Results-Based Payments for Biodiversity:

A New Pilot Agri-Environment Scheme for the Târnava Mare and Pogány-havas Regions 2015-2018



Managing body and contact

This pilot scheme is being managed by Fundatia ADEPT Transilvania between 2015-2018.

Contact:

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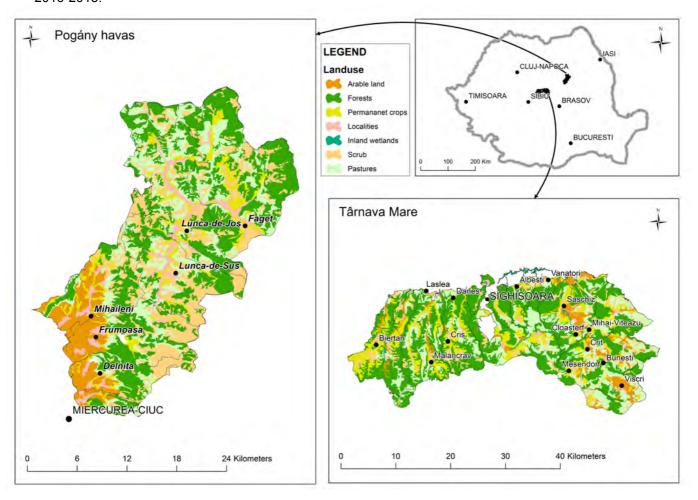
About results-based agri-environment schemes

Until now, agri-environment schemes have been based on management rules, such as strict mowing dates, which are judged as leading to a result: protections of important species or habitats.

Result-based schemes pay directly for the desired result, so that farmers have the freedom to manage their land according to local conditions, which vary from place to place, and differences in weather, which varies from year to year.

Târnava Mare and Pogány-havas pilot scheme

This leaflet describes a new pilot agri-environment scheme for the **Târnava Mare** and the **Pogány havas/Munții Ciucului** regions. The scheme is being run as a test in these two areas for 3 years from 2016-2018.



This scheme is targeted at **hay meadows of High Nature Value**. These meadows have often been traditionally managed over generations, and are an important part of local cultural heritage. They support many plant and animal species and are important for

- source of fodder for animals
- · nectar for honey bees
- · medicinal and other useful plants
- local incomes from nature tourism and added value to food products through HNV marketing
- meeting nature conservation targets required under national and EU legislation.

Studies have shown that High Nature Value meadows in Romania are some of the most species rich in the world. But they are becoming rarer, because they are either being grazed and turned into pastures, abandoned, or excessively fertilised and turned into high-yielding but species-poor grasslands.

This "results-based" agri-environment scheme aims to reward practical management that produces good quality hay as well as protecting wild species. Instead of paying according to management prescriptions, it pays for the "result" of species-rich meadows, which is measured using certain plant species as **indicators**.

Experience of RBAPS in other European countries

Schemes like this have been introduced in several regions of France, Germany and Switzerland in the last few years. **Farmers preferred using the results-based scheme** because:

- farmers' expertise is recognised
- farmers have the freedom to manage their meadows according to the local conditions and weather instead of having to follow precise mowing dates and other prescriptions dates which do not take account of local conditions and weather
- farmers are directly rewarded for the service they provide for nature, which is recognised by society.

The experiences with this pilot results-based scheme will be shared with the Ministry of Agriculture & Rural Development and Ministry of Environment, Waters & Forests. The pilot programme, if popular with farmers and practical for payments control agencies, may be available over the whole country in the future.

Who is eligible to participate?

This pilot scheme is for haymeadows in the two areas. It is being managed by Fundatia Adept Transilvania between 2016-2018.

To be eligible, farmers must

- 1. own or manage a hay meadow in the **Târnava Mare** and the **Pogány-havas/Munţii Ciucului** regions, see map on Page 2
- 2. not already be in an agri-environment scheme contract for the current 2014-2020 period
- 3. have at least 5 flower species from the list on page 8.

If you think you may be eligible, and you are interested in participating, please contact the Razvan Popa at the Fundatia ADEPT Office, Saschiz, or László Demeter in Pogany havas area. Contact details can be found on the back page. ADEPT specialists will be pleased to discuss with you.



