



# APRICOT BREEDING

UNIV. OF BOLOGNA and MILANO - Italy

D. Bassi

M. Rizzo, D. Vivoli



# PROGRAM GOALS

➤ FLESH QUALITY

✓ HIGH BRIX

✓ FIRMNESS-JUCINESS

✓ AROMA

➤ APPEARANCE



✓ GROUND: bright yellow-orange; blush

✓ SIZE: 60-80g



➤ EXTENDING RIPENING SEASON

➤ DISEASE RESISTANCE: brown rot; PPV

# Diverse flesh texture



## ***SOFT AND MELTING***

★ Very soft

★ Soft

'Ouardi'

'Reale di Imola'



## **FIRM AND MELTING**

★ Firm

★ Very firm

'Harcot'

'Harval'



## **FIRM AND COMPACT**

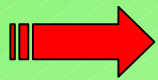
★ Very firm

★ Very, very firm

'Yamagata 3'

'Tirynthos'

# Ripening evolution: *respiration*



## *Respiration amount*

*low* 'Tirynthos' - 'Moniqui'

*high* 'Beliana'



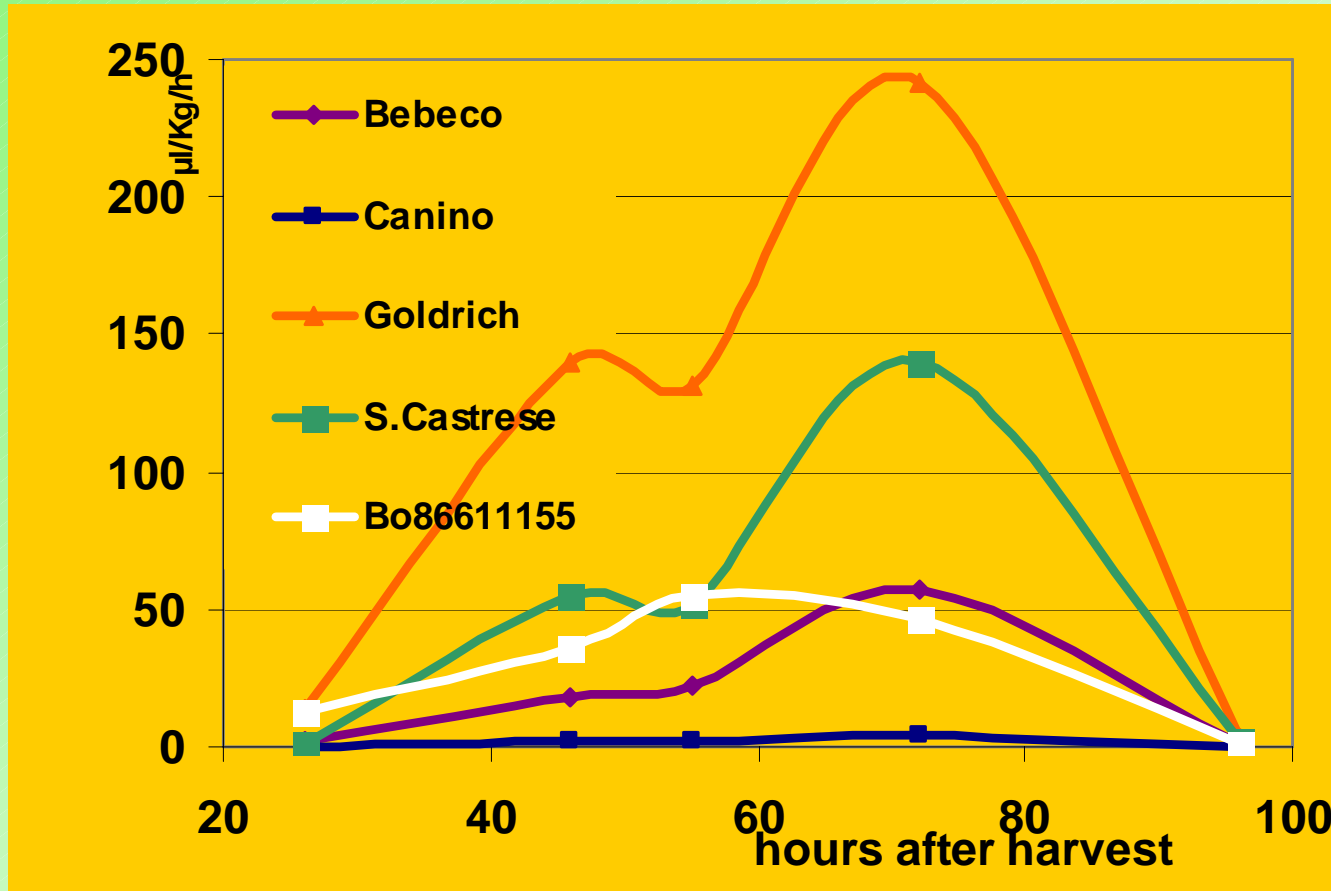
## *Respiration rate*

*slow* 'Bergeron' - 'Goldrich' - 'Tirynthos'

*fast* 'Beliana' - 'Moniqui' - 'EarlyBlush'

*Role of calcium??*

# Ripening evolution: ethylene



# Fruit ideotypes (1): *Fresh market*

*Traditional*



*New*



# Fruit ideotypes (2)



*White*

*novelty!*



*Glabrous skin*



*Orange flesh*

# Fruit ideotypes (3): *Processing*

## STANDARDS ?

*Juce*

*Acidity 1.5%*

*Brix >15%*

*Canning*

*Acidity 1.6-1.8%*

*Brix >15%*

*Drying*

*Acidity <0.5%*

*Brix >20%*





# *DISEASE RESISTANCE*

*> Brown rot (Monilinia spp.)*

*Several pathogens*

*Flowers and fruits (no correlation)*

*Quantitative inheritance*

*Strong environmental effects*



# Sharka (PPV)

## PARENTS:

Harlayne, Harcot, Lito, Orange Red  
SEO, Stella, etc.

 *Heritability*

 *Two or three genes ?*

 *Dominant?*

**M.A.S.**

for D and M strains??





# APRICOT

## Ripening season

Ripening Cultivar	May				June																July					
