

ASLP-PHDEB Mango Quality Improvement Workshops

July 09 – 13, 2007

Collaborative Workshops of ASLP Mango Supply Chain Management Project and Pakistan Horticulture Development & Export Board (PHDEB) on Mango Quality Improvement

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1. Introduction

Mango Supply Chain Management Project of Australia-Pakistan Agriculture Sector Linkages Program (ASLP) and Pakistan Horticulture Development & Export Board (PHDEB) are working with the same objective of improving the produce quality and status of supply chains of Pakistani mango for export as well as domestic markets. The ASLP mango supply chain management project conducted one workshop on mango quality improvement each in Sindh (Tando Allahyar) and Punjab (Lodhran) provinces in June 2007 when the Australian collaborators of the project visited Pakistan to initiate the project formally, while PHDEB has formulated its crop (mango) specific core groups in the two provinces which conduct regular meetings (seminars, trainings, workshops) in the relevant areas focusing different pre and post harvest factors determining produce quality of mango.

The ASLP Mango Supply Chain Management project demonstrated the methods of harvesting, desapping, grading and packing of the mangoes for quality improvement in the two workshops (each in Sindh and Punjab). In order to extend the technology of harvesting, desapping, grading and packing, the ASLP and PHDEB arranged to replicate the same workshops at mass scale to large number of audience and a series of workshops was planned in the mango production areas of Punjab (R.Y. Khan, Multan and Shuja Abad).

2. Objectives of the Workshops

The specific objectives of these workshops were as follows;

- Practical Demonstration cum Training on Post Harvest Management of Mango (Maturity Determination, Harvesting, Desapping, Grading and Packing at Farmer's field)
- Capacity development and improvement in the technical skills of F&VDP Staff, Mango Research Station, Dept of Agriculture, BZU, Growers, Contractors and Exporters
- Sustainable core group activities

3. Workshops Facilitators

The team of facilitators of these workshops was comprised of the following;

- Mr Muhammad Sohail Mazhar (Project Development Officer, ASLP Mango Supply Chain Management Project)
- Mr Babar Ehsan Bajwa (Manager Technical, PHDEB)
- Mr Asif Mahmood Qureshi (Field Officer, PHDEB)
- Mr Faheem Ur Rehman (Field Officer, PHDEB)

4. Details of the Workshops

The mango quality improvement workshops were conducted in the three cities of the Punjab province according to the plan (annex 1). The details of each workshop are as follows;

4.1 JDW Orchards, R.Y. Khan

The first workshop of this series was held at Jamal Din Wali (JDW) Orchards in Sadiq Abad (Rahim Yar Khan) on July 10, 2007. The F&V Development and Diversification project of R.Y.

Khan collaborated with ASLP and PHDEB for arrangements of this workshop. The venue of the workshop (JDW Orchards) was easy to approach and well known orchard of Sadiq Abad. About 60 growers, contractors, exporters and service providers were invited in this workshop. The workshop started with the recitation from the Holy Quran, followed by welcome address by Mr. Mujib Arjmand, who also described the activities being performed at the orchard. He let the participants know that the orchard was just like a forest in year 2002. He devoted himself for the improvement of the orchard. Now the situation was far different and the orchard was now the only model orchard of the vicinity.

Mr Babar Ehsan Bajwa defined the role of PHDEB in the welfare of mango industry of Pakistan. He also enlightened the activities of PHDEB and their impacts on the industry. He showed the snaps of the walking the Chain Activity of the ASLP to aware the participants of the workshop with the Australian mango industry.



Mr Babar Ehsan Bajwa and Mr Muhammad Sohail Mazhar briefing the audience of the workshop

Mr Muhammad Sohail Mazhar introduced the ASLP to the participants of the workshop. He described the objectives of the ASLP Mango Supply Chain Management Project to the participants, briefed them about the planned activities for the current season, supply chain mapping and the monitoring studies in the Sindh province.

The participants were told by Mr Sohail that the core objective of today's workshop is to practically train the participants to practice the postharvest mango handling to avoid sapburn and to improve the fruit quality of mango on the farms. The participants were divided into two groups. One group (covering the maturity indices and harvest activities) was led by Mr Babar Ehsan Bajwa and the other group (covering the activities of desapping and fruit packing) was led by Mr Muhammad Sohail Mazhar.

