Wolf predation risk in summer farms of Italian Alps

G. Faccioni[1], F. Marucco[2], A. Menzano[2], E. Sturaro[1], S. Calderola[3], M. Ramanzin[1]

[1] DAFNAE – University of Padova, Legnaro (PD) Italy
[2] Centro Gestione e Conservazione Grandi Carnivori, P. N. Alpi Marittime, Valdieri (CN) Italy
[3] Regione Veneto - Sezione Caccia e Pesca, Mestre (VE), Italy

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WOLFALPS

Wolf in the Alps: implementation of coordinated wolf conservation actions in core areas and beyond

Project LIFE 12 NAT/IT/000807
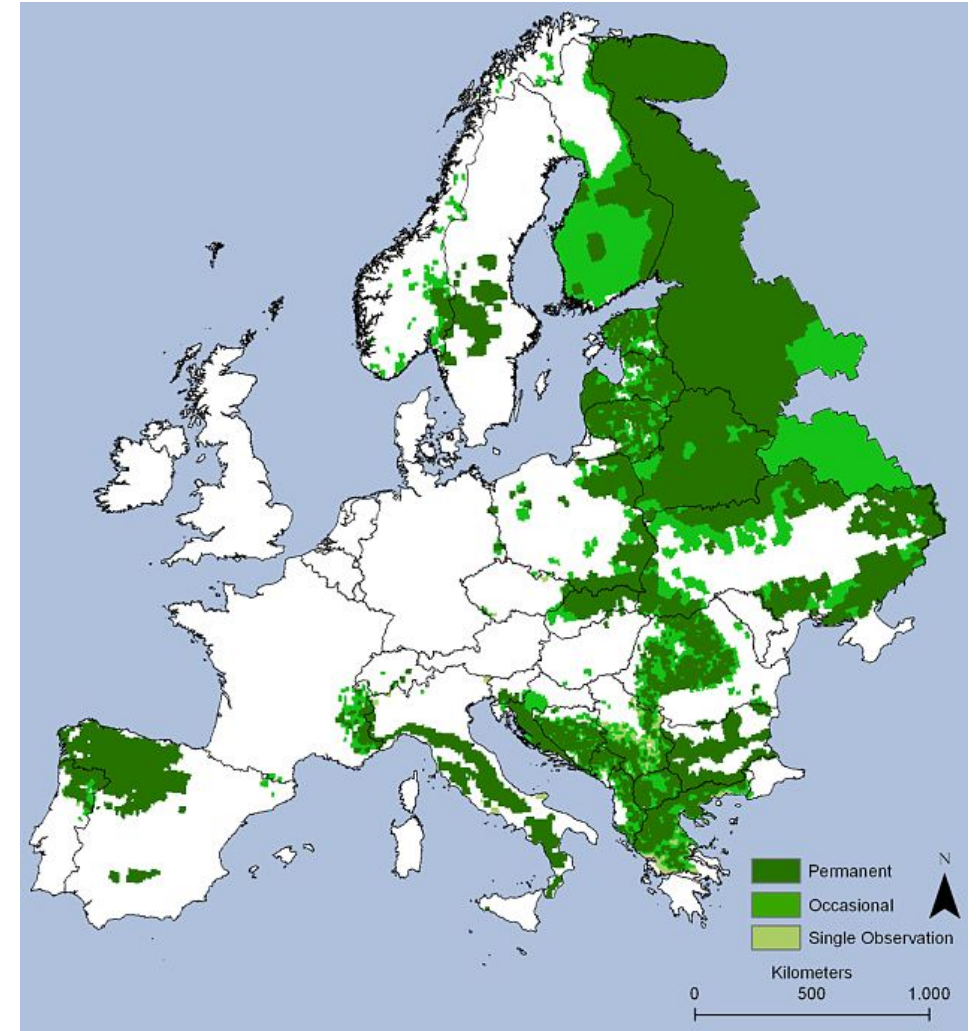

AIMS OF THE STUDY:

- *To collect information on existing alpine summer farms systems, on predation and on applied prevention systems*

