



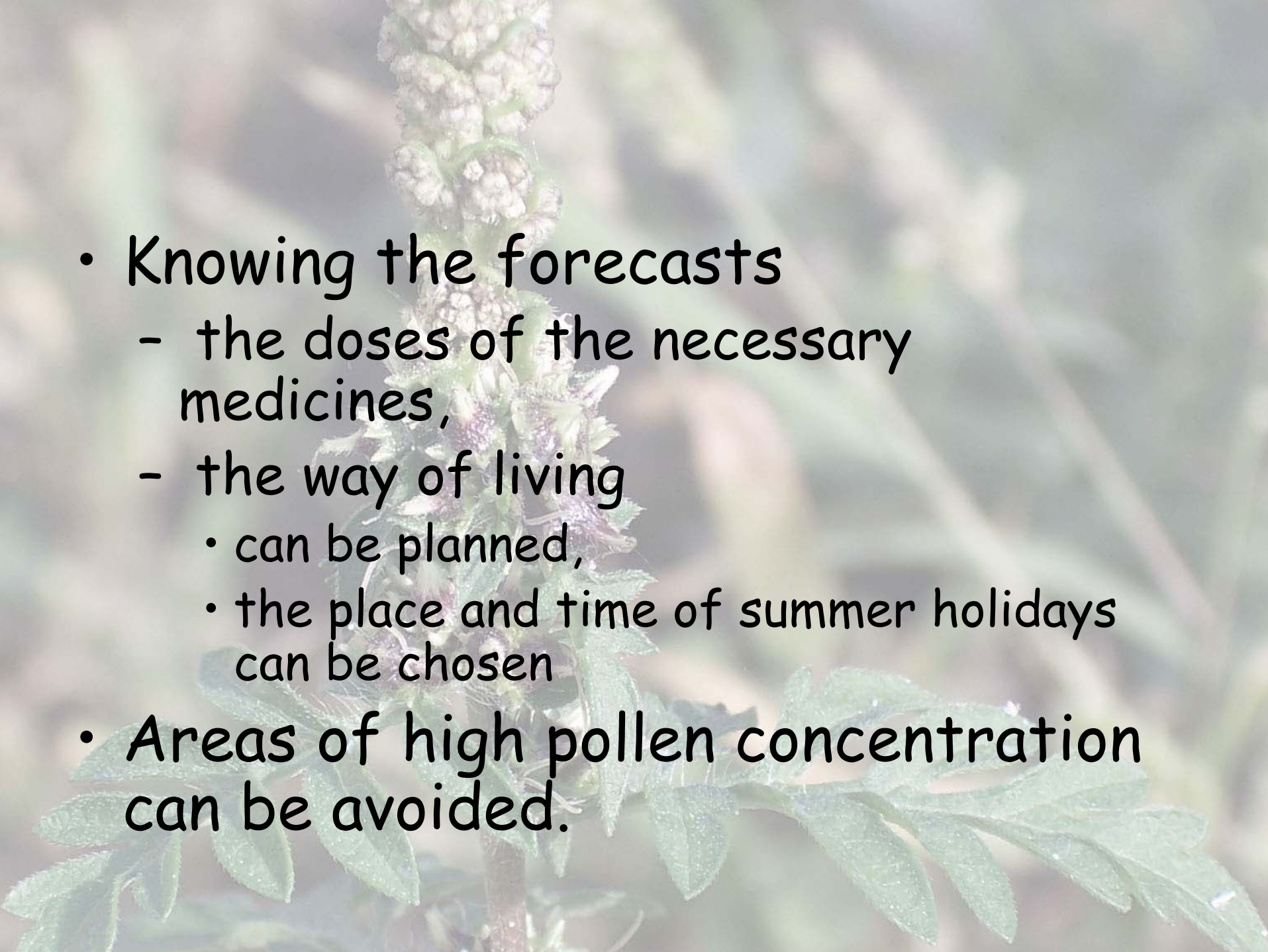
**New effective pollen
information system against
allergic diseases**

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National Institute of Environmental
Health, Hungary



Aim

- To develop a pollen forecasting system which is able to give the expectable intensity and composition of the pollen concentration at a given geographical point.
- The warnings of the forecasting system inform sensitive patients about the areas from which they should keep away in the interest of their health.

- 
- Knowing the forecasts
 - the doses of the necessary medicines,
 - the way of living
 - can be planned,
 - the place and time of summer holidays can be chosen
 - Areas of high pollen concentration can be avoided.

The consortium:

