

**NSW, primary Industry:**  
**2013 Citrus Growers**  
**Technical Conference**

**Israeli Citrus Industry: Current  
situation, and future directions.**

**Shuki (jushua) Kanonich, Israel**

**Many thanks to the organizers for  
invite me to participate in this  
conference.**

# **Israel- agricultural area and population**

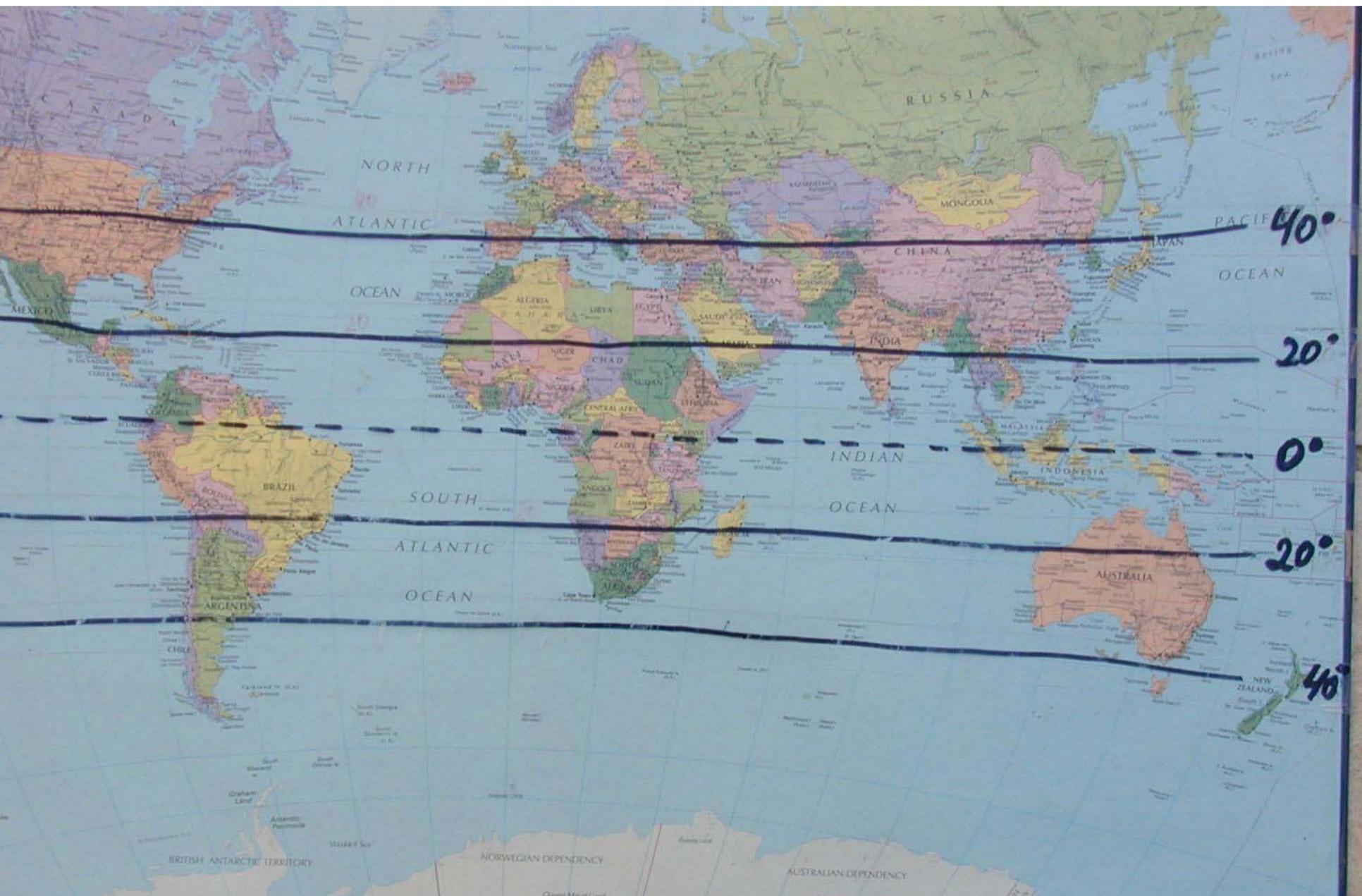
- **Total area - 22,000,000 square km**
- **Population - 7,000,000 people**
- **Cultivated area – 350,000 hectare**
- **Citrus area – 19,000 hectare**



חפץ ע  
 חסע  
 חשגו



# CITRUS world BELT



# Israel- changes in citrus area (Ha)

- **1975 - 42,000**
- **1997 - 23,000**
- **2001 - 19,000**
- **2003- 17,500**
- **2013 - 19,000**