Definitions

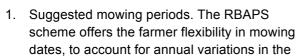
- For the purpose of this project, a meadow is defined as permanent grassland on which a
 hay cut is taken, at least once per year, during the main vegetative season and on which
 there is no grazing for a period of 10-12 weeks before mowing.
- The main vegetative season is the period May-August when the conditions are favourable for growth and flowering.

Contract requirements - Requirements for each meadow parcel in RBAPS pilot contract

- A meadow parcel is a single management unit. Each parcel should be applied for and monitored separately. If a parcel is larger than 10 ha, then it should be divided into sub-parcels of less than 10 ha, and each sub-parcel applied for and monitored separately.
- If only part of a meadow parcel is species rich, then the parcel can be divided and the species-rich part can be entered into the agri-environment scheme.
- The signatory of the contract must have sufficient control over the management of the land necessary for meeting the terms of the contract, for the duration of the contract.
- Each year, before mowing, the farmer must record which of the indicator species listed on pages 9-14 are present and in flower, using the methodology described on page 6, and using the form on page 15. The farmer must record the indicator species before mowing, when the species are in the flower bud, full flower or flower seed stage, so that they can be easily recognised, and to maintain the species by allowing some to set seed each year.
- Each year the farmer must complete the annual farm record for the parcel, including the date of mowing. These records will be an obligatory part of the contract.

Recommendations: advice on how to manage your meadow in order to maximise the number of indicator species, to assure a good management and continued payments

Farmers participating in the scheme will all receive one-to-one advice from the project managers. The advice is intended to help farmers manage their land in a way that will ensure that they can meet requirements. If a farmer follows this advice, the number of species may increase and (s)he may become eligible for higher payments. Advice will include:





- time the hay is ready. However, if the farmer mows before the indicator species are fully in flower and beginning to set seed, (s)he risks reducing the number of indicator species, and possibly losing his payments, in subsequent years. Later mowing also allows animals such as meadownesting birds to rear their young before the cover of the long grass disappears.
- 2. The meadow parcel should be mowed at least once each year, during the main vegetative period. Grazing on the meadow is excluded for the 10-12 week period during the main vegetative season, necessary to allow the hay crop to grow before mowing.
- 3. Mowing methods: on steep slopes, mowing by hand or by light machine with a cutting bar, will enhance species richness. Rotary mowing is more damaging to plant and animal diversity.
- 4. Short periods of spring or autumn grazing can be beneficial for meadow plants, but it is important that there is a period of 10-12 weeks during the main vegetative period (May-August) when the hay crop is allowed to grow. It is also important that the meadow is not grazed too intensively, as this can damage the sward.

- 5. Use of chemical fertilisers, or large amounts of farmyard manure as fertiliser, will cause loss of indicator species, as well as leading to problems with weeds (small amounts of farmyard manure given as fertiliser may be beneficial for the species richness).
- 6. If possible, the farmer should inform his project advisor before (s)he mows, when (s)he considers that mowing is imminent, so that the advisor has an opportunity to record the flowers before mowing, when recognition is easier.
- 7. The farmer should do all (s)he can to ensure that the meadow is not grazed during the hay-vegetative period, either by his animals or abusively by others, because this will increase the risk of the indicator species not flowering, and the loss of payment for that year.

Payments in RBAPS pilot

There are three levels of payment in this scheme:

- Package 1: €213 per ha per year for a minimum of 5 indicator species from the list (see pages 8-14 below) and recorded that year following the transect method appropriate for the size of the parcel (see the next section)
- 2. Package 2: €229 per ha per year for a minimum of 8 indicator species from the list and recorded that year following the transect method appropriate for the size of the parcel
- 3. Package 3: €259 per ha per year for a minimum of 10 indicator species from the list and recorded that year following the transect method appropriate for the size of the parcel.

The project advisor will offer guidance on the level of payment for which an applicant should apply.

- Different parcels owned by the same farmer can have different payment rates
- In the first year (2016), before the first control inspection by the advisor, a farmer may apply for a package linked to the number of species, according to his own judgement. This will be confirmed, and adjusted up or down as necessary, in consultation with the advisor.
- In subsequent years (2017-2018) the farmer will be penalised if (s)he moves to a lower package. A farmer may apply to move to a higher payment package for the remainder of the contract, if his management successfully produces more flower species.