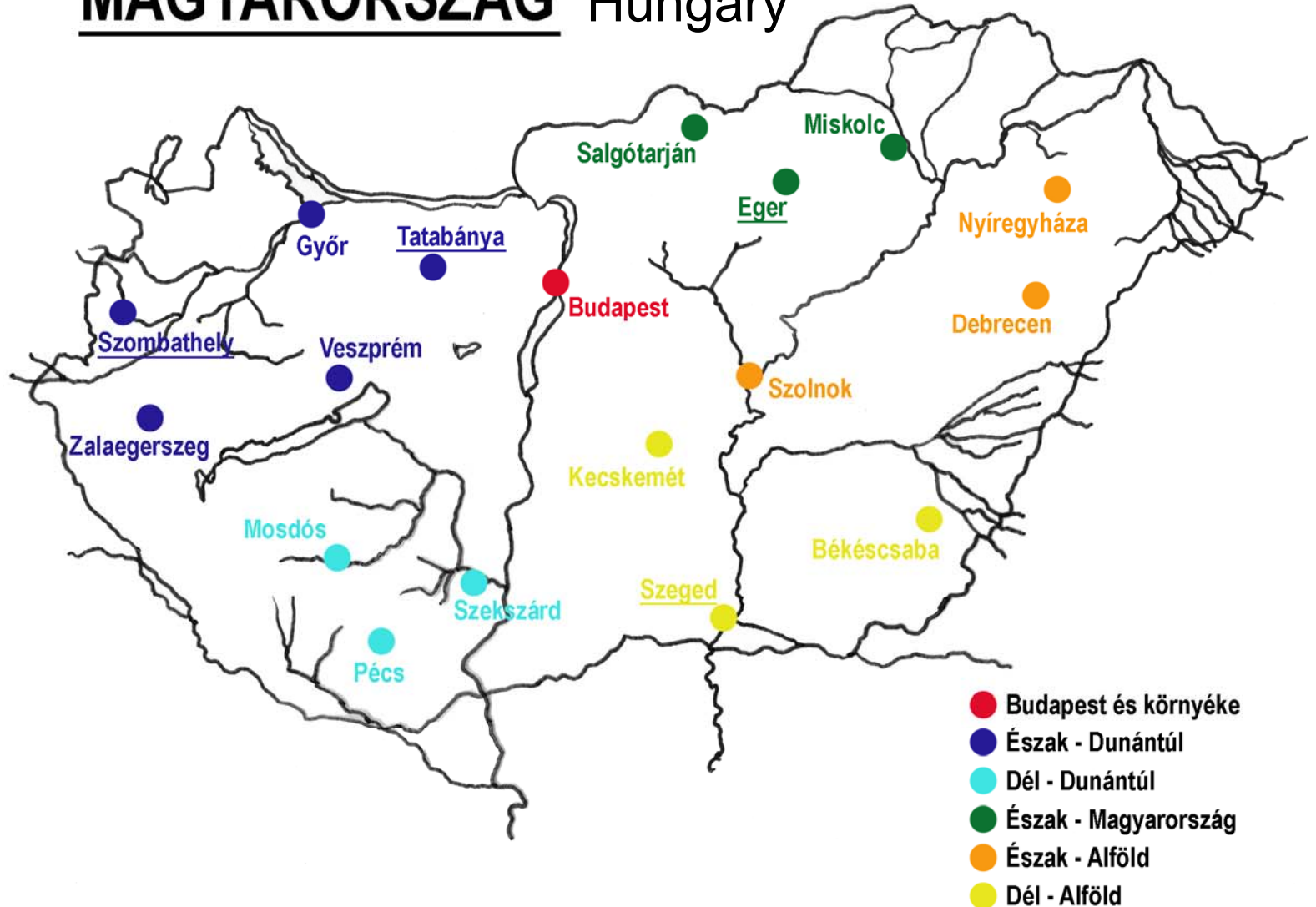
- National Institute of Environmental Health
- Hungarian Meteorological Service
- Institute of Geodesy, Cartography and Remote Sensing
- Glia Co.Ltd

Results

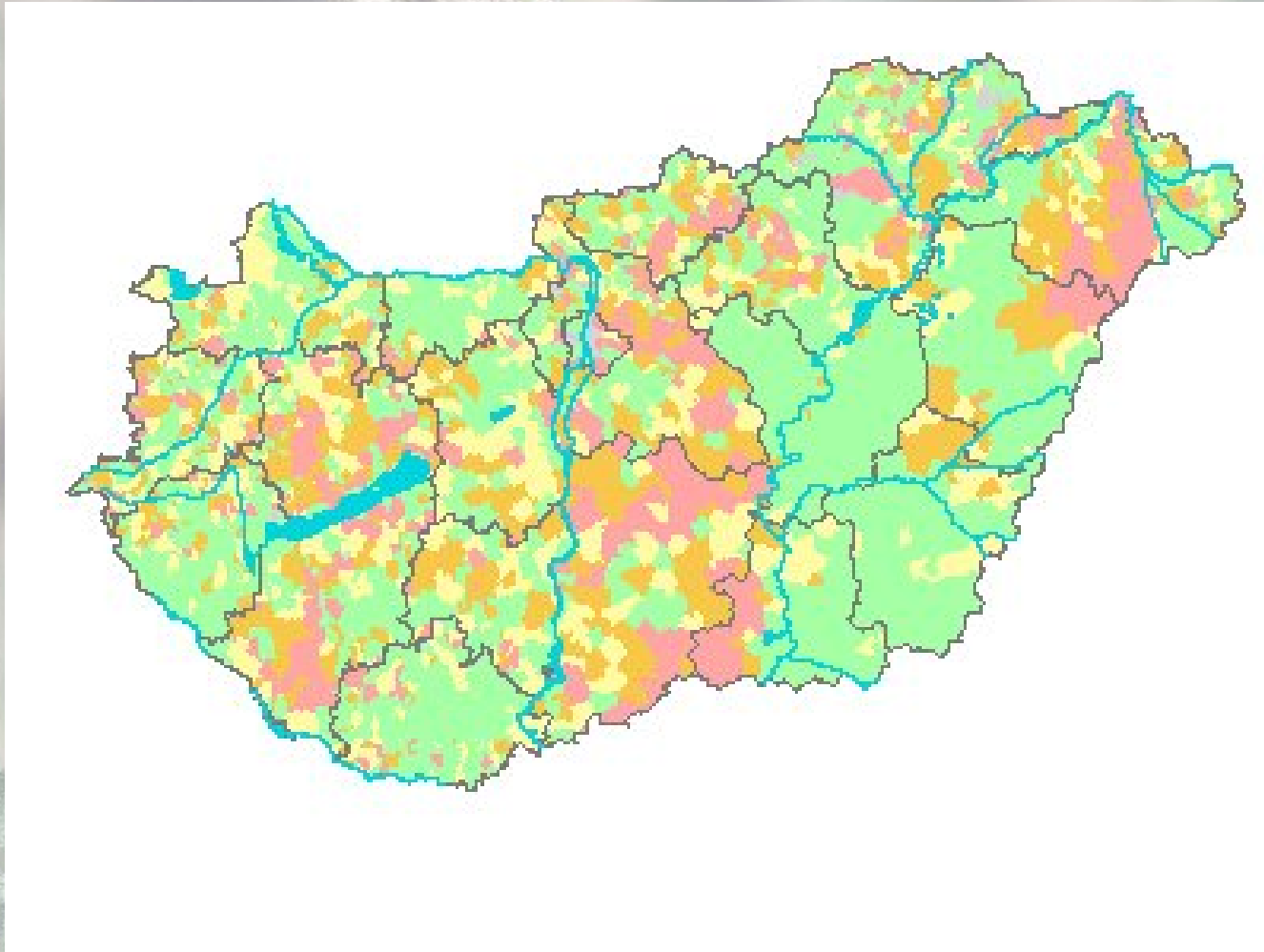
1. Identification of ragweed infected areas by remote sensing
2. Implementation of automated image system for pollen identification
3. Elaboration of pollen forecast.
4. Creation of a website for pollen information including 7-day forecast
5. Investigation of the pattern of aeroallergen sensitization in areas with different level of ragweed pollen load