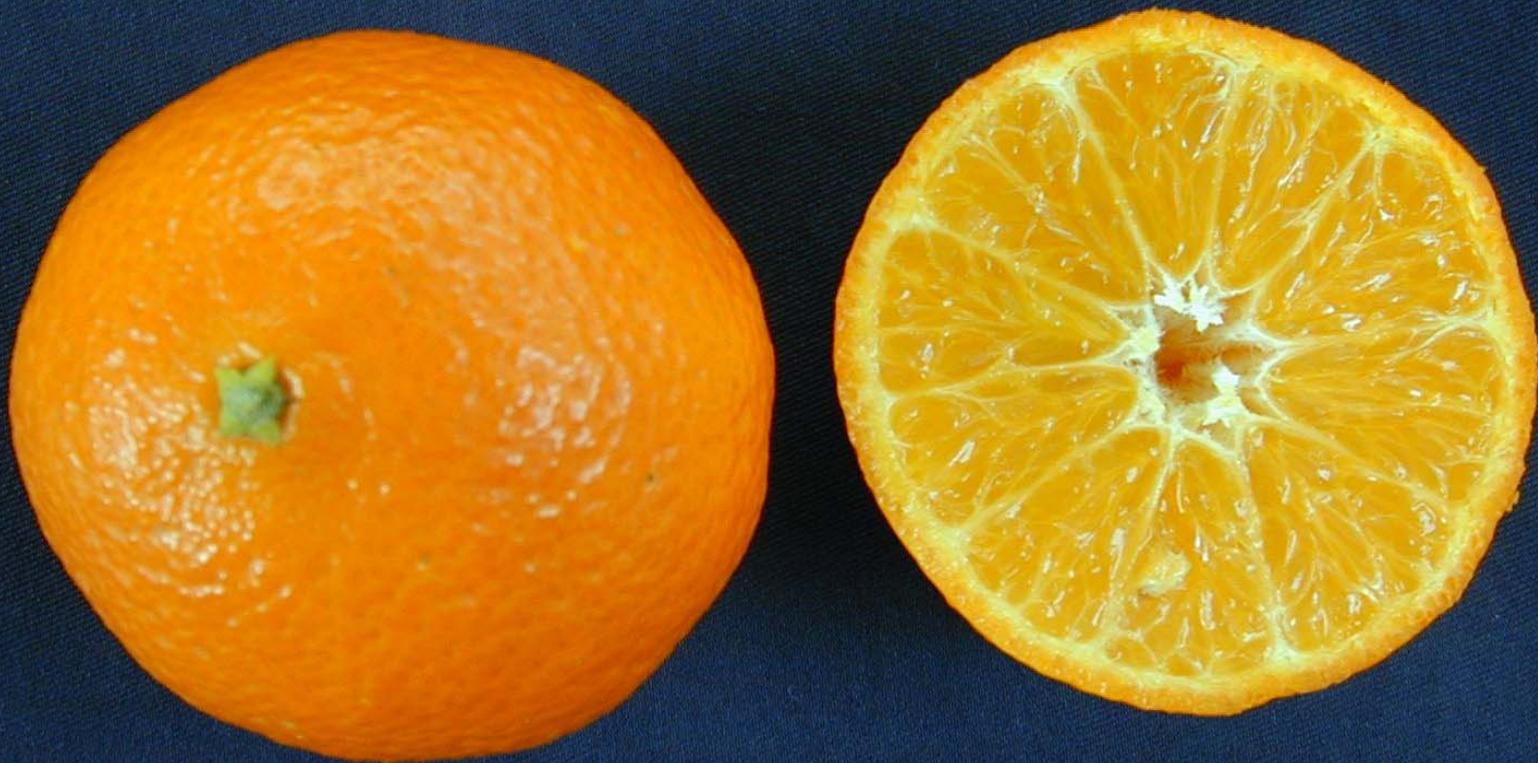
# Shamouti – Israeli local orange



# Shamouti – 4 years bearing tree



# Michal radiated – a.s.l (May-June)

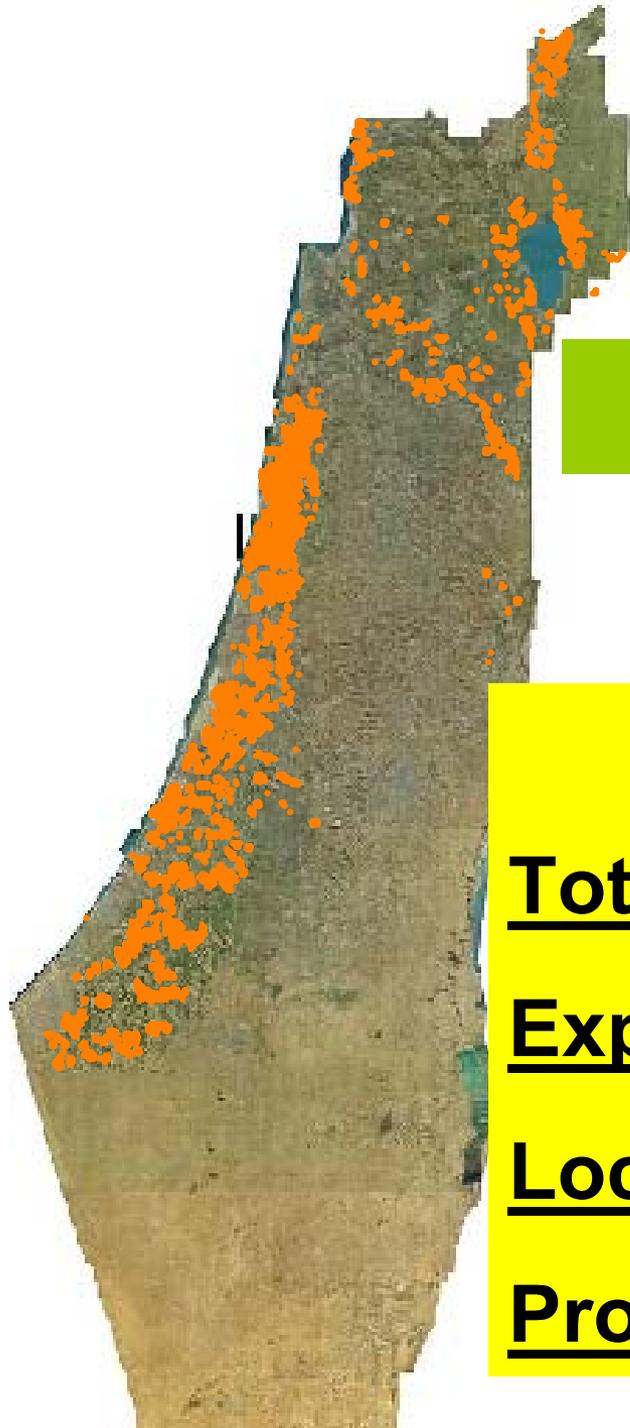


# 'ORRI' - TYPICAL FRUIT (July-October)



# 'ORRI'- TYPICAL FRUITS OF ISRAELI COAST





## Israel Citrus industry

Total area 19000 Ha

Total Production (ton) 600,000

Export 180,000

Local consumption 200,000