Scientific Investigations and Controls

Under this pilot scheme, contracts will be signed, and payments will be made and scientific investigations (and controls) carried out by Fundația ADEPT and partners, with direct funding from the European Commission and the DBU (a German Environmental Foundation).

Fundația ADEPT will consult with farmers and farmer associations in **Târnava Mare** and the **Pogány-havas / Munții Ciucului** regions, in order to identify farmers interested in participating in the scheme. The contracts will be for 3 years of payments, 2016, 2017 and 2018.

For the project period, in each of the two areas, the project team will check all of the parcels in the scheme each year during the vegetative season, and will provide advice to all the farmers participating. The project specialists will record the number of indicator species using the same method described above, and look for evidence that the meadow was mowed in the previous year. If there is clear evidence that the meadow was not mowed in the previous year (e.g. long, dead grass or many small bushes), or if (in 2017/2018) there are fewer than the number of species in the application (i.e. 5, 8 or 10), then the applicant will not receive the payment for the current year.

The specialist will aim to inspect the parcels before mowing. However, if unable to inspect before mowing, and as a result unable to identify species clearly, the specialist will return for a second inspection a few weeks later, allowing for regrowth of the species to aid identification.

Indicator recording method

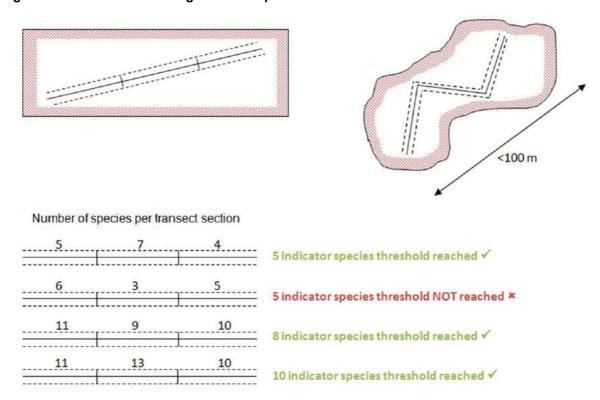
The recording method will be used by farmers for the obligatory recording of their annual results. Payment agencies will use this method for controls.

- 1) Within each parcel, walk a straight line for 100 m along the longest diagonal of the meadow ("transect"). If the meadow is more than 10 m wide then avoid the area 5 m from the edge.
- 2) If the longest diagonal is less than 100 m, then a zig-zag line can be walked.



- 3) Check for the indicator species in flower bud/full flower/seed stage (see the list pages 8-14 below) in the line within 1 m to left and to right of the transect (the length of your outstretched arms).
- 4) Record the indicator species in flower bud/full flower/seed stage separately for each third of the transect (i.e. three sections of approximately 33 m each this does not need to be measured, but can be estimated). **Each third must reach the minimum number of indicator species!** For example, if the 5 indicator species level has been applied for, and the recording results are: 1st third = 6 indicators, 2nd third = 5 indicators, 3rd third = 4 indicators, then the meadow is not eligible.
- 5) The species should be recorded on a form like that shown at the end of this leaflet. It doesn't matter if there are different sets of species in each third, or if the controller finds different species to the ones recorded by the farmer on the form. It is simply required that a minimum (5, 8, or 10, depending on which package is applied for) species from the indicator species list are found in each 33m section of the transect.

Fig: transects for the counting of flower species



Training and further information

Fundaţia ADEPT specialists will offer training to all scheme participants on how to identify and monitor the indicator species, and will offer advice on how to maintain and increase the nature value and the feed quality of traditional meadows. All of this information is also be provided in a free printed handbook or can be downloaded from the ADEPT website, www.fundatia-adept.org/?content=rbaps .

If any questions or problems arise, then the participants can telephone their contact partner at the Fundaţia ADEPT throughout the duration of the scheme. Fundaţia ADEPT specialists will be happy to provide advice at any time during the project.