Aerobiologic Network in Hungary, 2006

MAGYARORSZÁG Hungary

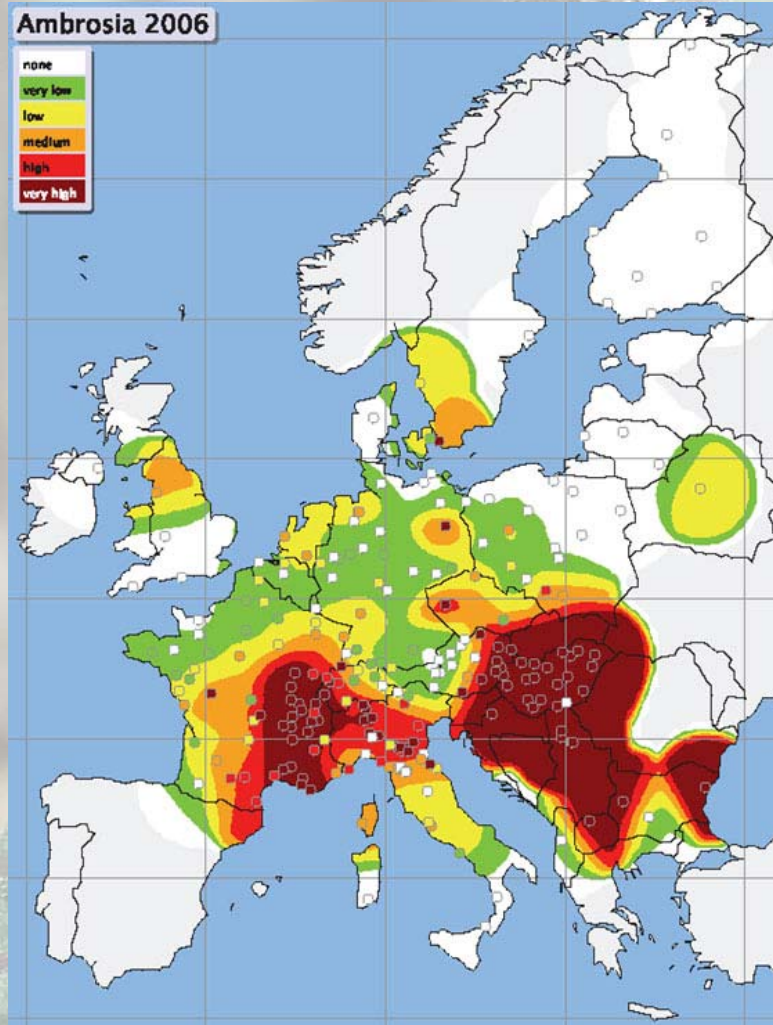


Areas covered by ragweed Apr-Sept 2006 by remote sensing



The maps and a register of the areas are freely accessible on the web
www.fomi.hu

Ambrosia in EUROPE, 2006



www.polleninfo.org

Dr. Siegfried Jäger

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AUTOMATIC POLLEN IDENTIFICATION SYSTEM