Processing 220,000

# New plantation in the Israeli desert (Negev)



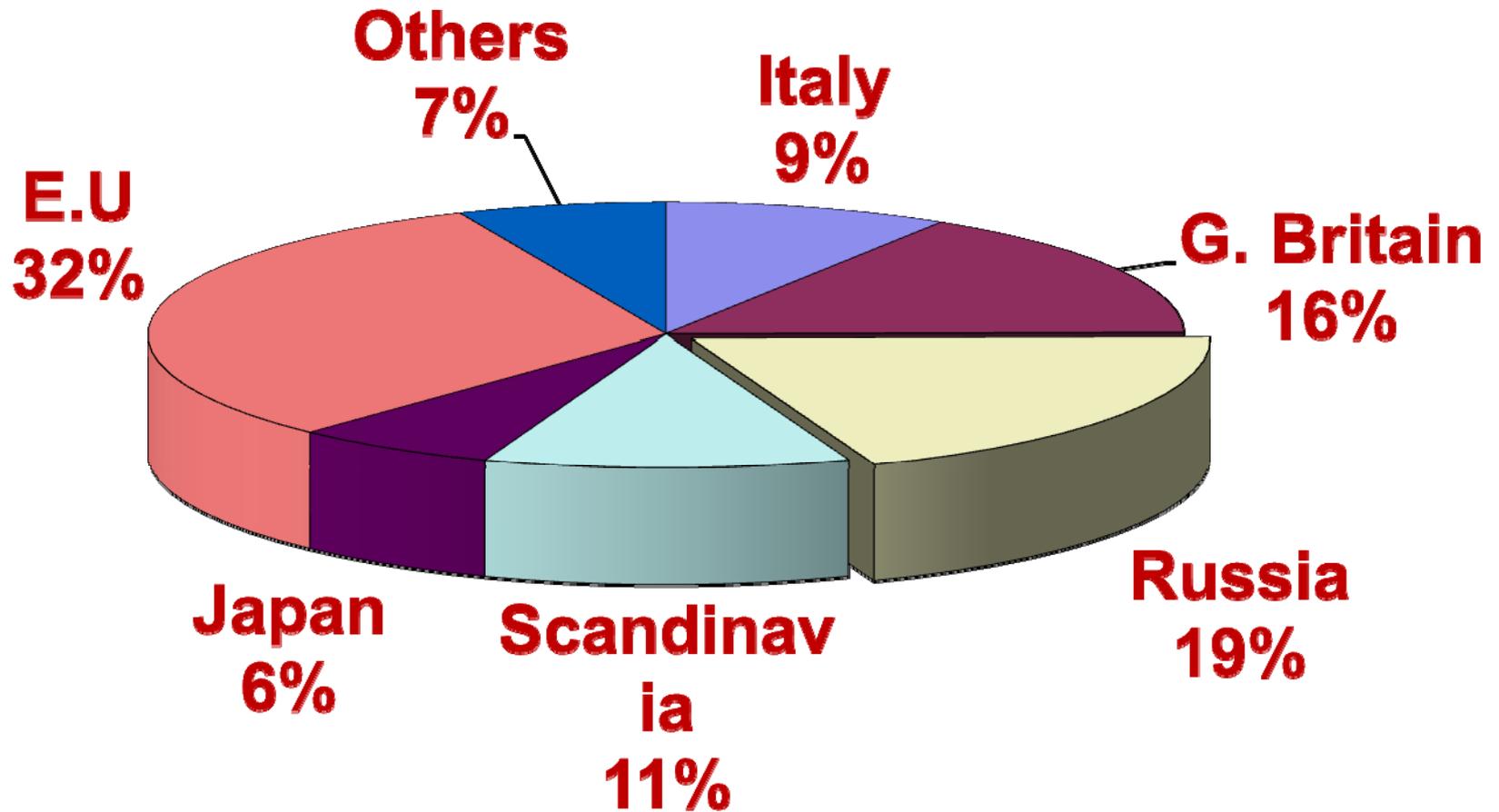
# New plantation in the Israeli galilee (north)



# Israel Total citrus hectars – 19,000

- **Mandarins - 8,600 (45%)**
- **(Orri – 4,700 , 25%)**
- **Oranges - 4,200 (22%)**
- **Grapefruits - 4,150 ( 22%)**
- **Lemons- 1,800 ( 9.5%)**
- **Pummelo - 250 ( 1.5%)**
- **Total: 19,000 Ha**