Further literature

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Indicator species

This section describes the 30 species or species groups that have been selected and tested as indicators meadows of high nature value in the pilot scheme regions. They have been selected because they only grow in hay meadows managed at low intensity, and are associated with high plant and animal species richness as well as good quality hay.

They are sensitive to changes in management, and will disappear if:

- large amounts of synthetic fertilisers or manure are applied
- herbicides are applied
- cutting frequency increases
- the meadow is cut too early (usually before mid-June)
- heavy machinery is used to cut and collect the hay
- the meadow is grazed during the main hay-vegetative season
- · the meadow is not mowed.

All the species are easy to recognise, and are flowering in the spring and summer when the recording is carried out.

Species that look very similar have been grouped together to avoid confusion. In the case of such species groups (e.g. different types of orchids), the group counts as a single indicator.

Indicator species for wet meadows:

- Caltha palustris Marsh marigold
- Geranium spec. Cranesbill
- Lathyrus pratensis Meadow Vetchling
- Lychnis flos-cuculi Ragged-Robin
- Lythrum salicaria Purple Loosestrife
- Polygonum bistorta Bistort
- Sanguisorba officinalis Greater Burnet
- Trollius europaeus Globefower
- Valeriana officinalis Valerian

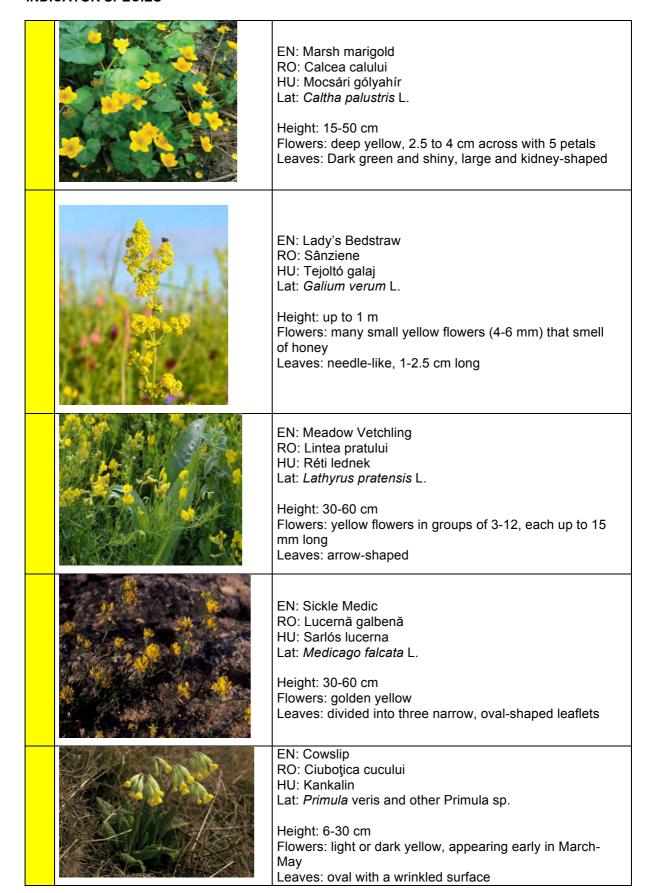
Indicator species for wet/dry meadows:

- Anemone narcissiflora Windflower
- Betonica officinalis Betony
- Campanula spec, Bellflower
- Dianthus spec. Charterhouse Pink
- Filipendula vulgaris Meadowsweet
- Fragaria spec. Wild strawberry
- Galium verum Lady's Bedstraw
- Gentiana/Gentianella spec. Gentian
- Leucanthemum vulgare Oxeye daisy
- Medicago falcata Sickle Medic
- Orchidaceae spec. Orchids
- Primula spec. Cowslip
- Scorzonera spec. Viper's-grass
- Trifolium ochroleucon/pannonicum Sulphur Clover, Hungarian clover
- Tragopogon spec. Goats beard/Jack-go-to-bed-at-noon
- Trifolium montanum Mountain clover

Indicator species for dry meadows:

- Anthericum ramosum Branched St Bernard's-Lily
- Coronilla varia Crown Vetch
- Scabiosa ochroleuca Yellow scabious
- Teucrium chamaedrys Red Germander
- Thymus spec. Wild Thyme

INDICATOR SPECIES





EN: Goats beard/Jack-go-to-bed-at-noon

RO: Barba caprei HU: Bakszakáll

Lat: Tragopogon pratensis and other Tragapogon sp.

