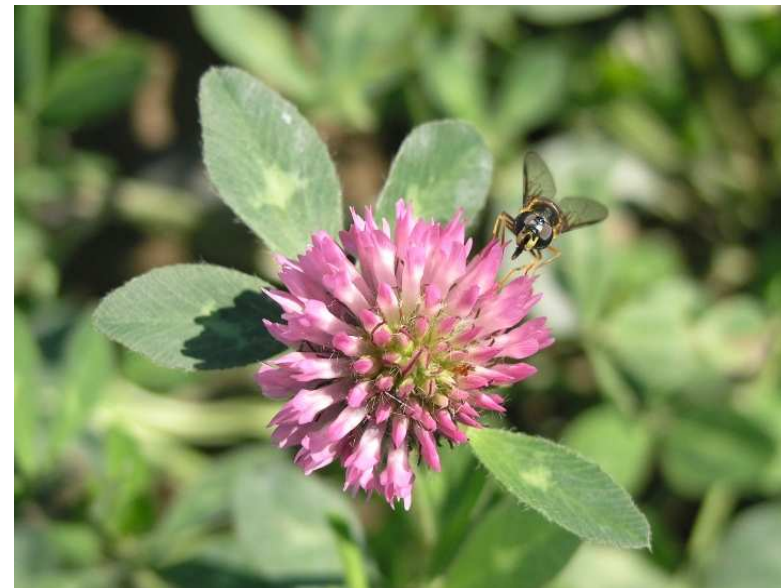


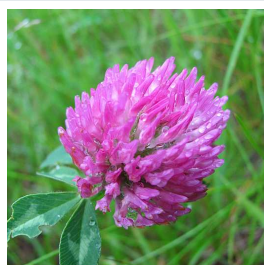
Introduction of the company Red clover and grass breeding Hana Jakešová



- The company started in 2003
- Hana Jakešová has been working as the plant breeder since 1980
- The company owns 5 ha of land and rents another 5 ha
- It employs 2 plant breeders and 5 to 10 seasonal workers and is provided for with both the necessary equipment and machinery



Interspecific hybrids *Trifolium pratense* x *Trifolium medium* as the source of new diversity for variety PRAMEDI breeding

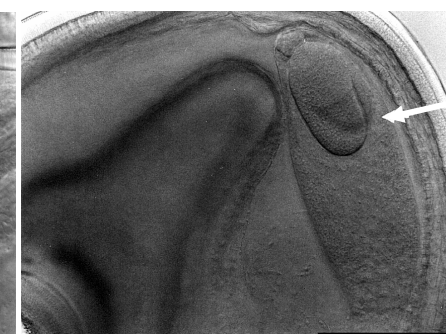
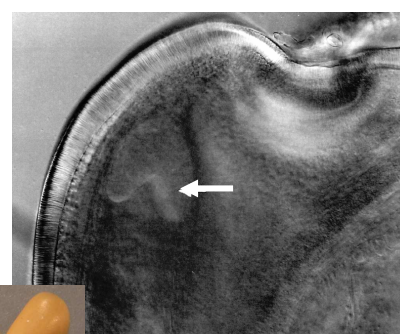