# **ISRAEL'S CITRUS EXPORT**



# Israel citrus-Main problems

## 1. Profit reduction

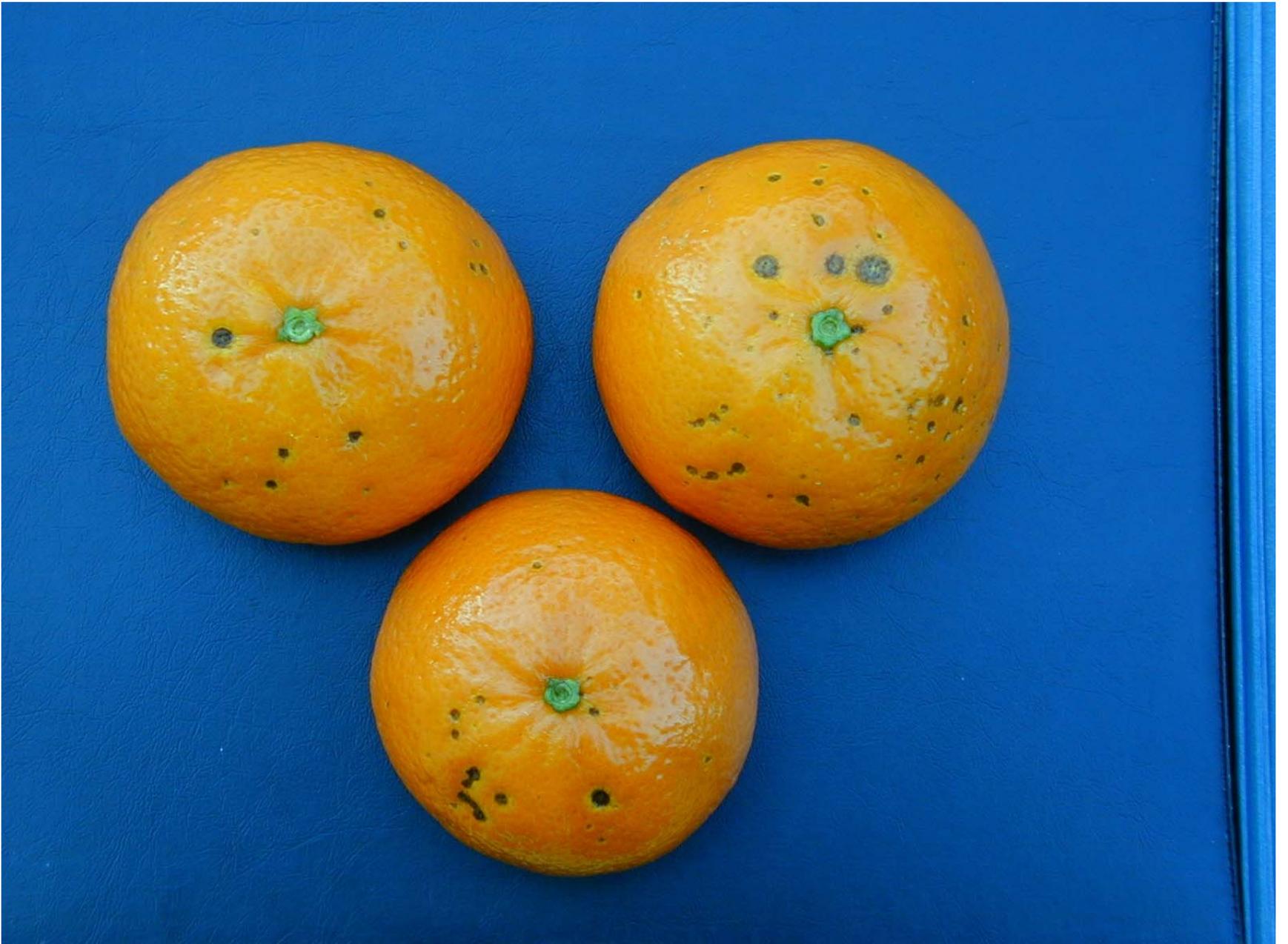
Last five years and today– same income and market prices, but production costs increase in **30%**.

- Costs today- 13,000 dollars/Ha

- Cost 5 years ago-10,000 dollars/Ha

## 2. Fruit set, Alternaria, splitting, shelf life ,hail +wind damage.

# Alternaria Brown Spot



# Alternaria in new mandarin variety



# Fruits splitting: september - october



# Fruits splitting – Mandarins high lost



# Fruits splitting – cause high yield lost



# Orra – hail damage



# Orra – hail damage after month



# Orri net cover- to prevent wind and hail damage (cost – 1500 dollars/Ha)



# Orri net cover- to prevent damage (cost – 1500 dollars/Ha)



**Israel: yearly production expenses**  
**(Australian dollars/ hectare for 40 ton )**

<b><u>variety</u></b>	<b><u>Total cost</u></b>	<b><u>Picking</u> <b>(1 ton)</b></b>
<b>Orri</b>	<b>13000-14000</b>	<b>120</b>
<b>Michal, Meirav, Orra</b>	<b>12000-13000</b>	<b>100</b>
<b>Nova, Minneola</b>	<b>12000-13000</b>	<b>80</b>

# Profitability of citrus orchard in Israel

(based on 40 ton/Ha crop)

- **Orri: 30,000 dollars/Ha**
- **Michal, Meirav, Orra - 21,000 dollar**
- **Nova, Minneola – 15,000 dollars/Ha**
- **Newhall Navel – 14,000**
- **Shamouti - 12,000**
- **Total yearly expenses-13,000 do/Ha**

# Israeli citrus - prices orchard gate (Australian dollars/ton)

<u>variety</u>	<u>Export</u>	<u>Local</u>
<b>Orri</b>	<b>850</b>	<b>500</b>
<b>Michal, Meirav, Orra</b>	<b>500</b>	<b>400</b>
<b>Nova, Minneola</b>	<b>350</b>	<b>300</b>

# New trends in Israel citrus industry

- 1. Moving from growing Oranges and grapefruits to Mandarins.**
- 2. Moving from growing along the Israeli coast (pleasant coastal climate and sandy soil) to inland hot climate (heavy clay soil)**

# Israel citrus-Main target

1. Developing new tasty mandarins varieties.
2. Developing field methods to increase yield, fruits size, decrease alternation and fruits splitting = tool box.
3. Developing sprays to strengthen the peel and Improving post harvest.

# Citrus market - three main seasons

## 1. Fall : March-April (Sep-Oct)

**Good prices. Low quality. Local market**

## 2. Winter: May-July (Nov-Jan)

**Good varieties. Fair prices. Local and  
Export**

## 3. Spring: August-October (Feb-Apr)

**Good varieties. good prices. Local and  
Export market.**

# Israel main commercial varieties

## 1. Fall : March-April (Sep-Oct)

**Satsuma, Rishon, Kedem, Newhall**

## 2. Winter: May-July (Nov-Jan)

**Michal, Meirav, Nova, Odem, Ora, Orri**

## 3. Spring: August-October (Feb-Apr)

**Orri, Mor, Murcot, Ortanique, Hadas**

# Export/local Markets demands

**1. Good fruits size- large fruits**

**Export: 63-73 m”m. Local: 70-75**

**2. Freshness and nice appearance**

**3. Tasty and solid segments.**

**4. No Seeds**

**5. Strong peel. No rot**

**6. Good peeling.**

# Growers needs

- 1. Yield- good production of 40-50 ton per hectare every year.  
(low alternation).**
- 2. Strong peel-resistance to decays**
- 3. Good compatibility with several rootstocks.**
- 4. Fair (economic) and stable price.**

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# What is the Israeli future direction?