The participants were guided about the determination of the fruit maturity, using the refractometer and the Calypso colour guide and fruit harvesting, using the mango poles. Further they were trained how to desap the fruit using lime solution as desapping agent, being the most feasible and easily available resource at the farms of every person

The participants were trained to desap the mango using 1% lime solution followed by fruit packing in corrugated boxes for export markets. They were told that how the fruit quality improvement can help increasing the profit from the produce at each step of the supply chain.

They were guided how to handle the fruit after packing in the boxes for export through air freight or sea freight.



Practical demonstration, feedback and group photo of the workshop

4.2 Meeting with F&V Development and Diversification Project Team

At the following day, the PHDEB and ASLP people conducted a meeting with the Field Officers of the F&V Development and Diversification Project, R.Y. Khan. The Field Officers were trained to continue such workshops at as much farms as possible in the current season, so that the latest available technology could be fully utilized.

The PHDEB and ASLP people moved from R.Y. Khan to Multan to continue the workshops in Multan.

4.3 Alizai Fruit Farms, Multan

The second scheduled workshop was arranged at Alizai Fruit Farms, Multan. The facilitators (PHDEB and ASLP people) arrived at the venue of workshop at 10:00 Hrs and arranged the things according to the requirements. The people of F&V DP Multan, growers, contractors, commission agents and people from BZU, Multan arrived at the venue of the workshop by 11:00 Hrs.



Mr Babar Ehsan Bajwa and Mr Muhammad Sohail Mazhar briefing the audience of the workshop

The workshop started with the recitation from the Holy Quran. Then Mr Babar Ehsan Bajwa and Muhammad Sohail Mazhar briefly introduced their respective work and progress for the improvement of status of mango industry of Pakistan. Mr Babar Ehsan Bajwa also described the objective of today's workshop before the participants of the workshop. He told them that there is a need of very simple technology to be used by the farmers, contractors and commission agents at their respective farms and the extension people could disseminate the technology easily at mass scale to be benefited by all, and the ASLP and PHDEB will introduce that technology to all the participants.



Practical demonstration and feedback of the workshop

The participants were again distributed in two groups, but this time one group was trained by Mr Asif Mahmood Qureshi and the other group was trained by Mr Faheem ur Rehman Memon (this

was done to build confidence among the field officers of PHDEB to continue such workshops in future as well), while Mr Babar Ehsan Bajwa and Mr Muhammad Sohail Mazhar remained assisting them at the two stations (Harvesting and Desapping).

In this workshop, about 50 people were trained for harvesting, desapping, grading and packing of mangoes for quality enhancement.

4.4 Khakwani Fruit Farms, Shuja Abad

The third and the final workshop of this series of workshops was held at Khakwani Fruit Farms, Shuja Abad, Multan. This area is a separate cluster of mango orchards, about 40 kilometers away from Multan. The workshop facilitators arrived the venue of workshop at 11:00 Hrs and the participants (local growers, contractors, commission agents, harvesters, experts from the Mango Research Station and participant from Postharvest Research Station, AARI Faisalabad) arrived by 11:30 Hrs.



Mr Asif Qureshi and Mr Faheem Ur Rehan educating audience about fruit maturity

The workshop started by introduction of the participants. Mr Babar Ehsan Bajwa recited few verses from the Holy Quran and explained the role of PHDEB in improvement of the mango industry of Pakistan. He also described the background of ASLP, its role in mango industry of Pakistan, the purpose of the current workshop and the scope of the adaptation of the technology.



Workshop participants are trained for harvesting with harvesting poles

For practical demonstration of the activities, Mr Asif Mahmood Qureshi, Mr Faheem ur Rehman Memon and Mr Muhammad Sohail Mazhar explained the criteria of maturity determination by the use of Calypso colour chart and measurement of TSS by the use of refractometer.



Mango desapping in lime for quality improvement

The whole group visited the orchard and practically learned and performed fruit harvest by the use of mango picking poles. The harvest labour of the farm was also trained and asked to perform the harvest by these poles, who highly admired the use of these poles. The fruit was desapped by the trainers as well as the farm labour using 1% lime solution. The fruit was dried and packed in the corrugated boxes. Two boxes of fruit taken from conventional postharvest handling were also filled and left at the farm for taking data of the fruit at ripening.

