Perennial Horticulture in Pakistan
Innovations and Interventions

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University California Davis
Mission: ....improve Pakistan’s tree fruit industries...
Results with trees require years....
...done well will produce for decades.
Areas of emphasis: ....selected for greatest potential impact...

Areas of emphasis:

• Postharvest production and alternative uses
• Underserved tree crops
• Cultivar diversification
Crops: ....top three and four underserved tree fruit crops...

Tree fruit crops and number of projects: 24

- Mango (4)*
- Citrus (7)
- Guava (3)
- Pistachios (4)
- Olives (2)
- Grapes (1)
- Ber (1)
- Value Added (2)*

* 5 Completed
Partners: ....Punjab, KPK, Sindh, Balochistan...

Partners:
- ATI-Sakrand
- ARI-Tarnab
- CRI-Sargodha
- ARI-Quetta
- UAF
- AAUR
<table>
<thead>
<tr>
<th>Crop</th>
<th>UAF</th>
<th>AAUR</th>
<th>ARI Quetta</th>
<th>ARI Sargodha</th>
<th>ARI Tarnab</th>
<th>ATI Sakrand</th>
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</thead>
<tbody>
<tr>
<td>*Completed</td>
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<tr>
<td>Mango</td>
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<tr>
<td>Citrus</td>
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<td>4</td>
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<tr>
<td>Guava</td>
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<tr>
<td>Olive</td>
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<td>2</td>
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<tr>
<td>Pistachio</td>
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<tr>
<td>Ber</td>
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<tr>
<td>Grape</td>
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<td>Post Harvest</td>
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<tr>
<td>Value Added</td>
<td>2*</td>
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</table>
Result: ….24 projects with 6 Pakistan partners in 7 fruit crops…

Highlight three:

• Mango diversification in Punjab
• Pistachio industry development in Balochistan
• Postharvest program in Sindh
Increasing Mango Cultivar Diversity

Agricultural Innovation Program (AIP) for Pakistan

Comparison of Potential Mango Accessions with Four Commercial Cultivars

<table>
<thead>
<tr>
<th>LINE #</th>
<th>ACCESSION/ CULTIVAR NAME</th>
<th>X</th>
<th>NUMBER OF PLANTS</th>
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<tr>
<td>1</td>
<td>Sufaid Chaunsa</td>
<td>x</td>
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</tr>
<tr>
<td>2</td>
<td>MLT-658</td>
<td>x</td>
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<td>3</td>
<td>MLT-239</td>
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<td>MLT-369</td>
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<td>MLT-248</td>
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<td>5</td>
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<td>6</td>
<td>KHW-250</td>
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<td>5</td>
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<tr>
<td>7</td>
<td>Malda</td>
<td>x</td>
<td>5</td>
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</tbody>
</table>

S.B. Chaunsa  | RYK-644  | RYK-265  | KHW-251  | MLT-240  | RYK-426  | Anwar Ratole  | 5

Institute of Horticultural Sciences, University of Agriculture, Faisalabad, Pakistan
Mango Cultivar Diversification:
- 471 accessions evaluated
- 10 selected
- ~ 600 plants distributed

Goal: new cultivars
- different harvest dates
- disease resistance
- postharvest quality
Baluchistan’s Pistachio Industry
FARMER.
Haji Dad Mohammad
Killi Karez Sore
Mastung
Akbari
Rais Ghulam Haider.
Killi Karek Sore
Mastung
12/15/2014
Badami
DIRECTORATE OF FRUIT
PISTACHIO BLOCK
YEAR OF PLANTATION
MARCH 1970
BLOCK NO. 8
PISTACHIO VARIETAL TRIAL
AT THE RATIO 1:9 (MALE & FEMALE)

VARIETES
M_1, M_2, Z_1, Z_2

BUDDING
CHIPE BUDDING
1. T-BUDDING
2. DATE OF PLANTATION  Feb. 2004
Baluchistan Pistachio Model Farm

By
Mehjabeen Hameed Sulemanzai
Lecturer SBK Women University Quetta
meh051185@gmail.com
Date 10/12/20
Baluchistan’s Pistachio Industry

Developing the Pistachio Industry:
- rehabilitate 45 year old ARI-Quetta block
- develop a nursery
- plant a model orchard
- develop a grower association:
  - Farmer Field Schools
Developing Postharvest in Sindh
Developing Postharvest in Sindh

Postharvest Laboratory:
- provided basic laboratory and field testing equipment
Developing Postharvest in Sindh

Curriculum for Students:
- sent Mr. Keerio to UC Davis Postharvest Short Course in June 2015
- funded UAF Assistant Professor Dr. Raheel Anwaar to cooperate in course design
  - first pilot course to be tested January 2016
- plans for UAF Combined Teaching and Farmer Field School Internship in 2017
Progress Summary
Perennial Horticulture

• With our Pakistan partners:
  • UAF
  • AAUR
  • CRI-Sargodha
  • ARI-Tarnab
  • ARI-Quetta
  • ATI- Sakrand

• ..... Developed 24 projects and completed 5, established 2 postharvest laboratories, 1 nursery lath house, conducted 26 trainings, distributed ~ 600 mango plants, 600 pistachio rootstock seeds...
Thank You