## 1. Developing high value mandarins

- **Productive and stable yield**
- **Seedless- low seeds.**
- **Very tasty (sweet)**
- **Easy peeling and not splitting**
- **Resistant to 'Alternaria brown spot**
- **Strong peel. Long shelf life**

## **2. Developing new treatments to minimize disadvantages**

**1. Increase yield**

**2. Decrease alternation**

**3. Enlarge fruits size.**

**4. Improve taste**

**5. Improve peel strength for more freshness and to reduce decay.**

**6. Decrease Seeds number**

# **RISHON- SEEDLESS, PRODUCTIVE, March (oct)**



**RISHON- Good fruits size(Nova size). Medium taste**



# Rishon(18/10) :fruits after 5 days degreening



# **Kedem(20/9) :seedless, easy peeling, March**



# Kedem(20/9) : Bud mutation of Rishon



מנדררונה קדם

# Kedem grafted on C-35 (Israel - 20/9)



# Kedem(18/10) :fruits after 5 days degreening



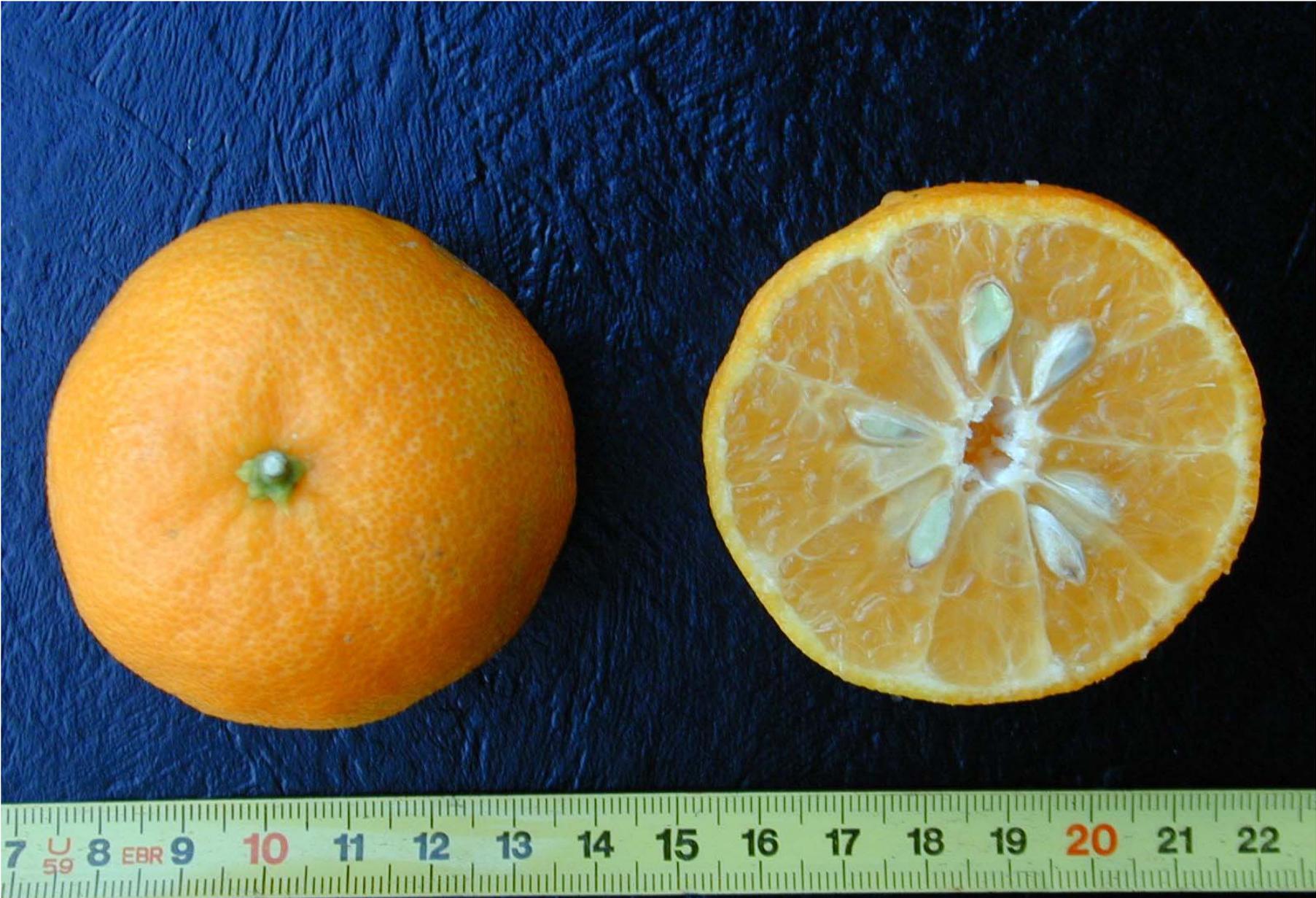
# Rishon(18/10) :fruits after 5 days degreening