	28	29	30	31	1	2	3	4	9	10	20	21	22	23	24	25	26	27	28	29	30	1	2	15	16	
<i>Aurora</i>		■																								
<b>BO 88620004</b>						■																				
<b>NINFA</b>							■																			
<b>BORA</b>									■																	
<b>BOREALE</b>										■																
<i>Goldrich</i>												■														
<b>BO 92639060</b>													■													
<b>PIEVE</b>																				■						
<i>Portici</i>																						■				
<b>ARDORE</b>																									■	

# APRICOT

## SEEDLINGS and ADVANCED SELECTIONS



stage	trees
Growing	6.100
Seeds 2004	6.100
Advanced selections	111
Commercial trials	34

# NINFA

+ 4-5 Early Blush

## Tree (high adaptability)

- Habit: open
- Growth: medium-poor
- Bloom: early-medium
- Self-compatible
- Yield: high

## Origin:

*Ouardi x Tirynthos*



- Fruit: 50g.: round, yellow,
- firmness: medium-poor
- flavour: mild



# APRICOT

## Ripening season

Ripening Cultivar	May				June																July					
	28	29	30	31	1	2	3	4	9	10	20	21	22	23	24	25	26	27	28	29	30	1	2	15	16	
<i>Aurora</i>		█																								
<b>BO 88620004</b>						█																				
<b>NINFA</b>							█																			
<b>BORA</b>									█																	
<b>BOREALE</b>										█																
<i>Goldrich</i>												█														
<b>BO 92639060</b>													█													
<b>PIEVE</b>																				█						
<i>Portici</i>																						█				
<b>ARDORE</b>																									█	

# BORA

with Tirynthos

## Origin:

*Early Blush x PA 7005-2*



## Tree (hilly areas)

- Habit: regular
- Growth: medium-high
- Bloom: early-medium
- Part. self-compatible
- Yield: medium-good
- PPV resistance ??