- *To analyze the vulnerability of summer farms in the Alpine core areas*
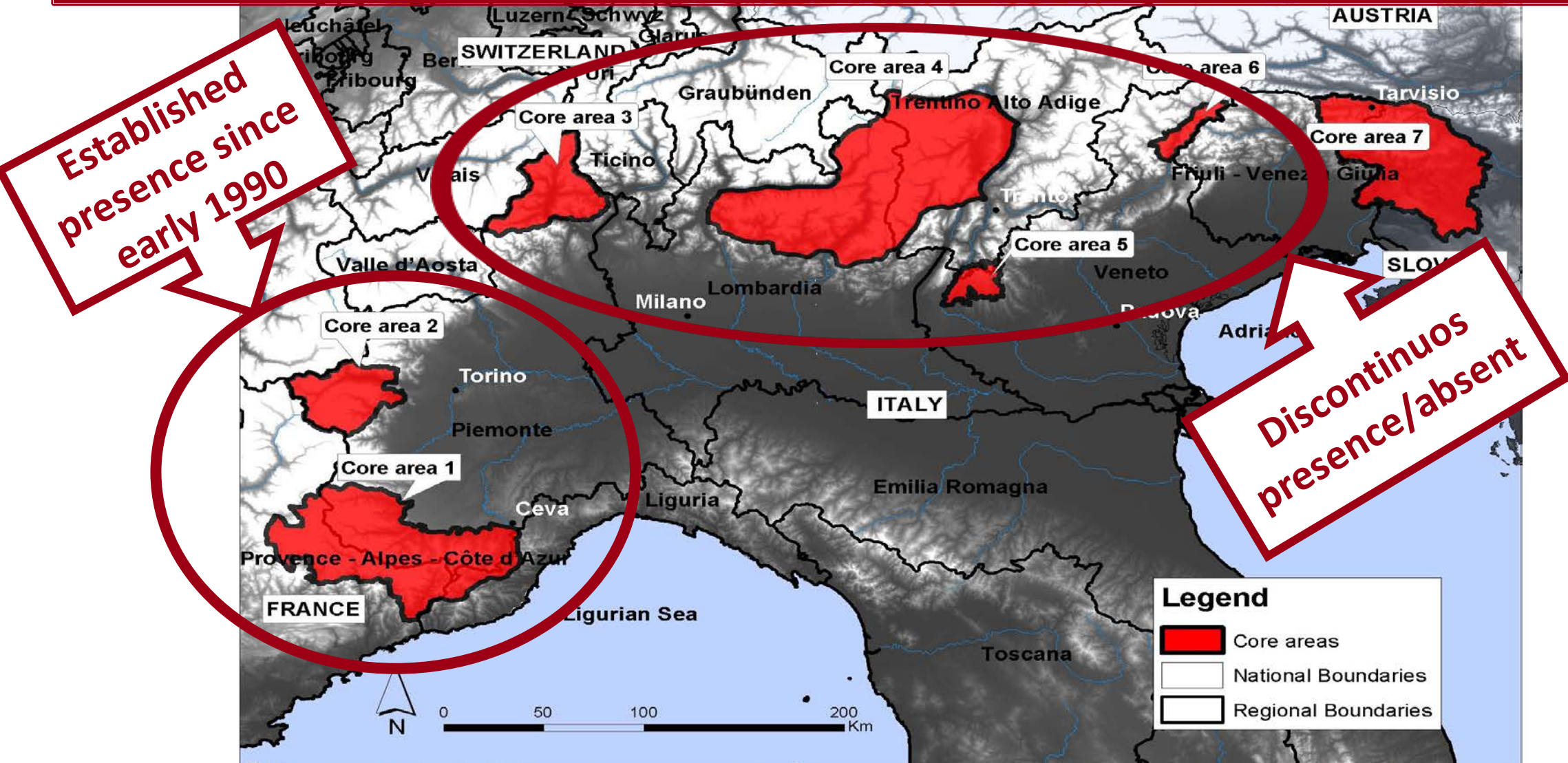
The return of the wolf

- Recently, wolf has naturally recolonised many European areas

- Problems arise particularly where farmers have lost the habit to protect their livestock

- Sheep and goat are the most frequently livestock species killed by wolves in Europe but predation on cattle may also occur

Permanent
Occasional
Single Observation

Kilometers
0   500   1.000

Core areas and wolf presence

Established presence since early 1990

Discontinuos presence/absent

Core area 3

Core area 4

Core area 6

Core area 7

Core area 5

Core area 2

Core area 1

AUSTRIA

SWITZERLAND

Graubünden

Trentino Alto Adige

Tarvisio

Friuli - Venezia Giulia

SLOV

Ticino

Trento

Valais

Valle d'Aosta

Veneto

Lombardia

Milano

Padova

Adria

Torino

Piemonte

ITALY

Ceva

Liguria

Emilia Romagna

Provence - Alpes - Côte d'Azur

FRANCE

Ligurian Sea

Toscana

Legend

■ (red)	Core areas
□	National Boundaries
□	Regional Boundaries

0   50   100   200 Km

N

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Materials and methods/1

- **Data collection:**

➡ On farm survey through questionnaire during 2013 on 849 summer farms.

➡ Data on herd composition and management, grazing management, use of predation prevention methods.

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Summer farms in the core areas

- Summer farms in the core areas:

	ESTABLISHED WOLF PRESENCE	DISCONTINUOUS /ABSENT WOLF PRESENCE	TOTAL
CATTLE	227	175	402
SHEEP AND GOATS	80	116	196
MIXED	116	135	251
TOTAL	423	426	849

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Use of prevention methods

USE	ESTABLISHED WOLF PRESENCE	DISCONTINUOUS WOLF PRESENCE	TOTAL
NO	102	341	443
YES	321	85	406
TOTAL	423	426	849

APPLIED PREVENTION METHODS	ESTABLISHED WOLF PRESENCE	DISCONTINUOUS WOLF PRESENCE	TOTAL
Night gathering	39%	15%	27%
Night gathering + guardian dogs	30%	3%	17%
Guardian dogs	2%	2%	2%
Other combinations	5%	0%	2%
TOTAL	76%	20%	48%

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▪ **Data collection:**

⇨ On farm survey through questionnaire during 2013 on 852 summer farms.

⇨ Data on herd composition and management, grazing management, use of predation prevention methods.

