



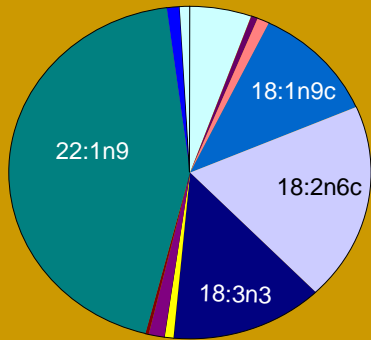
Exploiting Brassica Diversity

Brassica trait genetics at Warwick HRI

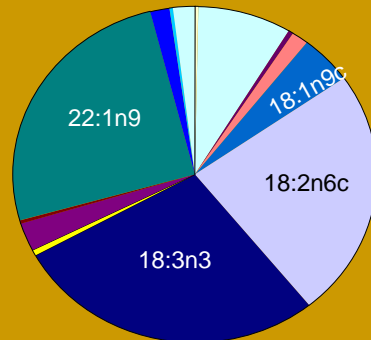
- Water use efficiency - Thompson
- Phosphate and other mineral use efficiency - Hammond (White)
- Nitrogen use efficiency - Teakle, Pink...
- Virus/bacterial disease resistance - Walsh, Holub, Pink, Hand
- Seed dormancy, establishment, vigour - Finch-Savage, Barker
- Juvenility/flowering time - Teakle, Thomas, Massiah
- Shelf life - Buchanan Wollaston, Pink
- Oil content, novel uses eg. bioplastics and biodiesel - Barker, Pink

This is underpinned by:

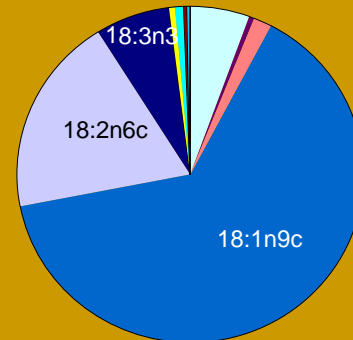
- Genomics lab
- Freezer Archive - BAC libraries, EST libraries, pathogens ...
- Seed Archive - secure storage of research collections



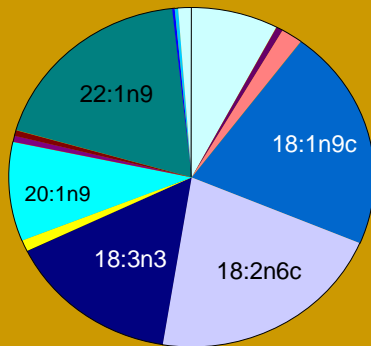
B. napus biennis
(Winter forage rape)



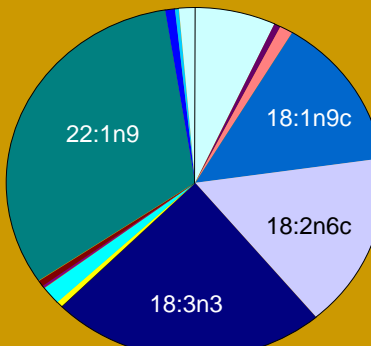
B. napus oleifera
(Asian variety)



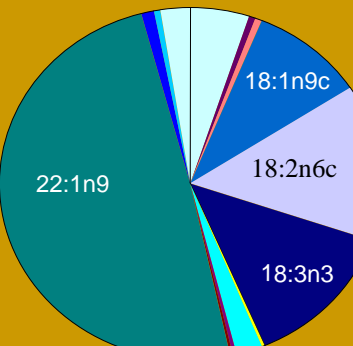
B. napus oleifera
(Modern oilseed rape variety)



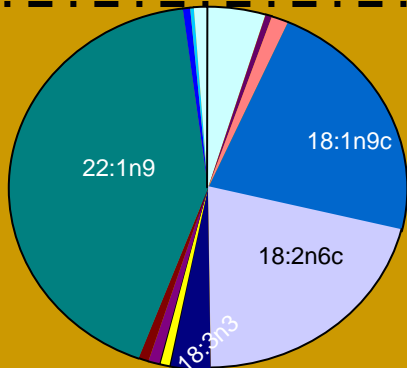
B. oleracea gemmifera
(Brussels Sprout)