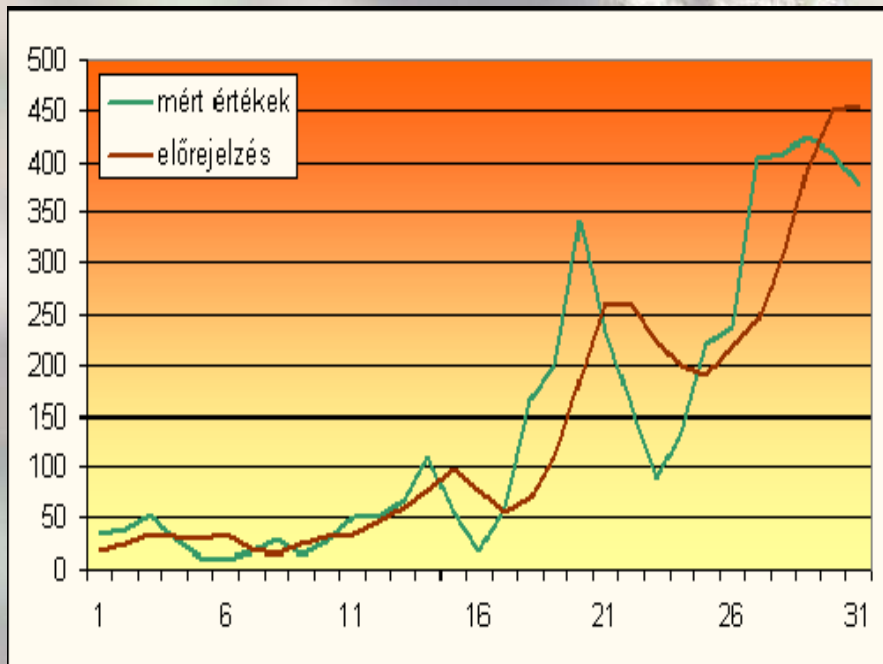


- **DigiTrace Professional software system**
developed by
- **IMATEC Electronische Bildanalyse-systeme GmbH**
- **ZEISS Axio Imager. Z1 mikroscope**

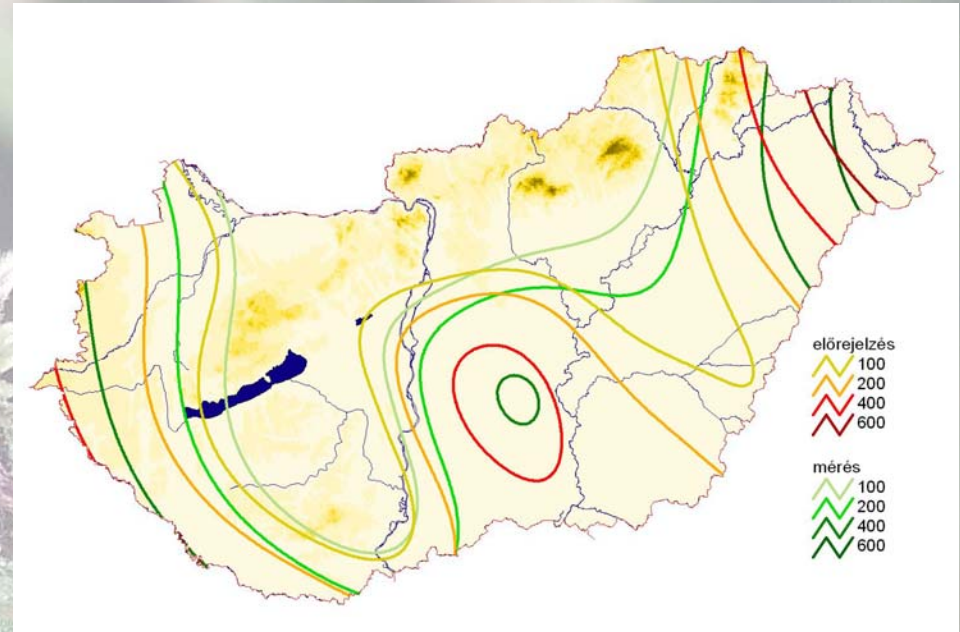
Pollen concentration forecast

- The forecast was based on the following data:
- Pollen data of 18 very highly and highly allergenic plants from 12 monitoring stations for the years 1999-2004
- Daily meteorological data of the years 1999-2004 for 14 parameters

Comparison of measured and forecasted pollen concentration



Measured (green) and forecasted (brown) ragweed pollen concentration in town Kecskemét in August, 2005



Distribution of measured (green) and forecasted ragweed pollen concentration (yellow) on the day 31.08.2005

KERESÉS: NÉV: JELSZÓ: BELÉPÉS REGISZTRÁCIÓ

Aktuális

Régiós előrejelzés
 Válasszon az alábbi régiók közül és megtekintheti az adott régió pollen-előrejelzését 5 napra!
 Válasszon egy régiót

Régiós mért adatok
 Válasszon az alábbi régiók közül és megtekintheti az adott régió mért adatait!
 Válasszon egy régiót

Városok előrejelzés
 Válasszon az alábbi városok közül és megtekintheti az adott város pollen-előrejelzését 5 napra!
 Válasszon egy várost

Pollen előrejelzés
 Válasszon az alábbi pollenek közül és megtekintheti az adott pollenre vonatkozó pollen-előrejelzését 5 napra!
 Válasszon egy pollent