▪ **Statistical analyses:**

➡ Logistic regression of the probability of use of prevention measures on wolf predation considering the following factors:

- **Wolf presence**
- **Livestock species**
- **Milk production**

- **Shepherd's presence**
- **Grazing management**
- **Head/flock size**

WOLF PRESENCE
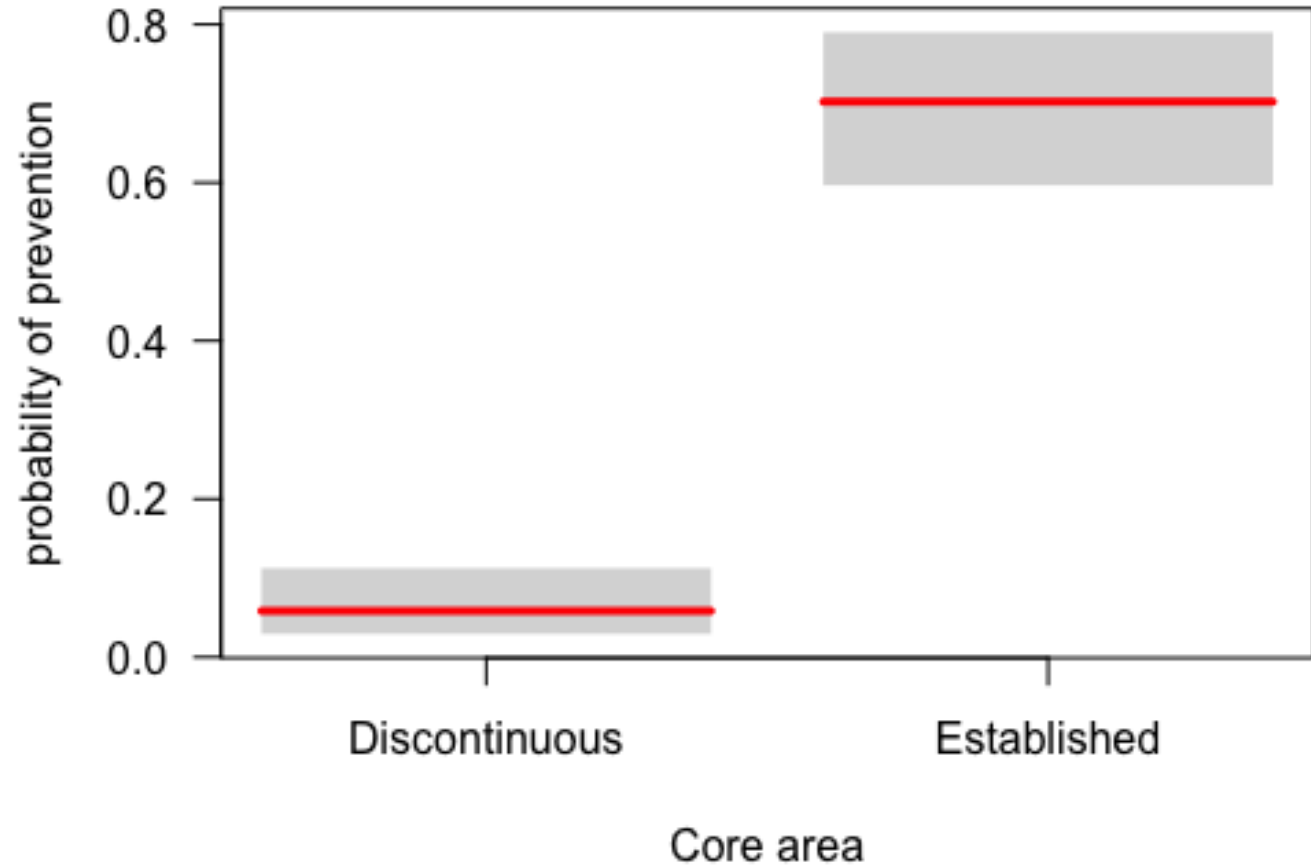
P<0.001
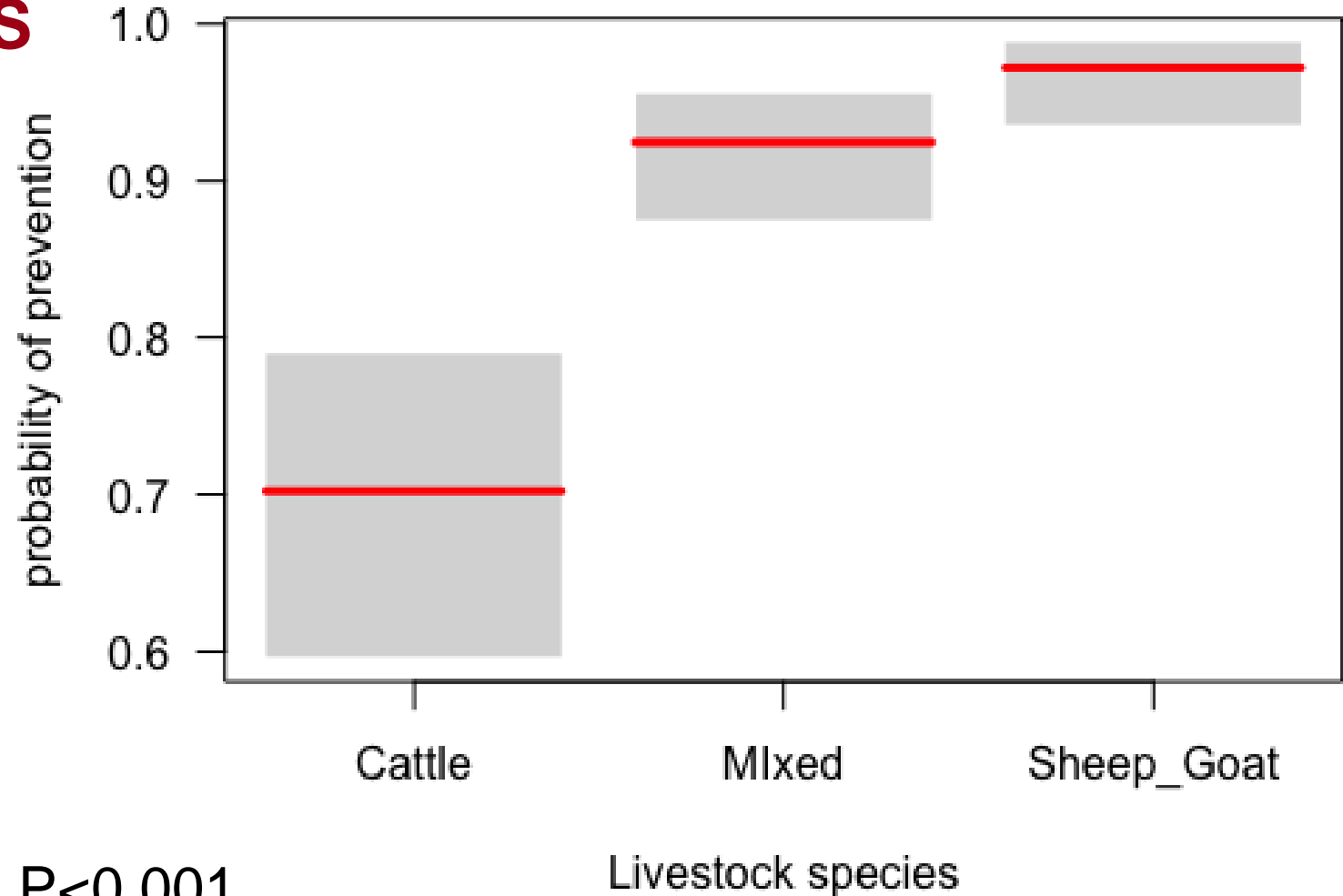
LIVESTOCK SPECIES