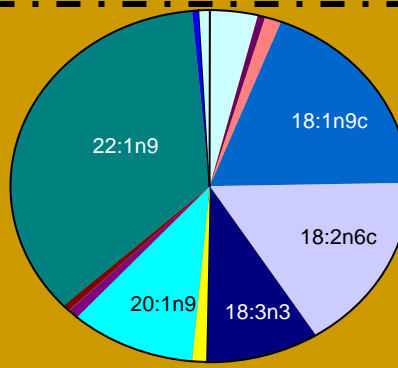
B. oleracea italica
(Inbred Broccoli)



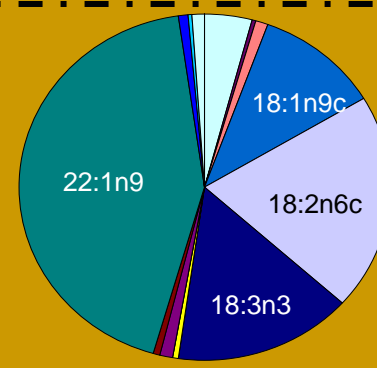
B. oleracea italica
(Doubled haploid Broccoli)



B. rapa olifera



B. rapa Broccoletto Gp



(Pekinensis)

**% FA mol
variation
between
Brassica
species and
accessions**

Desaturase

1		670	680	690	700	710	720	730
te ▶	Consensus	TCTACATCTCTAAA	-----	CA--G--	ATGTTATAT	-----	A-----	TGCA
002.ab1 (50>784)	→	TCTACATCTCTAAA	-----	CA--G--	ATGTTATAT	-----	A-----	TGCA
007.ab1 (49>783)	→	TCTACATCTCTAAA	-----	CA--G--	ATGTTATAT	-----	A-----	TGCA
005.ab1 (45>779)	→	TCTACATCTCTAAA	-----	CA--G--	ATGTTATAT	-----	A-----	TGCA
016.ab1 (65>798)	→	TCTACATCTCTAAA	-----	CA--G--	ATGTTATAT	-----	A-----	TGCA
004.ab1 (50>784)	→	TCTACATCTCTAAA	-----	CA--G--	ATGTTATAT	-----	A-----	TGCA
016.ab1 (49>869)	→	TCTACATCTCTAAA	-----	CA--G--	ATGTTATAT	-----	A-----	TGCA
004.ab1 (52>1013)	→	TCTACATCTCTAAA	-----	CA--G--	ATGTTATAT	-----	A-----	TGCA
012.ab1 (49>1013)	→	TCTACATCTCTAAA	-----	CA--G--	ATGTTATAT	-----	A-----	TGCA
001.ab1 (45>1009)	→	TCTACATCTCTAAA	-----	CA--G--	ATGTTATAT	-----	A-----	TGCA
011.ab1 (51>813)	→	TC-ACATCTCTAAA	TAGATGTTATATAAGCA	-GTGATGTTATAT	ATGCATGA	-----	-----	TGCA
006.ab1 (46>810)	→	TC-ACATCTCTAAA	TAGATGTTATATAAGCA	-GTGATGTTATAT	ATGCATGA	-----	-----	TGCA
005.ab1 (50>992)	→	TC-ACATCTCTAAA	-----	TA--G--	ATGTTATAT	-----	AAGCAGTGATGT	TGCA
012.ab1 (89>816)	→	TC-ACATCTCTAAA	TAGATGTTATATAAGCA	-GTGATGTTATAT	ATGCATGA	-----	-----	TGCA
016.ab1 (50>782)	→	TCTACATCTCTAAA	-----	CA--G--	ATGTTATAT	-----	A-----	TGCA
016.ab1 (91>790)	→	TCTACATCTCTAAA	-----	CA--G--	ATGTTATAT	-----	A-----	TGCA
007.ab1 (85>783)	→	TCTACATCTCTAAA	-----	CA--G--	ATGTTATAT	-----	A-----	TGCA
008.ab1 (82>781)	→	TCTACATCTCTAAA	-----	CA--G--	ATGTTATAT	-----	A-----	TGCA
015.ab1 (87>786)	→	TCTACATCTCTAAA	-----	CA--G--	ATGTTATAT	-----	A-----	TGCA



Riding the wave of brassica biodiversity

Improving health benefits

Producing environmentally friendly oils



Klein project
defra
Marshall's
Elooms Seeds
WENTHORPE

Wardk
WARDK

Healthy Roots

THE WORSHIPFUL COMPAN
GARDENERS AN

in the garden

Primary School

PROGIFT

WENTHORPE