | 4 |
| Grassland Renovation Calculator (Poland) | 5 |
| Harvest prognosis for ley (Sweden) | 5 |
| WeideKompas (The Netherlands) | 3 |
| Vers gras dashbard (The Netherlands) | 4 |

Table 8: Fertiliser Support Tools Category:

| Grazing Tool | Ranking (1-5) |
|---|---------------|
| Slurry value calculator (Sweden) | 5 |
| Räknehjälpen (Sweden) | 5 |
| Beweidingswijzer (The Netherlands) | 3 |
| Digitale Graslandgebruikskalender (The Netherlands) | 3 |

Table 9: Weather Tools Category:

| Grazing Tool | Ranking (1-5) |
|--|---------------|
| Grass growth prediction (The Netherlands) | 4 |

Table 10: Grassland Renovation Tools Category:

| Grazing Tool | Ranking (1-5) |
|---|---------------|
| Grassland renovation calculator (Poland) | 5 |

Table 11: Feed Costs Tools Category:

| Grazing Tool | Ranking (1-5) |
|------------------------------------|---------------|
| Herbometer (Belgium) | 3 |
| Grovfoderkalkylen (Sweden) | 4 |
| Beweidingswijzer (The Netherlands) | 5 |

Table 12: Ecology Tools Category:

| Grazing Tool | Ranking (1-5) |
|---|---------------|
| Grassland renovation calculator (Poland) | 3 |

Conclusion

The following link can be used to access the One-Stop Shop for the Inno4Grass grassland tools:

https://inno4grass.eu/images/dokumenty/Overall_rankings_grassland_tools.pdf (inno4grass.eu)

This should be a facility for extension agents and farmers to get access to tools that could benefit their grassland enterprises.