- Cattle *vs* Mixed: P<0.01
- Cattle *vs* Sheep and goat: P<0.001

LIVESTOCK SPECIES and HERD/FLOCK SIZE

- Cattle *vs* Mixed:

  P<0.001

- Cattle *vs* Sheep and goat

  P<0.01
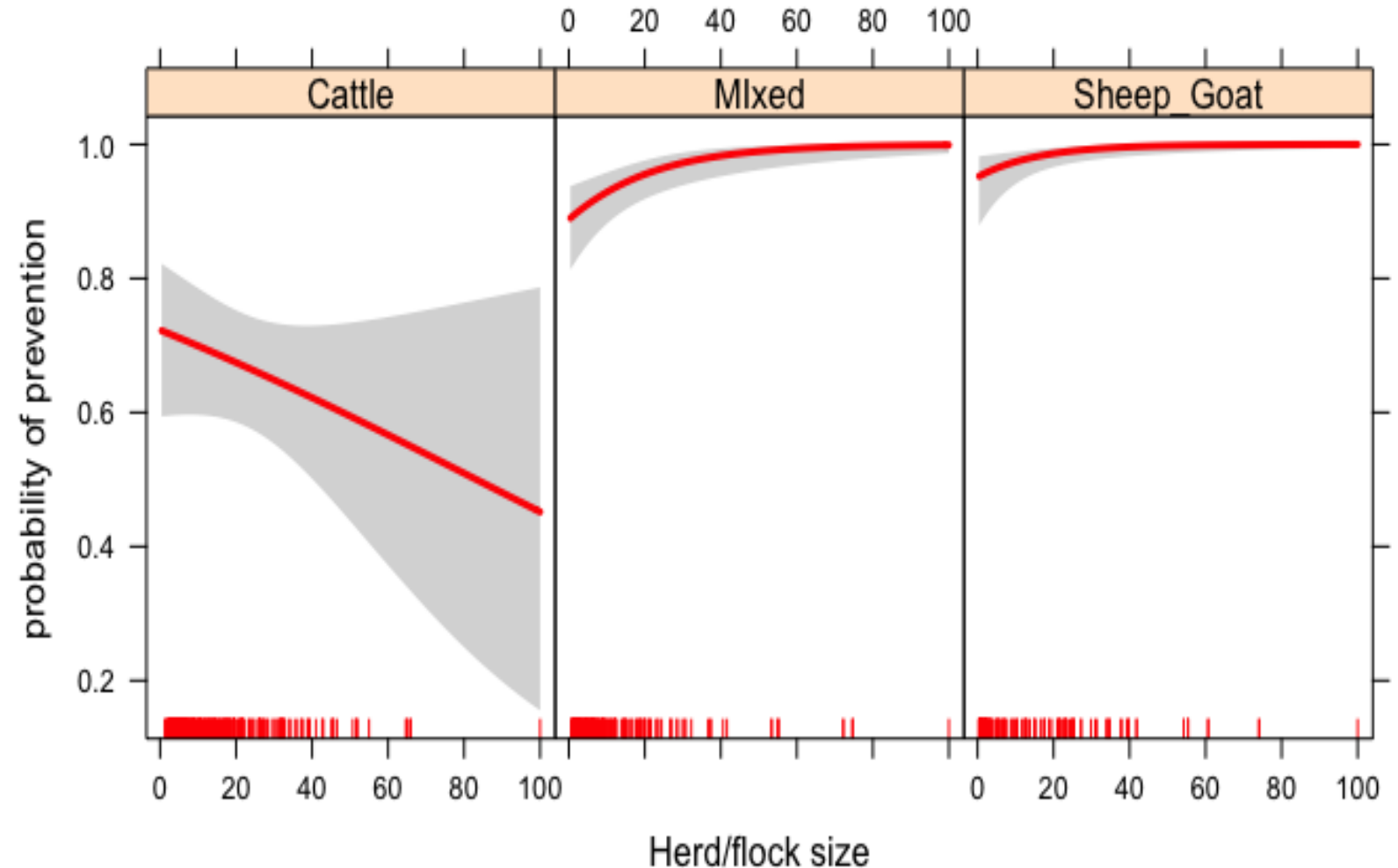
GRAZING MANAGEMENT

SHEPHERD'S PRESENCE
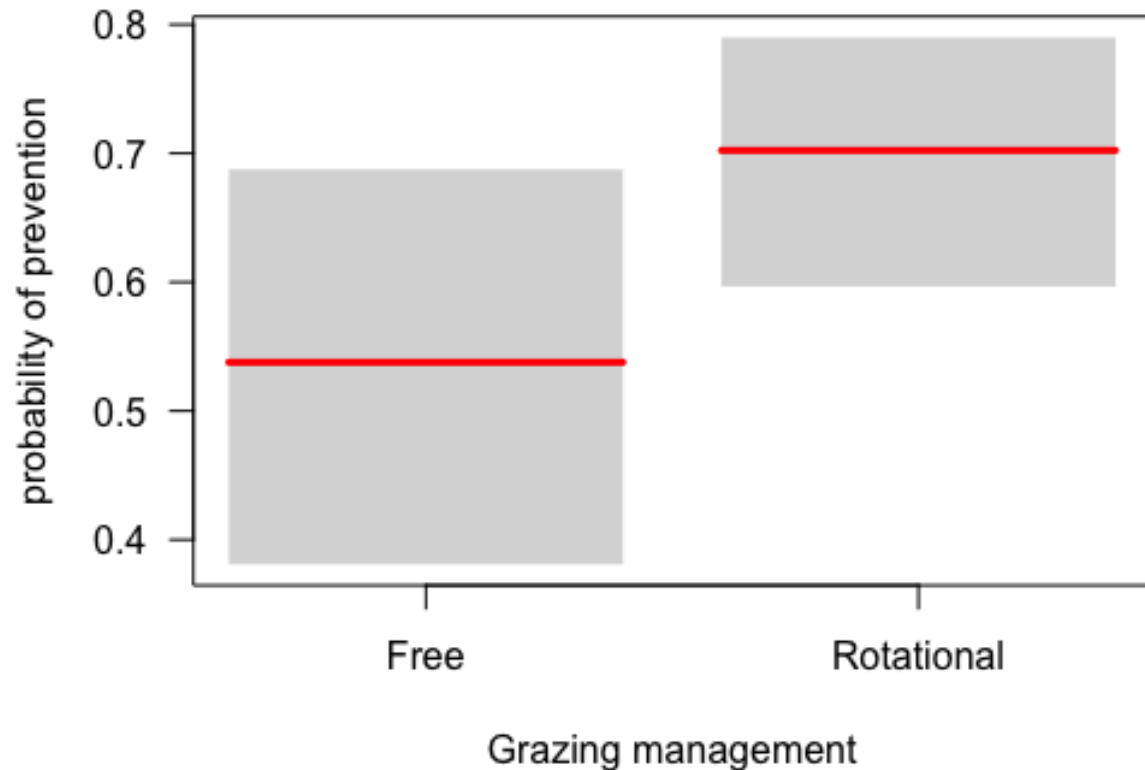