# Admoni –deep orange color



**Admoni – Very Early, seeded, March**



# ראשון מוקדם (30/9/12)



# קדם – כרמיה, 812 סוף ספטמבר 2011



# Kedem(20/9) :seedless, easy peeling, March



# Kedem(20/9) :productive, March



**'TAMI' - typical fruit, full color mid May.**



# 'TAMI' - mid November. Trees age- 8 years



# ‘TAMI’- typical fruit set. mid December.



# ‘Tami’-small trees, early bearing.age- 4 years



# Tami: early season. Internal ripening on April



# New hall Navel- the profitable orang in Israel



# New hall Navel- picking from March to July



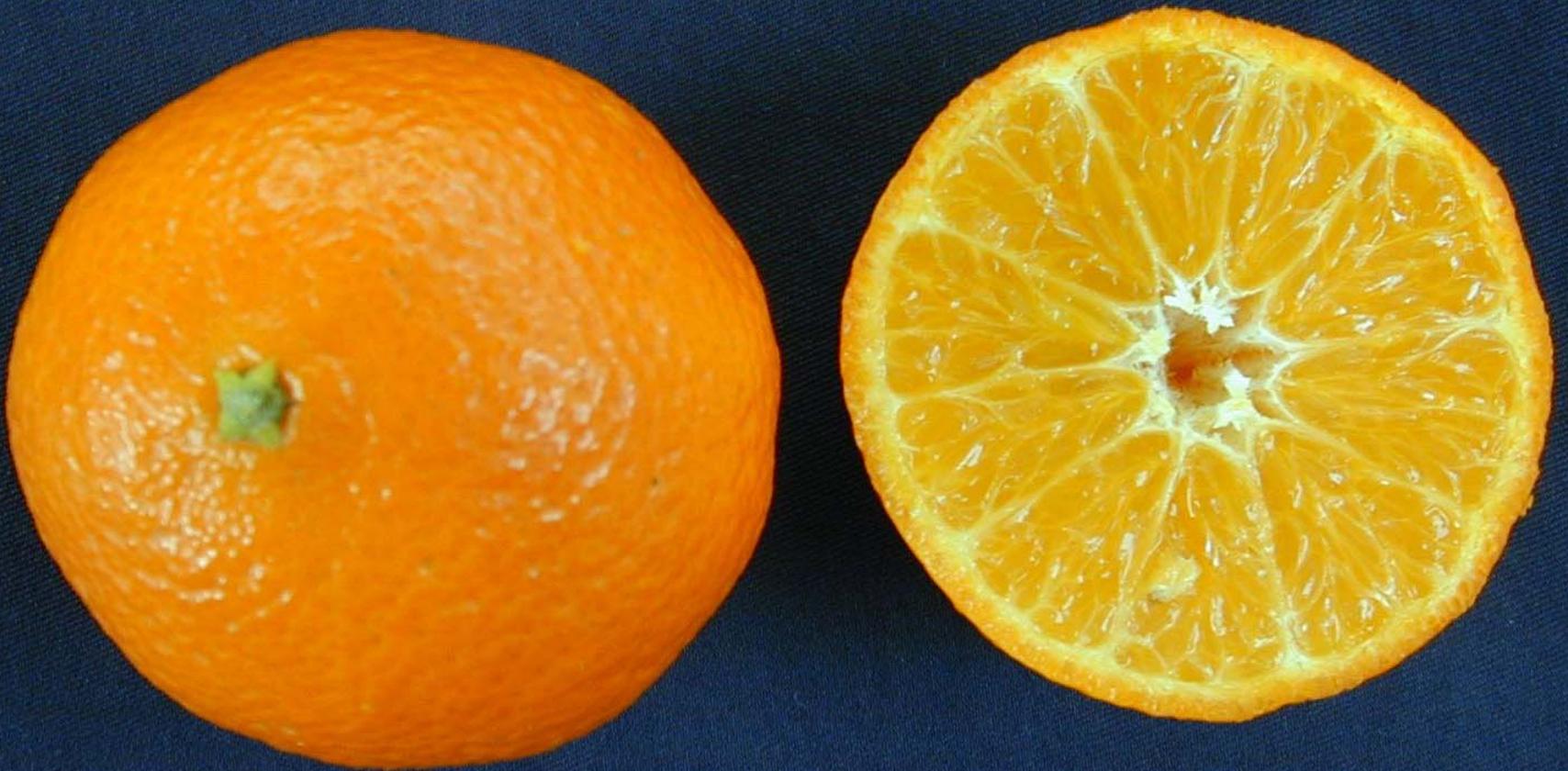
# Red grapefruit – Star Rubi



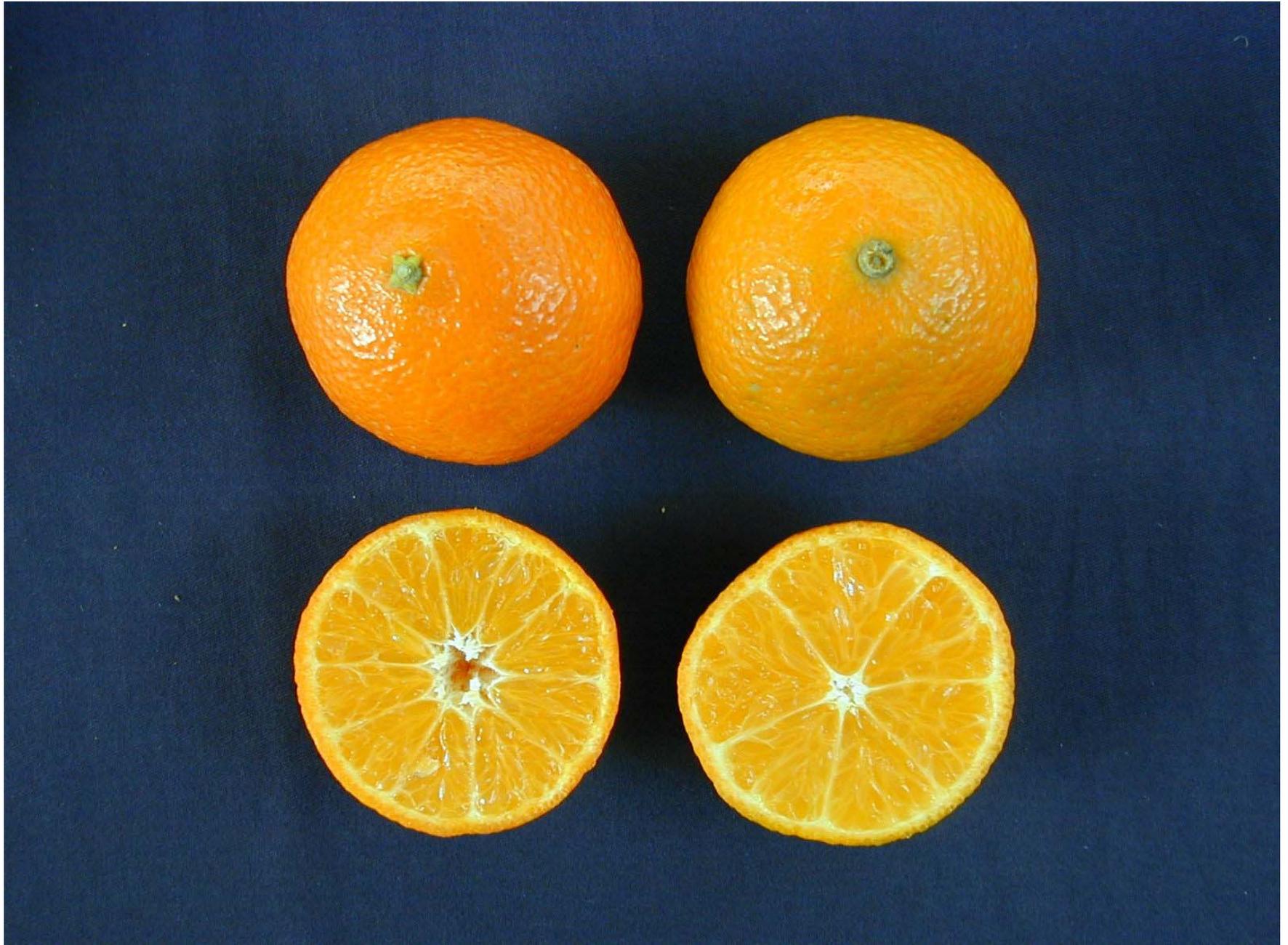
**MICHAL, April-June, PRODUCTIVE, SEEDLESS**