Thirty five people were trained for fruit maturity determination, harvesting and desapping for quality improvement in this workshop.



Workshop concluding session and the group photo

5. Workshops Evaluation

At the end of each workshop, the project team got feedback from the participants (annex 2). An evaluation form was developed for this purpose (annex 3). The general feedback given by the participants was as follows;

- The information presented in the workshop was easy to understand
- The practical on-farm demonstration of modern technology was an appreciated effort
- The knowledge gained from the workshop was very useful
- Such workshops were desired to be arranged either on quarterly basis or the frequency can even be increased on demand and the participants agreed to be involved in such workshops in future as well
- The technology was required to be spread to more audience by conducting more number of workshops
- Similar workshops were desired to be conducted ahead of the mango season in the next cropping year
- The information presented in the workshop should be given to the farmers in printed format
- The tools used in demonstration should be readily available to the stakeholders (growers, contractors, commission agents, exporters), so that the advantage should be harvested from the technology
- The material incentives from this technology should also be given to the stakeholders

Annex 1: Program Schedule

Day & Date	Time (Hr.)	Activity
Monday, July 9 (R.Y. Khan)	17:00	PHDEB & ASLP People arrived R.Y. Khan from Lahore / Karachi / Multan
Tuesday, July 10 (R.Y. Khan)	09:30	Participants arrived JDW Orchards, Sadiq Abad
	09:30 - 11:30	Presentations on Orchard Management, PHDEB & ASLP
	11:30 - 13:30	Practical demonstration and performance of Maturity Determination, Harvesting, Desapping, Grading and Packing
	13:30 - 14:30	Lunch/Prayer Break
	14:30 - 17:00	General Discussion on On-going Activities on mango Quality Improvement and Marketing
	20:00	Dinner
Wednesday, July 11 (R.Y. Khan)	10:00 -12:30	Meeting with F&V DP at R.Y. Khan Office
	12:30 - 13:30	Lunch
	14:00 - 19:00	Travel to Multan
	20:00	Dinner
Thursday, July 12 (Alizai Fruit Farms, Multan)	09:00	Participants arrived Alizai Fruit Farms, Multan
	09:30 - 10:30	Presentations on Orchard Management, PHDEB & ASLP
	10:30 - 13:00	Practical demonstration and performance of Maturity Determination, Harvesting, Desapping, Grading and Packing
	13:00 - 14:30	Lunch/Prayer Break
	14:30 - 17:00	General Discussion on On-going Activities on mango Quality Improvement and Marketing
	20:00	Dinner
Friday, July 13	11:00	Participants arrived Khakwani Fruit Farms, Shuja Abad
	11:00 - 11:30	Presentations on Orchard Management, PHDEB & ASLP
	11:30 - 13:00	Practical demonstration and performance of Maturity Determination, Harvesting, Desapping, Grading and Packing
	13:30 - 14:30	Lunch/Prayer Break
	14:30	Travel back to Multan / Lahore / Karachi