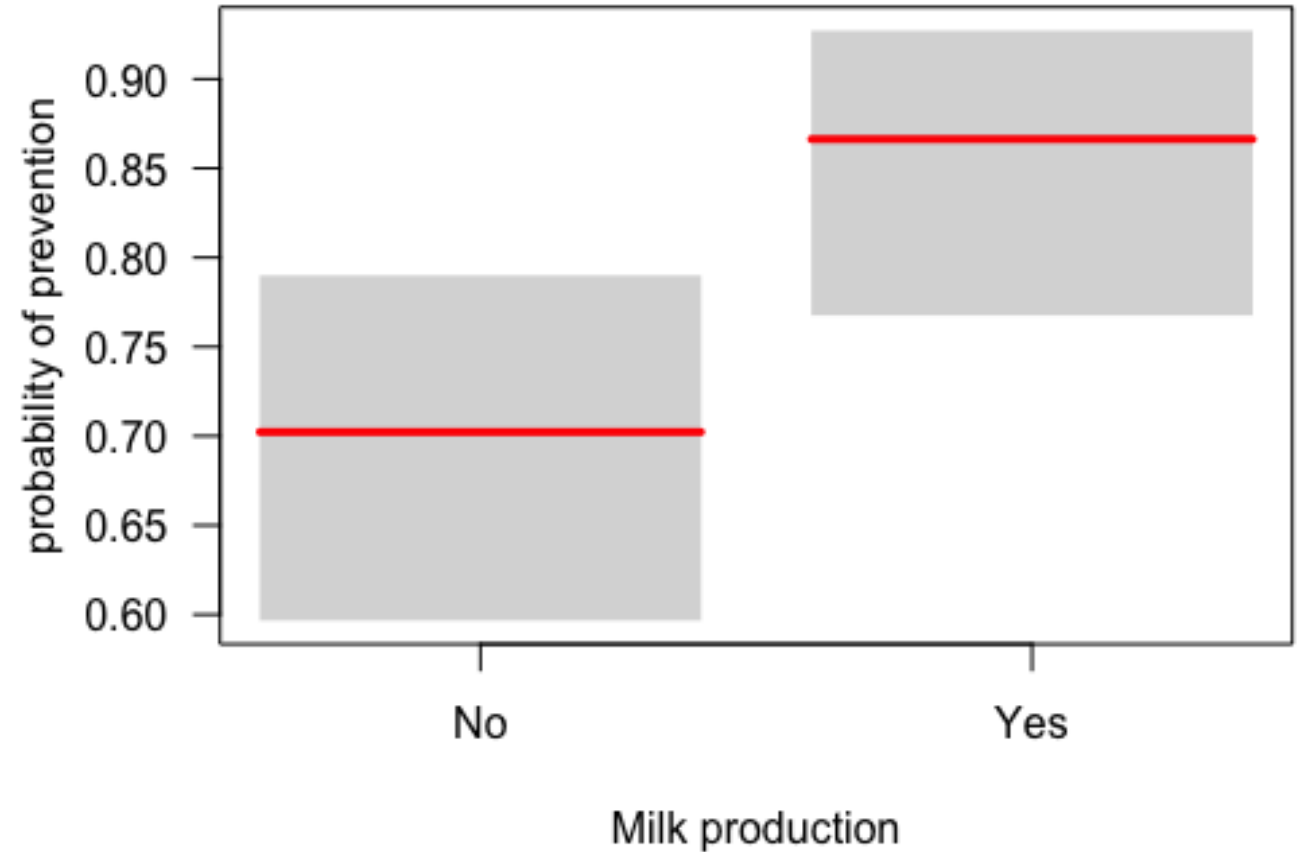- Free *vs* Rotational grazing: P<0.01
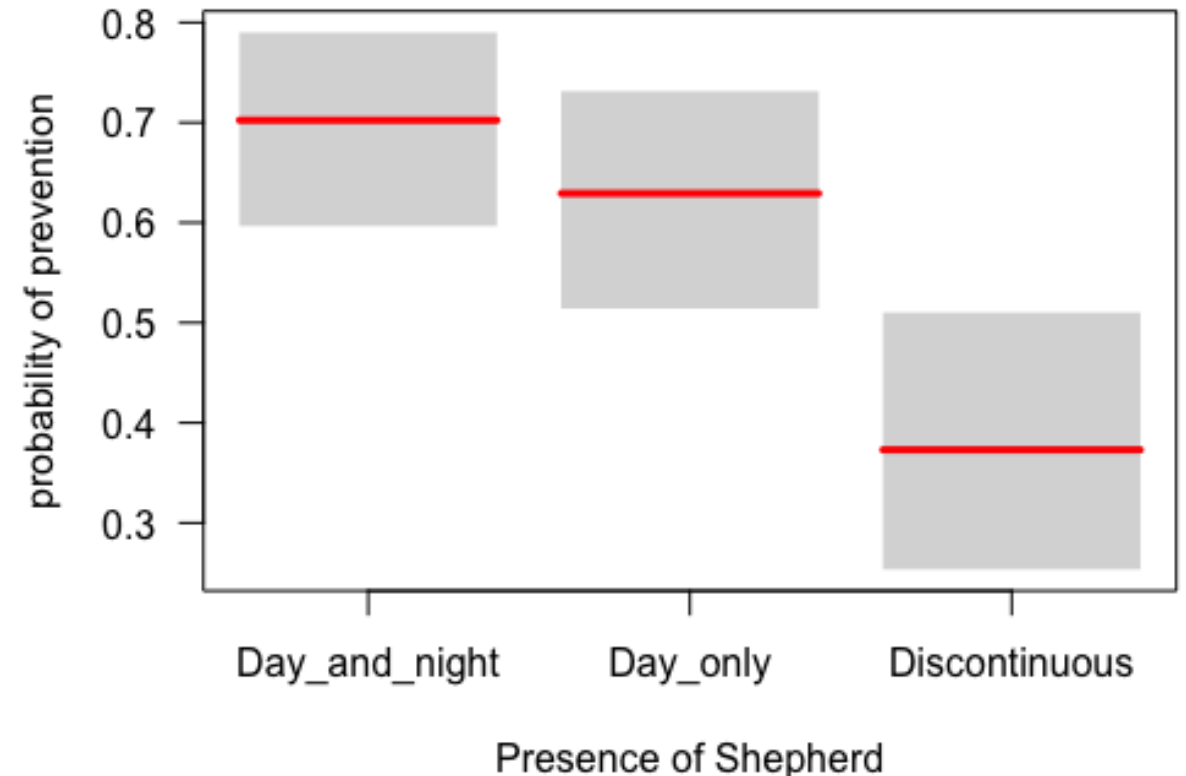
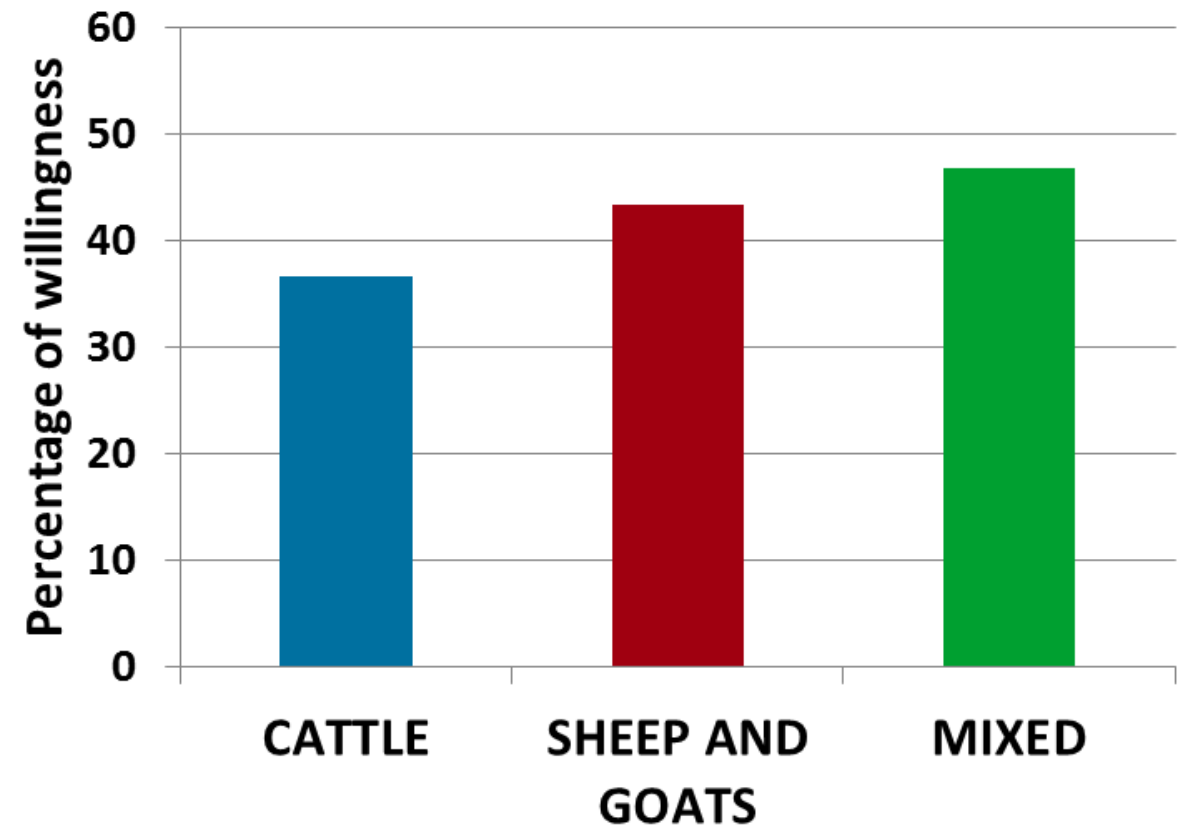