T. pratense
red clover
 $2n=4x=28$

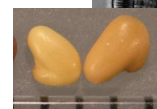
X



T. medium
zig-zag clover
 $2n=8x=64$



Embryogenesis control



Embryo rescue



Hybrids-morphological and cytogenetic variability



Breeding

1993 - 2010

Year

1993/1994

nursery of individual plants
F2/F3

1995

selection of the best plants as to seed production

1996/1998

nursery in rows of F3/F4
back cross by TP cv. Amos

nursery of individual plants
F3/F4

flow cytometry

selection of plants with DNA ~ 29 and 30 chromosomes

Morphological and
agronomic traits
POSTER

1998/1999

1999/2001

nursery of individual plants
F4/F5

2002/2004

nursery of individual plants
F5/F6

yield test of both
green and dry matter

multipli
cation

2005/2006

multipli
cation

yield test of both
green and dry matter

nursery of individual plants
JEH 1 F F6/F7

nursery of individual plants
F6/F7 JEH 1 V

yield test of both
green and dry matter

multipli
cation

2007/2009

multipli
cation

yield test of both
green and dry matter

nursery of individual plants
JEH 1 F F7/F8

nursery of individual plants
F7/F8 JEH 1 V

yield test of both
green and dry matter

multipli
cation

2010/2012

multipli
cation

yield test of both
green and dry matter

nursery of individual plants
JEH 1 F F8/F9

Central Institute for Supervising and Testing in Agriculture 2010 - 2012
2013 cv. PRAMEDI

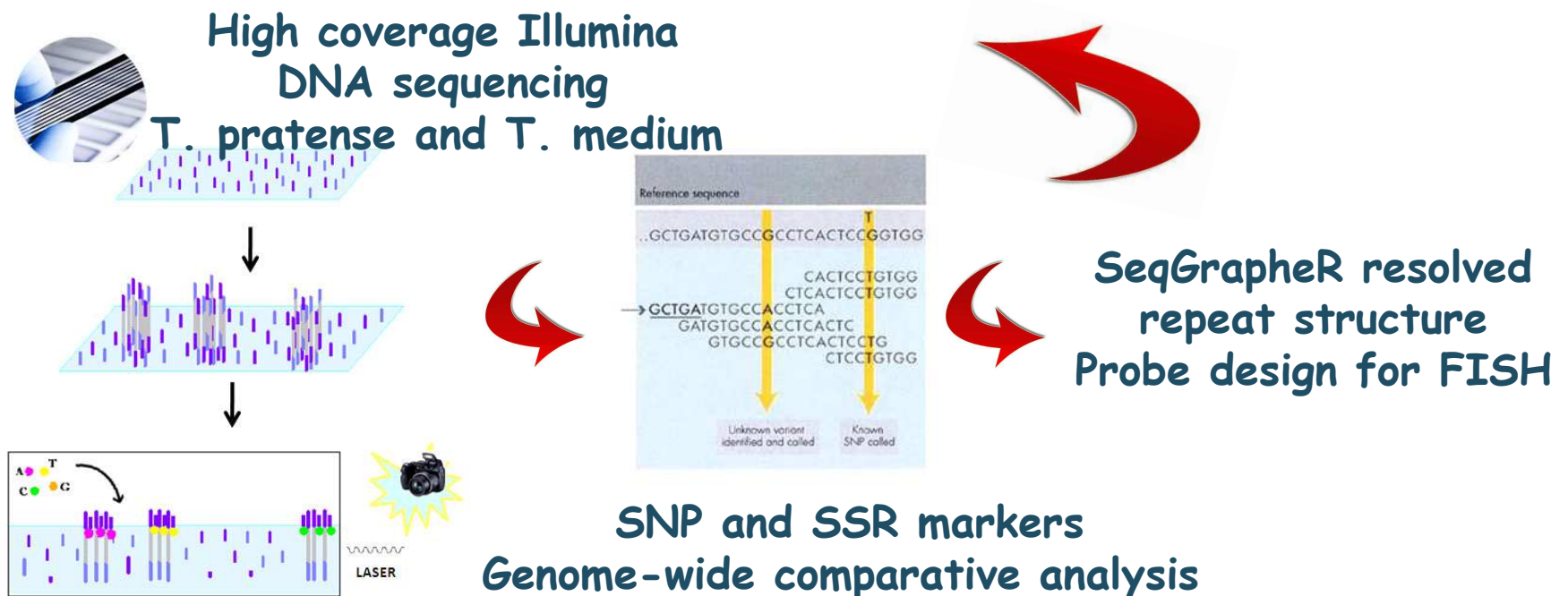
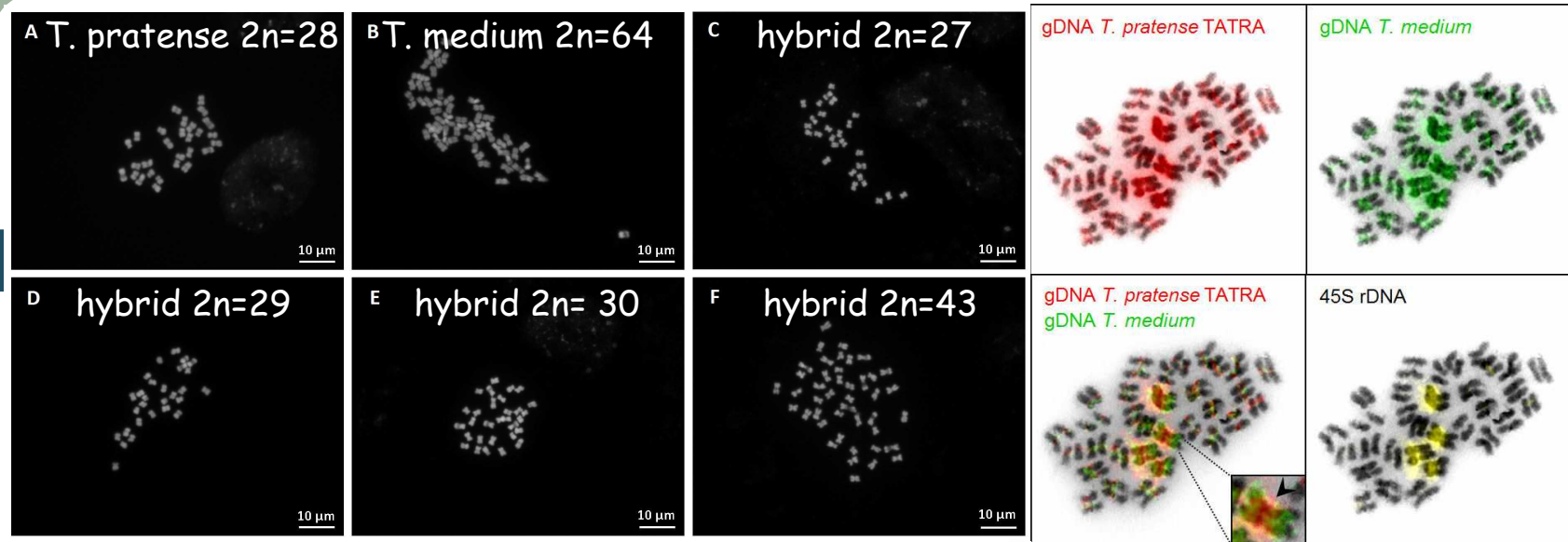