Pollen gyorskereső
 Válasszon egy pollent

Előrejelzés Régióként >> Városként >> Polleneként

Budapest és környéke

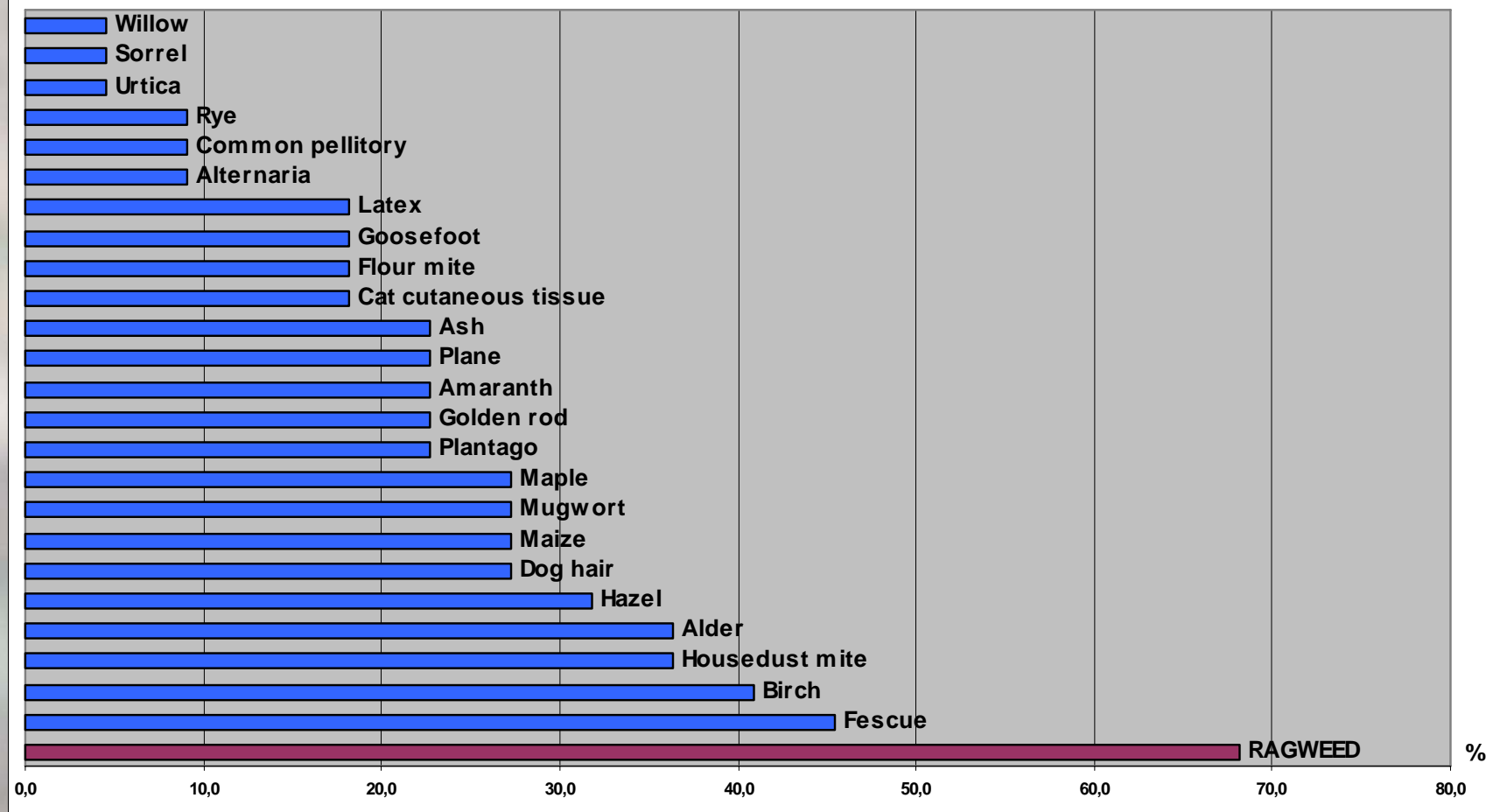
19. hét május.11 - május.16

Név	Kód	Péntek	Szombat	Vasárnap	Hétfő	Kedd	Szerda
bodza	SAM						
bükk	FAG	■	■	■	■	■	■
csalánfélék	URT	■	■	■	■	■	■
dió	JUG	■	■	■	■	■	■
eperfa	MOR	■	■	■	■	■	■
ernyősök	UMB	■	■	■	■	■	■
fenyőfélék	PIN	■	■	■	■	■	■
fűz	SAL	■	■	■	■	■	■
gyertyán	CAR	■	■	■	■	■	■

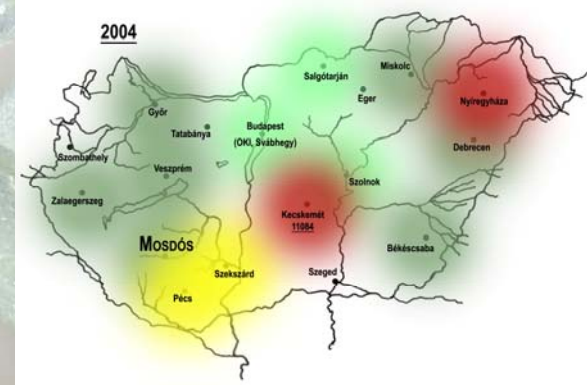
Examined
allergens in
children and
adult
population with
symptoms of
allergy,
Hungary, 2006