- Fruit: 70g. elongated, orange,
- firmness: good
- flavour: mild



# APRICOT

## Ripening season

Ripening Cultivar	May				June																July					
	28	29	30	31	1	2	3	4	9	10	20	21	22	23	24	25	26	27	28	29	30	1	2	15	16	
<i>Aurora</i>		█																								
<b>BO 88620004</b>						█																				
<b>NINFA</b>							█																			
<b>BORA</b>									█																	
<b>BOREALE</b>										█																
<i>Goldrich</i>												█														
<b>BO 92639060</b>													█													
<b>PIEVE</b>																				█						
<i>Portici</i>																						█				
<b>ARDORE</b>																									█	



# BOREALE

+ 10 Tirynthos

## Origin:

*San Castrese x  
Reale di Imola*



## Tree

- Habit: regular
- Growth: medium
- Bloom: early-medium
- Self-compatible
- Yield: good



- Fruit: 70g., ovate, yellow
- firmness: good
- flavour: mild, acidic
- resistant to cracking

apricot



# APRICOT

## Ripening season

Ripening Cultivar	May				June																July					
	28	29	30	31	1	2	3	4	9	10	20	21	22	23	24	25	26	27	28	29	30	1	2	15	16	
<i>Aurora</i>		█																								
<b>BO 88620004</b>						█																				
<b>NINFA</b>							█																			
<b>BORA</b>									█																	
<b>BOREALE</b>										█																
<i>Goldrich</i>												█														
<b>BO 92639060</b>													█													
<b>PIEVE</b>																				█						
<i>Portici</i>																						█				
<b>ARDORE</b>																									█	

# PIEVE

-2 Portici

Origin:

*Harcot x*

*Reale di Imola*

## Tree

- Habit: open
- Growth: medium-high
- Bloom: medium
- Self-compatible
- Yield: very good



- Fruit: 70g. ovate, yellow,
- firmness: good
- flavour: **oustanding**

apricot\_



# APRICOT

## Ripening season

Ripening Cultivar	May				June																July					
	28	29	30	31	1	2	3	4	9	10	20	21	22	23	24	25	26	27	28	29	30	1	2	15	16	
<i>Aurora</i>		█																								
<b>BO 88620004</b>						█																				
<b>NINFA</b>							█																			
<b>BORA</b>									█																	
<b>BOREALE</b>										█																
<i>Goldrich</i>												█														
<b>BO 92639060</b>													█													
<b>PIEVE</b>																				█						
<i>Portici</i>																						█				
<b>ARDORE</b>																									█	

# ARDORE

+ 15 San Castrese

Origin:

*Harval A.I.*



## Tree

- Habit: very upright
- Growth: vigorous
- Bloom: medium
- Self-compatible
- Yield: very good

- Fruit: 50g., orange-red
- firmness: very-very firm
- flavour: good, not juicy



# APRICOT

## Ripening season

Ripening Cultivar	May				June																July					
	28	29	30	31	1	2	3	4	9	10	20	21	22	23	24	25	26	27	28	29	30	1	2	15	16	
<i>Aurora</i>																										
<b>BO 88620004</b>																										
<b>NINFA</b>																										
<b>BORA</b>																										
<b>BOREALE</b>																										
<i>Goldrich</i>																										
<b>BO 92639060</b>																										
<b>PIEVE</b>																										
<i>Portici</i>																										
<b>ARDORE</b>																										

**BO 88620004**

+4 Early Blush

Origin:

*NJ A 53 x NJ A 62*

Tree

- Habit: open
- Growth: vigorous
- Bloom: medium
- **Self-incompatible**
- Yield: average-low



- Fruit: 60-65g., orange-red
- firmness: firm
- flavour: **very good**



# APRICOT

## Ripening season

Ripening Cultivar	May				June																July					
	28	29	30	31	1	2	3	4	9	10	20	21	22	23	24	25	26	27	28	29	30	1	2	15	16	
<i>Aurora</i>		█																								
<b>BO 88620004</b>						█																				
<b>NINFA</b>							█																			
<b>BORA</b>									█																	
<b>BOREALE</b>										█																
<i>Goldrich</i>												█														
<b>BO 92639060</b>													█													
<b>PIEVE</b>																				█						
<i>Portici</i>																						█				
<b>ARDORE</b>																									█	



# BO 92639060

with Goldrich

Origin:

*Harcot x*

*Reale di Imola*

## Tree

- Habit: medium upright
- Growth: medium
- Bloom: medium
- Self-compatible
- Yield: very good



- Fruit: 70-80g. ovate, yellow,
  - firmness: very good
  - flavour: **very good**
- (tendency to split)

apricot\_