Height: 20-80 cm

Flowers: only open in the morning

Leaves: long and thin



EN: Globefower RO: Bulbuc de munte HU: Zergeboglár Lat: Trollius europaeus L.

Height: 10-50 cm

Flowers: ball-shaped, 4-5 cm in diameter

Leaves: hand-shaped, darker on the upper side than on

the lower side



EN: Betony RO: Vindecea

HU: Orvosi tisztesfű (bakfű)

Lat: Stachys officinalis L. (syn. Betonica officinalis L.)

Height: 30-100 cm

Flowers: many purple flowers on a single flower spike

Leaves: oval, with a rounded teeth at the edge



EN: Crown Vetch RO: Coroniste HU: Tarka koronafürt

Lat: Coronilla varia L. (syn. Securigera varia L.)

Height: 30-120 cm

Flowers: small clusters of pink and white flowers

Leaves: feather-like, with 11-21 leaflets



EN: Charterhouse Pink

RO: Garofiță HU: Szegfű

Lat: Dianthus carthusianorum amd other Dianthis spec.

Height: 30-40 cm

Flowers: dark or light pink flowers with 5 petals,

sometimes with white dots on them Leaves: long and thin (3-5 mm wide)





EN: Wild Thyme RO: Cimbrişor HU: Kakukkfű Lat: *Thymus* spec.

Height: 10-40 cm

Flowers: many small pink-purple flowers on a flower

spike

Leaves: small and oval



EN: Valerian

RO: Odolean/ Valeriana HU: Orvosi macsakgyökér Lat: *Valeriana officinalis* L.

Height: 25-200 cm

Flowers: clusters of small light pink to white flowers Leaves: dark green, feather-shaped, up to 20 cm long



EN: Branched St Bernard's-Lily

RO: Liliuta

HU: Ágas homokliliom Lat: *Anthericum ramosum* L.

Height: 30-80 cm

Flowers: star-shaped and white

Leaves: long and thin



EN: Windflower RO: Anemone

HU: Nárciszképű szellőrózsa

Lat: Anemone narcissiflora L. (syn. Anemone narcissifolia, Anemonastrum narcissiflorum)

Height: 20-40 cm

Flowers: often 3-8 flowers together on a single stem

Leaves: long and thin



EN: Meadowsweet

RO: Aglică

HU: Koloncos legyezőfű

Lat: Filipendula vulgaris Moench.

Height: 30-80 cm

Flowers: dense clusters of creamy white flowers Leaves: 15-25 cm long and 3-4 cm wide and finely cut

(fern-like)



EN: Wild strawberry

RO: Fraguţa HU: Eper

Lat: Fragaria spec.

Height: 5-20 cm Flowers: 5 white petals

Leaves: consist of 3 leaflets with pointed teeth



EN: Oxeye daisy RO: Mărgărită

HU: Réti margitvirág / margaréta

Lat: Leucanthemum vulgare Lam. (syn. Chrysanthemum

leucanthemum L.)

Height: 20-80 cm;

Flowers: up to 5 cm in diameter with around 20 white

florets surrounding a yellow disc

Leaves: dark green on both sides, spoon-shaped with

serrated edges



EN: Sulphur Clover, Hungarian clover

RO: Trifoi sulf, Trifoi magyar

HU: Magyar here

Lat: Trifolium ochroleucon + Trifolium pannonicum

Height: 20-100 cm

Flowers: the yellow-white flowerheads are 2-4 cm long

Leaves: three long leaflets with dense hairs



EN: Mountain clover

RO: Trifoi panonic, Trifoi magyar

HU: Hegyi here

Lat: Trifolium montanum L.