Cladosporium herbarum	Cladosporium herbarum
Alternaria alternata	Alternaria alternata
Hámszövet keverék	mix of cutaneous tissue
Macska hámszövet	cat cutaneous tissue
Kutya hámszövet	dog cutaneous tissue
Kutya szőr	dog hair
Macska szőr	cat hair
Házipor keverék (H1, D1, D2, I6)	mix of housedust
Csótány	cocroach
Dermatophagoides pteronyssinus (poratka)	Dermatophagoides pteronyssinus (poratka)
Dermatophagoiedes farinae (liszt atka)	Dermatophagoiedes farinae (liszt atka)
Lepidoglyphus destructor	Lepidoglyphus destructor
Tyrophagus putresentiae	Tyrophagus putresentiae
Fű keverék (G2,G3,G5,G6,G8,G10,G12,G13)	grass mix
Csenkesz faj	Fescue (Festuca)
Kukorica	maize
Gyom keverék (W6, W9, W10, W12, W20)	weed mix
Lándzsás útifű	plantain (Plantago)
Fehér libatop	Goose-foot family(chenopodiaceae)
Aranyvessző	golden rod
nagy csalán	nettle family (Urticaceae)
Fekete üröm	Mugwort (Artemisia)
Szőrös disznóparéj	Amaranth (Amaranthus)
Juh sóska	Sorrel (Rumex)
Közönséges falgyom	Common pellitory (Parietaria erecta)
Ürömlevelű parlagfű	ragweed (Ambrosia)
Fa keverék (T1, T2,T 3, T4, T7, T11, T12, T13)	mix of trees
Juhar	Maple (Acer)
Hamvas éger	Alder (Alnus)
Nyírfa	Birch (Betula)
Mogyoró	Hazel (Corylus)
Platán	Plane (Platanus)
Fűz	Willow (Salix)
Magas kőris	Ash (Fraxinus)
Élelmiszer keverék (F1,F2,F4,F5,F8, F75, F76)	mix of food
Tojásfehérje	egg white
Tehéntej	cow milk
Búzaliszt	flour of corn
Rozs	rye
Tojássárgája	egg yellow
Kazein (marha)	caseine
Élelmiszer keverék (F13, F14, F16, F17, F20)	mix of food)
Földimogyoró	peanut
Szójabab	soybean
Dió	nut
Mogyoró	hazel nut
Szezámrag	sesam seed
Mustár	mustard
Latex	Latex

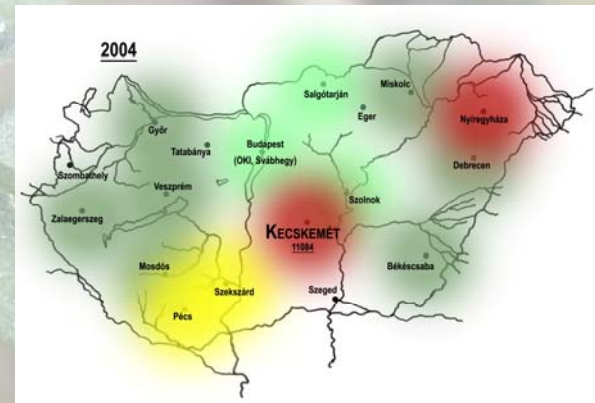
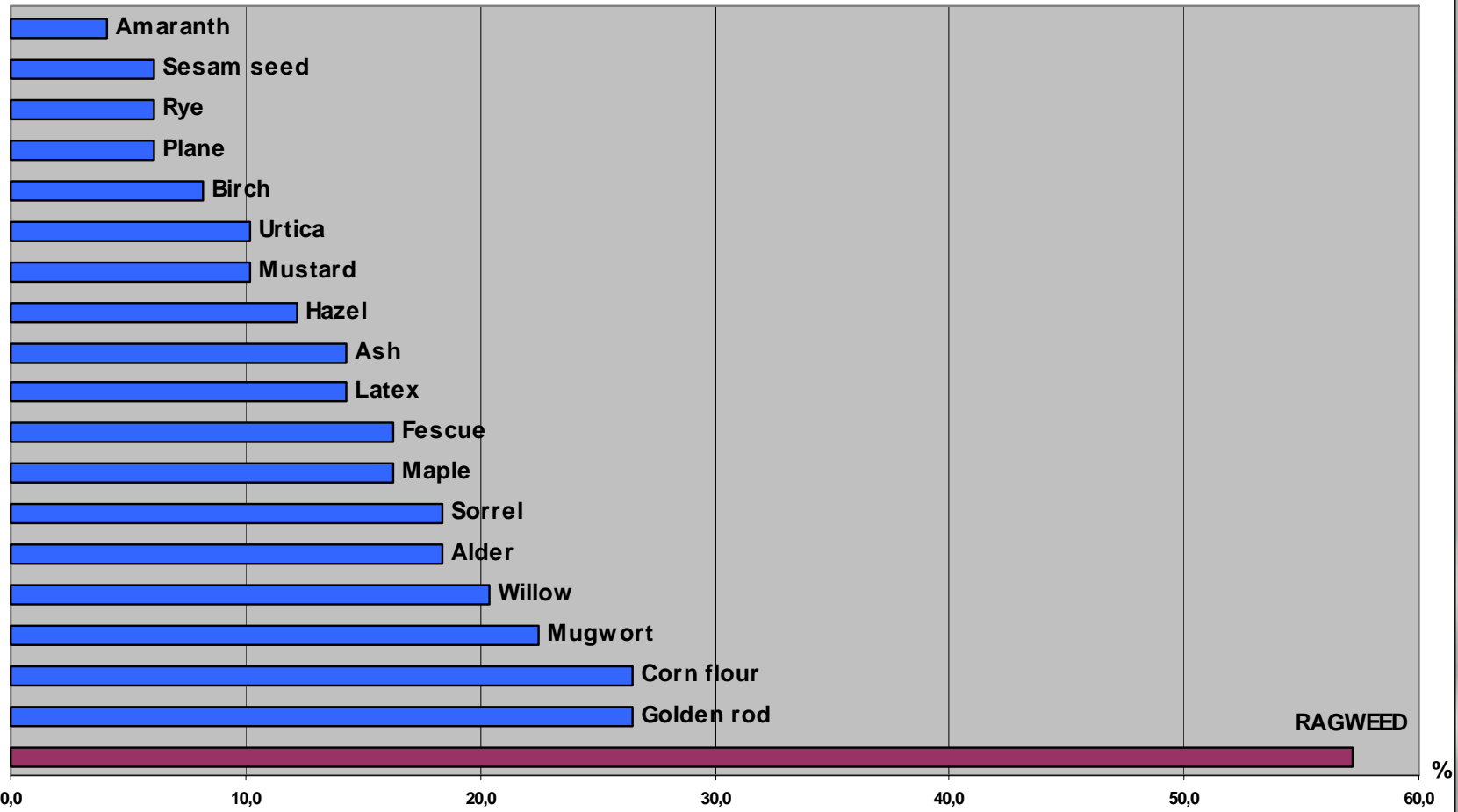
Frequency of sensitisation in Mosdós



