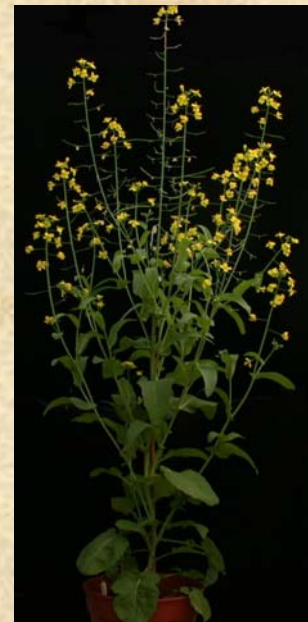


Update on: TNDH mapping population

& NOVORB

Colin Morgan

John Innes Centre



TNDH mapping population

- TNDH map is being developed
 - in collaboration with Prof. Jinling Meng and Yan Long (Huazhong Agricultural University, Wuhan).
- Consists of 188 lines
 - from a cross between a European winter cultivar (Tapidor) and a semi-winter Chinese cultivar (Ningyou 7).
- A reduced set of 94 lines
 - more suited to UK conditions (Flowering Time & Stem Canker) has been selected.
- Developing new markers at JIC & Wuhan.

Summary of markers currently available for TNDH

➤ AFLP	124
➤ MS-AFLP	823
➤ RFLP	61
➤ SSR	471
➤ SNP/InDel (IGF)	118
➤ SRAP (sequence related amplified polymorphism)	106
➤ SSAP (sequence specific amplified polymorphisms)	73
➤ STS	43
➤ SNP/InDel (new JIC candidate gene markers)	42

was 969

Total

1861

Mapping strategy

Joint mapping approach:

- 1st round
 - Using all markers except AFLP markers to produce high stringency skeleton map.

- 2nd round
 - Adding AFLP markers to increase marker density while maintaining high stringency.

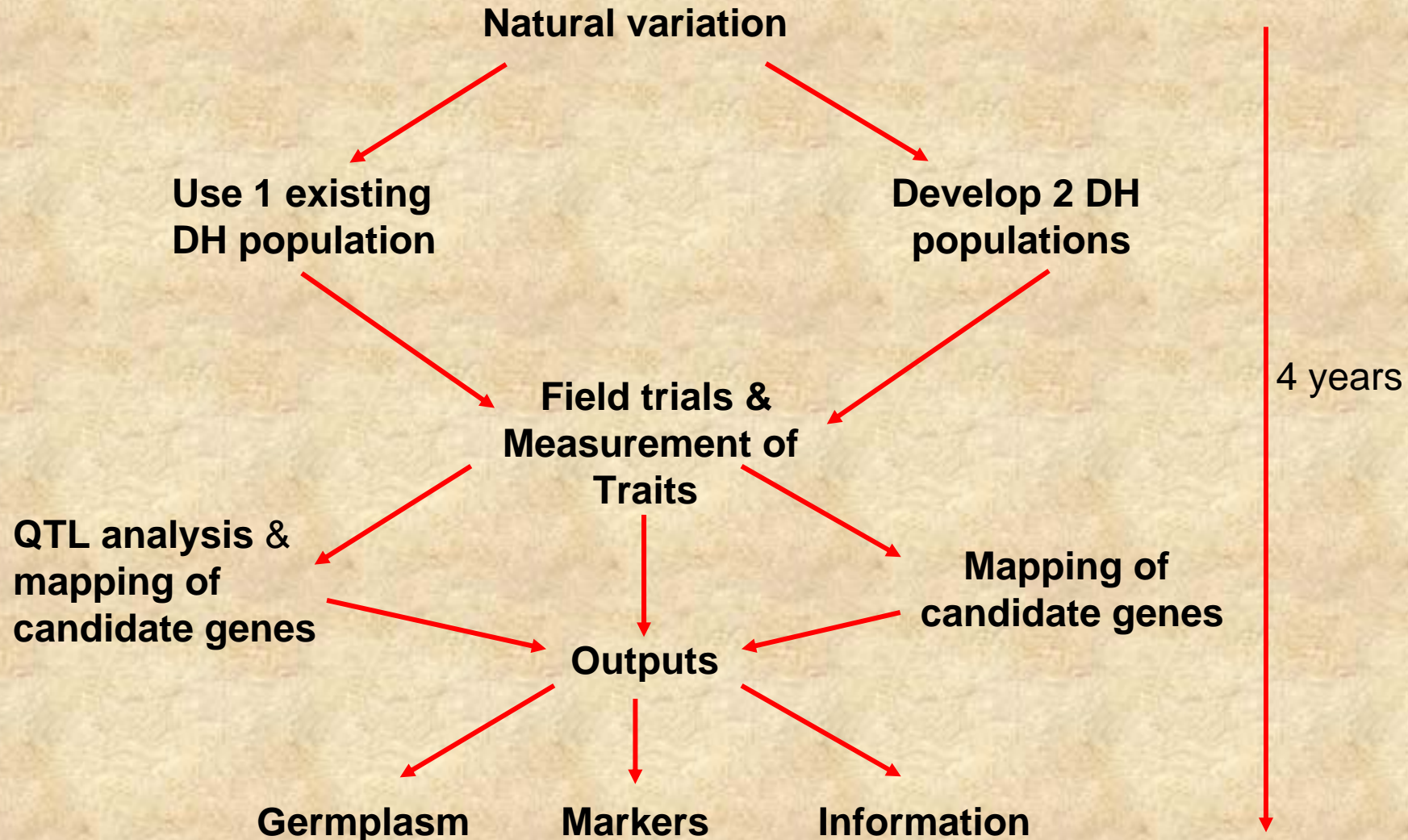
- 3rd round
 - Add additional gene specific markers – lower stringency (if necessary) to ensure the inclusion of the maximum number of gene specific markers.

NOVORB

- Study genetic control of canopy architecture in oilseed rape
- Sappio-Link project - LK0964



Strategy & work plan for NOVORB-HI



Traits assessed

➤ Field traits

- Flowering time & maturity
- Canker
- Lodging
- Vigour
- Plot yield

➤ Whole plant character

- HI (5 plants)
- Height
- Terminal length
- Foot
- Branch & node no.
- Terminal raceme pods

➤ Pod characters

- Beak length
- Pedicel length
- Pod length & width
- Pedicel & pod angle

➤ Seed characters

- Weight of 10 pods
- Mean seed weight
- No seed/pod

➤ Seed quality traits

- Oil content
- FA composition
- Protein
- Glucosinolates

With thanks to ...

JIC

Ian Bancroft

Rachel Wells

Hayley Jeffries

Plant Breeding Companies

Joe Bowman

Matthew Clarke

Mark Nightingale

Richard Jennaway

Peter Werner

Thanks for listening