Height: 15-70 cm

Flowers: white, on upright stems that are often quite tall

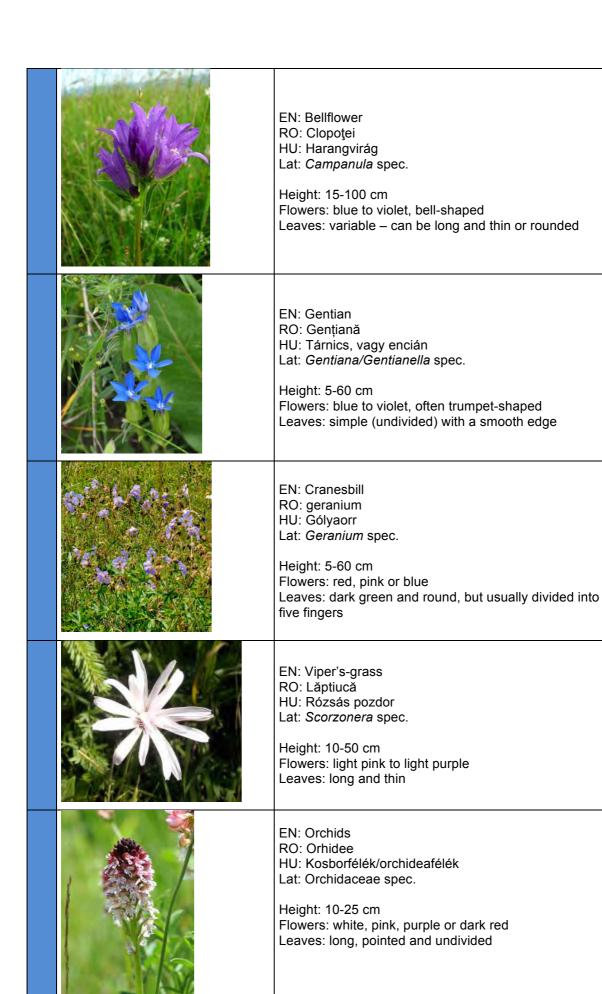
Leaves: three leaflets with



EN: Yellow scabious RO: Sipică albă

HU: Vajszínű ördögszem Lat: *Scabiosa ochroleuca* L.

Height: 20-80 cm Flowers: creamy yellow Leaves: deeply divided



Example of a species record form

Name of applicant:	
Parcel name/number:	
Recording date:	No. of indicator sp. (5/8/10):
Name of monitor:	

Aerial photograph of a meadow parcel (thick yellow outline) including the recording transect (red line, divided into 3 sections)



			1°	2	3
			third	third	third
	1	Anemone narcissiflora			
	2	Anthericum ramosum	×	×	×
	3	Betonica officinalis			
	4	Caltha palustris			
	5	Campanula spec.	×		×
50	6	Coronilla varia			
	7	Dianthus spec.		×	×
1	8	Filipendula vulgaris	×	×	×
Ŷ.	9	Fragaria spec.			
ğ	10	Galium verum	×	×	×
	11	Gentiana spec.			
	12	Geranium spec.			
	13	Lathyrus pratensis			
	14	Leucanthemum vulgare			
	15	Lychnis flos-cuculi			
	16	Lythrum salicaria			
	17	Medicago falcata			
Ś	18	Orchidaceae spec.	×		
	19	Polygonum bistorta			
Š	20	Primula spec.			
	21	Sanguisorba officinalis			
	22	Scabiosa ochroleuca			
8	23	Scorzonera spec.			
9	24	Teucrium chamaedrys			
3	25	Thymus spec.			
Š	26	Tragopogon spec.	×	×	
	27	Trifolium montanum			×
	28	Trifolium			
1		ochroleucon/pannonicum			
	29	Trollius europaeus			
N	30	Valeriana officinalis			
3		Total number of	6	5	6
N		indicator species			

Managing body and contact

This pilot **results-based agri-environment scheme** is being managed by Fundația ADEPT Transilvania between 2016-2018.

The scheme will reward practical management that produces good quality hay as well as protecting wild species. Instead of paying according to management prescriptions like the current Romanian agri-environment scheme, it pays for the result, species richness of hay meadows, which is measured using certain plant species as **indicators**. This document gives further details of the pilot scheme, including eligibility and payment rates.

If you own or manage hay meadows in the Tarnava Mare and the Pogány havas/Muntii Ciucului regions, and you are interested in participating, please contact the Razvan Popa at the Fundația ADEPT Office, Saschiz, or László Demeter in Pogány havas area.

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