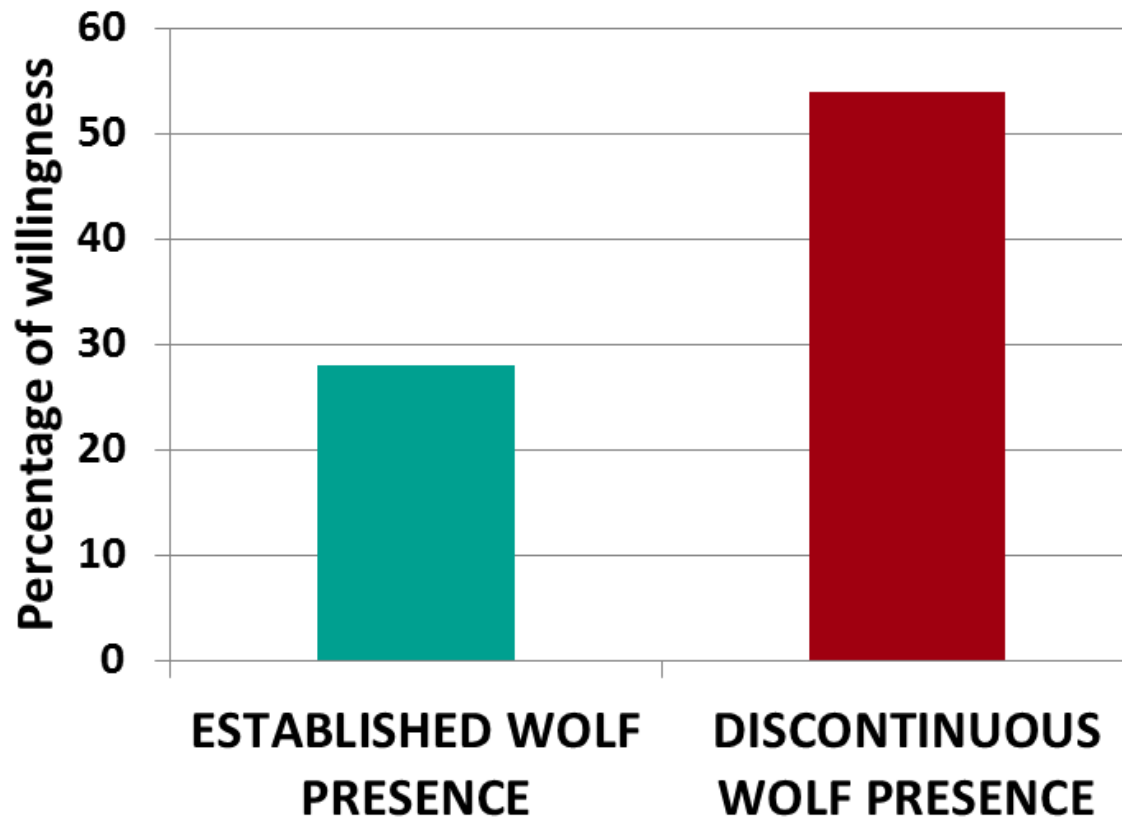- Presence day and night (or day only) *vs* Discontinuous: P<0.001
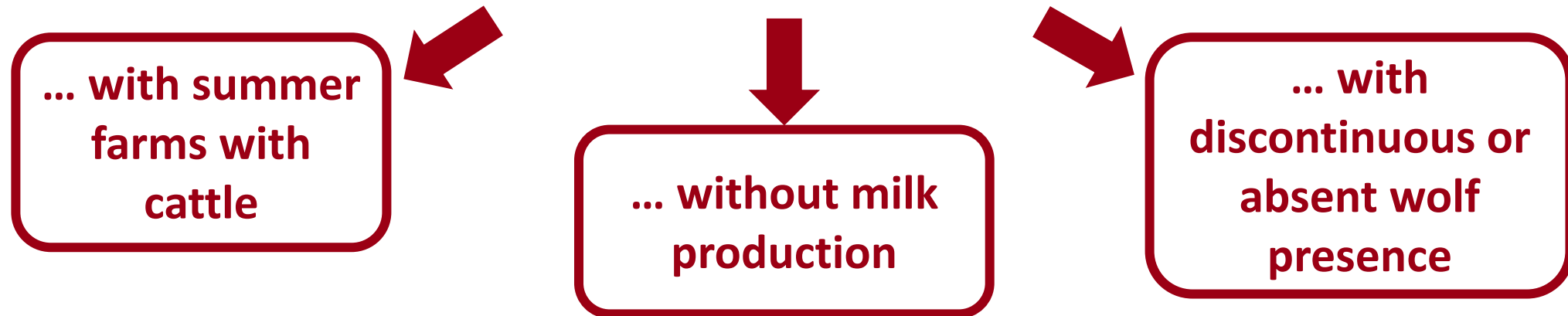
MILK PRODUCTION