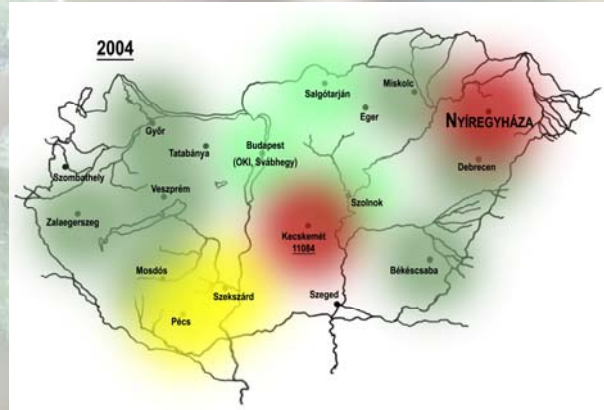
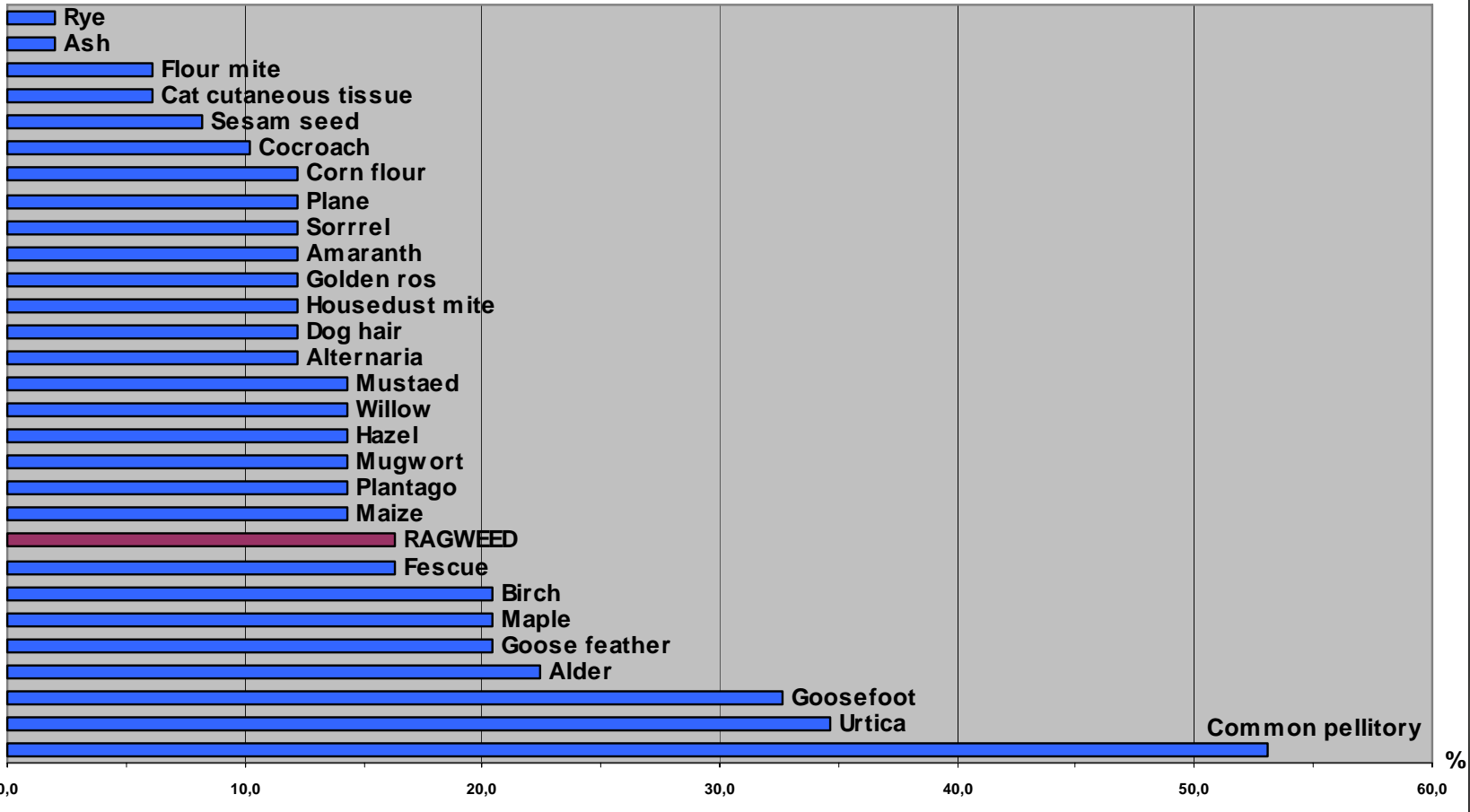
Legend: the population sampled were children under 18 y