**MICHAL S.L: May, RED PEEL, SEEDLESS**



# Michal a.s.l.: queen of the Israeli mandarins,

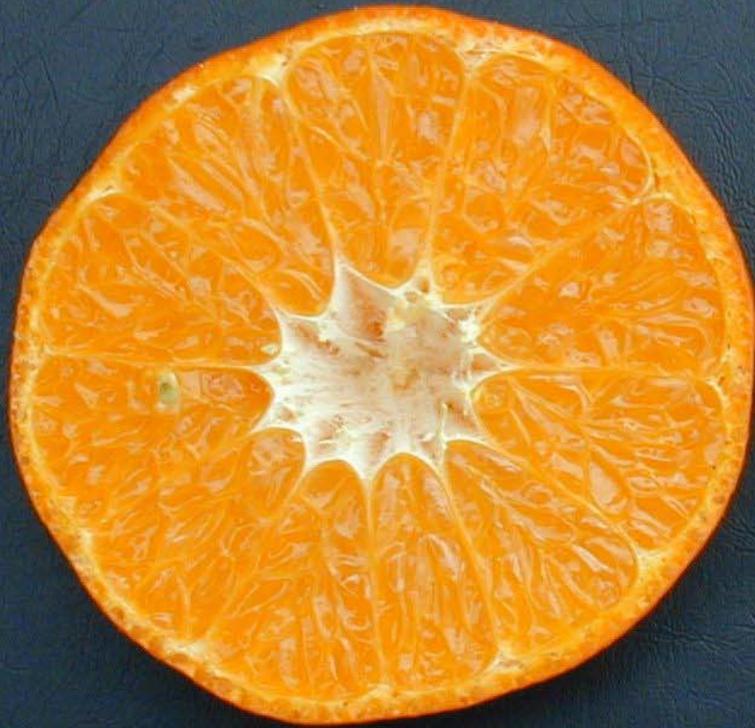


# Michal – Extreme Excess fruits amount

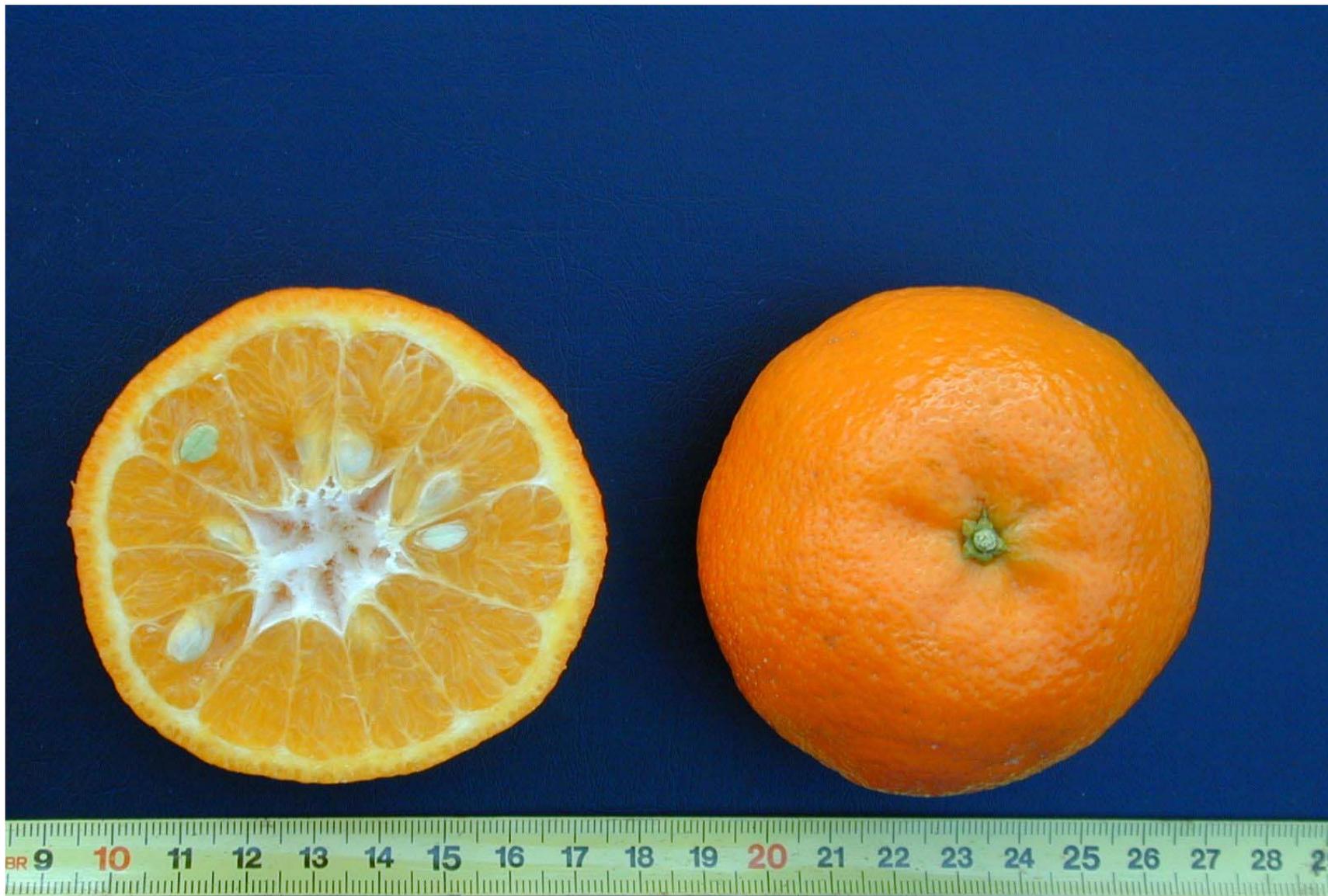




**DITY s.l.**— June, RED COLOR, VERY TASTY



# MEIRAV- June-July, LOW SEEDS IN ISOLATION



# Mierav s.l.



# ‘Meirav s.l.’ - Typical fruit (June)



# Mairav- June, export to Russia



# **'Meirav' - Typical tree grafted on C-35**



# ‘Meirav’- Typical fruits appearance on tree



# 'Meirav' - Typical fruits after picking



# 'Meirav' on C-35 (year 