P<0.001

Prevention methods

- Willingness of farmers to implement prevention measures

Conclusions

- **The main obstacle to prevention** is the use of **unguarded free-grazing,**

more frequent in areas

| … with summer farms with cattle | … without milk production | … with discontinuous or absent wolf presence |

- Suitable grazing practices and summer farms management are needed to implement prevention methods
- This should be considered into the wider approach to innovate and sustain the multifunctionality of the livestock sector in mountainous areas.

Thanks for the attention

georgia.faccioni@gmail.com

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Prevention methods

	CUNEO	TORINO	OSSOLA	CENTRAL ALPS	LESSINIA	DOLOMITES	TOTAL
Night gathering	125	41	15	32	2	15	230
Night gathering + dogs	84	42	2	12	0	0	140
Dogs	6	1	2	4	0	1	14
Night gathering+ dogs + acoustic dissuasives	4	2	0	0	0	0	6
Night gathering+ acoustic dissuasives	0	5	0	0	0	0	5
Night gathering + dogs+ visual dissuasives	1	3	0	0	0	0	4
Night gathering + visual dissuasives	3	0	0	0	0	0	3
Dogs + visual dissuasives	0	1	0	0	0	0	1
Fladry	0	1	0	0	0	0	1

Willingness to use prevention methods

	CUNEO	TORINO	OSSOLA	CENTRAL ALPS	LESSINIA	DOLOMITES	TOTAL
Night gathering	43	13	71	15	6	18	166
Dogs	23	11	53	10	3	7	107
Acoustic dissuasives	21	8	112	4	15	4	164
Visual dissuasives	17	13	102	3	4	4	143
Fladry	8	6	65	65	3	1	148
Other	3	7	0	4	11	0	25

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