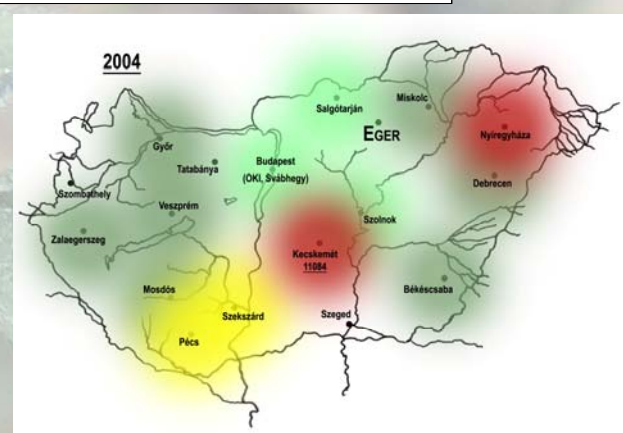
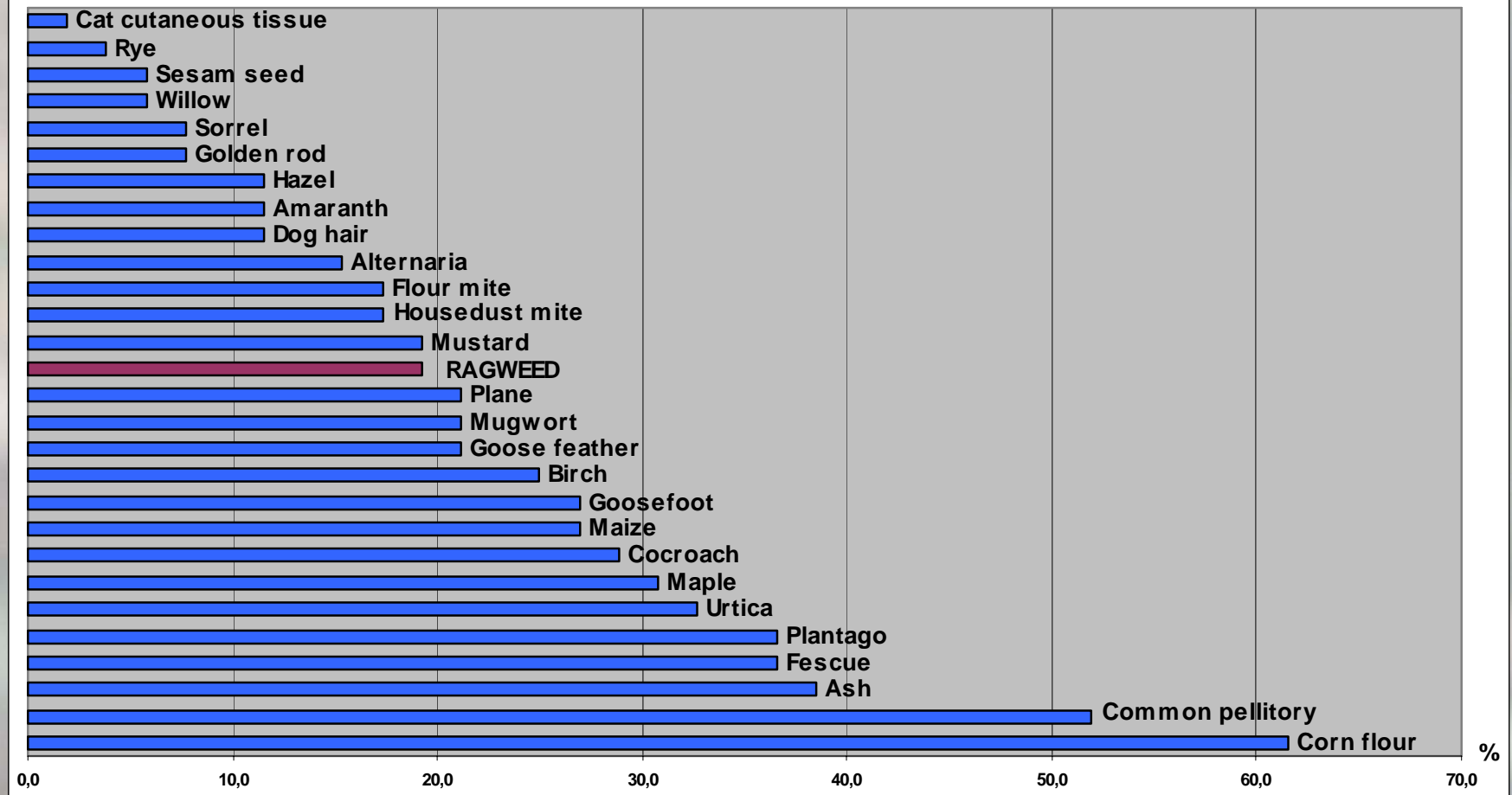
Frequency of sensitization in Kecskemét



Frequency of sensitisation in Nyíregyháza



Frequency of sensitisation in Eger





The project was founded by:

- **National Research and Development program**
– **socio-health research**

NKFP -1B/022/04. 2005-2006

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Received fund: 712 k€



Thank you for
your attention!

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