6), incompatibility



**‘Meirav’ on C-35 age 7 years. shoots  
immerge: advance incompatibility**



# 'Meirav' on C-35 – death trees(age 8)



**Odem: June- October. Few seeds, low acidity**



# Odem – Middle June, good taste



# Odem: June. Few seeds, good taste



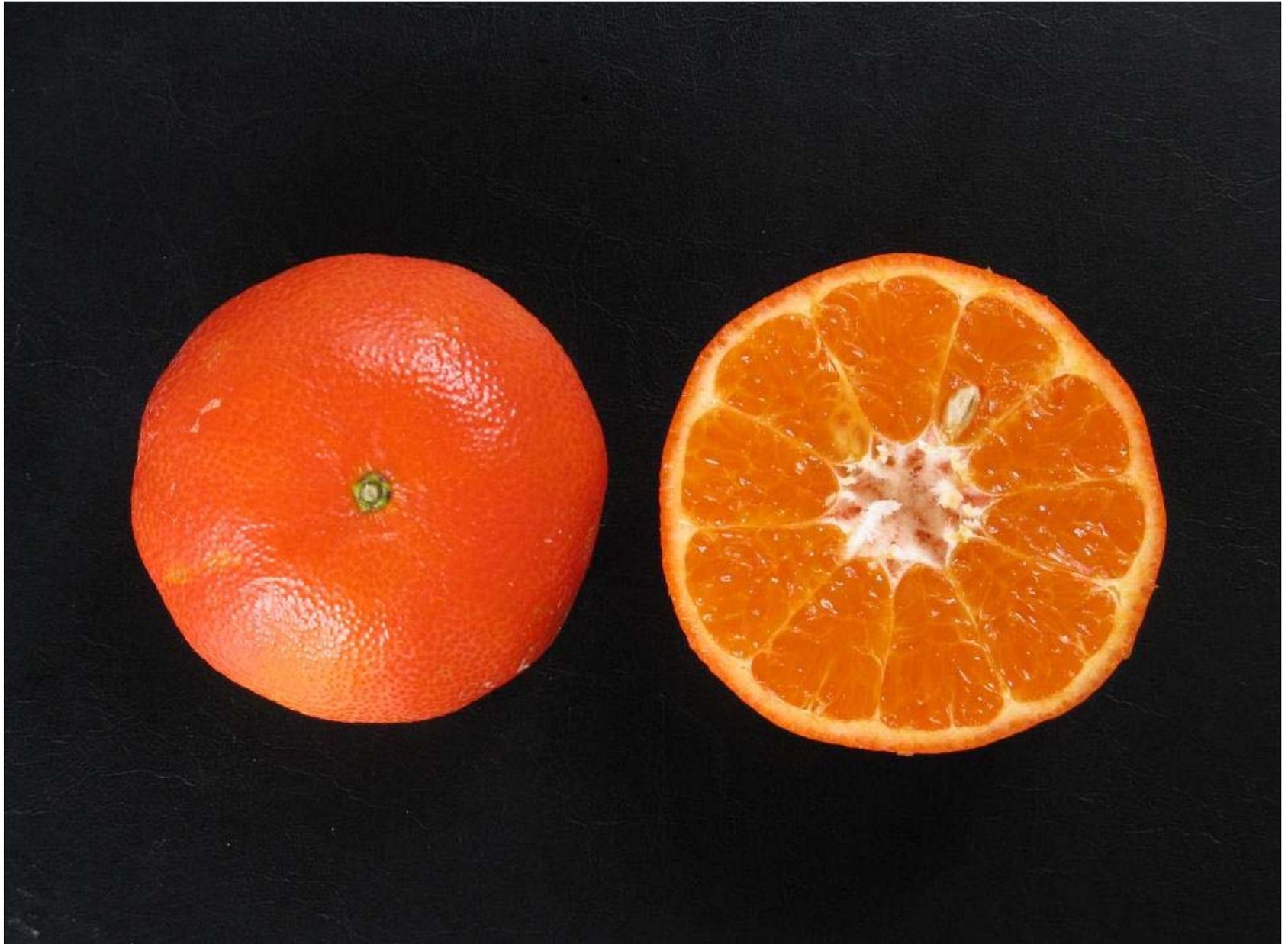
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# Odem – nice color after packing



# Odem – deep red color in October



# Odem – over cropping



# Odem – severe over cropping



# Odem – excess fruits



**Thank you for your attention and  
for your hospitality.**