Breeding continues
root habit
and persistency



Red Clover Breeding Hladké Životice

Cytogenetics and next-generation sequencing



Other activities of the company

Ing.Hana Jakešová,CSc

Plant breeding of red clover 4n

- for higher N₂ fixation
- higher forage quality and better seed production
- more resistant to fusarium spp.
 - to WCIMV
 - to RCMV
 - to Erysiphe spp.



Other activities of the company Ing.Hana Jakešová,CSc

Plant breeding of *Festuca pratensis* L.

- for grazing purposes – five cuts
- for better persistency



Other activities of the company Ing.Hana Jakešová,CSc

Plant breeding of

- *Agrostis capillaris*
- *Trisetum flavescens*
- *Trifolium medium*
- *Trifolium ambiguum*
- *Festulolium* of festucoid type for better resistancy to rust (*Puccinia coronata*, *Puccinia graminis*)



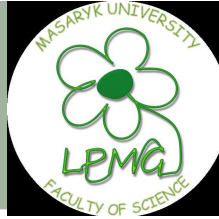
Which topics we would like to offer for collaboration

- To implement molecular genetic methods in plant breeding especially in plant breeding aimed at enhanced resistance as well as in plant breeding aimed at higher nitrogen fixation and fodder quality





ing.hana šlechtění
akešová csc.
etelů a trav



Thank you for attention

Participating institutes

Masaryk University Brno
Research Institute for fodder Crops Ltd. Troubsko
Academy of sciences of the Czech Republic
Crop Research Institute Prague