Annex 2: List of Participants

1. Mian Muhammad Ajmal (Mango Grower, R.Y. Khan)
2. Mian Ateeq (Mango Grower, R.Y. Khan)
3. Makhdoom Moin Ud Din Ali Hashmi (Mango Grower, R.Y. Khan)
4. Mr Sohail Ashraf (Mango Grower, R.Y. Khan)
5. Mr Mureed Abbas Khan (Mango Grower, R.Y. Khan)
6. Mr Sarfraz Abbasi (Mango Grower, R.Y. Khan)
7. Mr Bilal Mahmood (Mango Grower, R.Y. Khan)
8. Mr Muhammad Asif Sagheer (Mango Grower, R.Y. Khan)
9. Mian Mohsin (Mango Grower, R.Y. Khan)
10. Mr Musab Ajmal (Mango Grower, R.Y. Khan)
11. Mr Haseeb Ullah Khan (Mango Grower, R.Y. Khan)
12. Mr Muhammad Saleem (Mango Grower, R.Y. Khan)
13. Mr Shaukat Ali Gilani (Mango Grower, R.Y. Khan)
14. Mr Abdul Sattar Raaz (Mango Grower, R.Y. Khan)
15. Mr Khalid Pervez (Mango Grower, R.Y. Khan)
16. Mr Abdul Basit (Exporter, R.Y.Khan)
17. Ms Shams Ud Din Nisa Qudsia (Exporter, R.Y.Khan)
18. Mr Salah Ud Din Usmani (Exporter, R.Y.Khan)
19. Mr Javed Iqbal (F&V Project, R.Y.Khan)
20. Mr Bilal Israel Khan (F&V Project, R.Y.Khan)
21. Hafiz Naseer Ud Din Asif (F&V Project, R.Y.Khan)
22. Mr Muhammad Hussain Babar (F&V Project, R.Y.Khan)
23. Hafiz Muhammad Ismail (F&V Project, R.Y.Khan)
24. Mr Abdul Wahab (F&V Project, R.Y.Khan)
25. Mr Shaukat Hussain (F&V Project, R.Y.Khan)
26. Mr Mujeeb Arjmand Khan (F&V Project, R.Y.Khan)
27. Mr Muhammad Iqbal (F&V Project, R.Y.Khan)
28. Mr Ghulam Mustafa (F&V Project, R.Y.Khan)
29. Mr Imtiaz Ahmed (F&V Project, R.Y.Khan)
30. Mr Haseeb Durrani (F&V Project, R.Y.Khan)
31. Sardar Muhammad Akbar Khan (F&V Project, R.Y.Khan)
32. Mr Shaukat Ali Khan (F&V Project, R.Y.Khan)
33. Hafiz Rauf Asghar (F&V Project, R.Y.Khan)
34. Mr Muhammad Din (F&V Project, R.Y.Khan)
35. Mr Saeed Khan (Mango Grower, Multan)
36. Mr Faiz Ahmed Khan (Mango Grower, Multan)
37. Mr Qaisar Abbas Khan (Mango Grower, Multan)
38. Mr Zahid Hussain Gardezi (Mango Grower, Multan)
39. Mr Nazim Hussain Labar (BZU, Multan)
40. Chaudhry Khalid Mahmood (F&V Project, Multan)
41. Mr Muhammad Imtiaz Khan (F&V Project, Multan)
42. Mr Azam Latif (F&V Project, Multan)
43. Mr Asif Zulfiqar (F&V Project, Multan)
44. Mr Israr Ahmed Khan (F&V Project, Multan)

45. Mr Ejaz Ahmed (F&V Project, Multan)
46. Chaudhri Sher Muhammad (F&V Project, Multan)
47. Mr. Imran Qadri (F&V Project, Multan)
48. Mr. Arif Hussain (F&V Project, Multan)
49. Mr. Fiaz Ahmed Bhatti (F&V Project, Multan)
50. Chaudhri Abdul Rasheed (F&V Project, Multan)
51. Mr. Zulfiqar Ali (F&V Project, Multan)
52. Haji Atta Muhammad (F&V Project, Multan)
53. Mr. Manzoor Ahmed Tahir (Mango Grower, Multan)
54. Mr. Abdul Karim (Mango Grower, Multan)
55. Haji Sardar Ahmed (Mango Grower, Multan)
56. Malik Muhammad Nazim (Mango Grower, Multan)
57. Mr Ghulam Rasheed (Mango Grower, Multan)
58. Mr Zubair Anjum (Mango Grower, Multan)
59. Mr Zeeshan Javed (Mango Grower, Multan)
60. Mr Saif Ullah (Mango Grower, Multan)
61. Mr Niaz Ahmed (Mango Grower, Multan)
62. Mr Fareed Khan Alizai (Mango Grower, Multan)
63. Mr Abdul Hafeez Soomro (Mango Grower, Multan)
64. Mr Sher Abbas Khan (Mango Grower, Multan)
65. Mr Ahmed Nadeem (Mango Grower, Multan)
66. Mr Ejaz Saleh (Mango Grower, Multan)
67. Dr. Akbar Anjum (BZU, Multan)
68. Mr Shafqat Saeed (BZU, Multan)
69. Mr Muhammad Azam Sabri (Commission Agent, Multan)
70. Mr. Riaz Ahmed Chishti (Mango Grower, Multan)
71. Chaudhri Wasim Sherazi (Mango Grower, Multan)
72. Chaudhari Maqbool Ahmed (Mango Grower, Multan)
73. Mr. Muhammad Yousaf (Mango Grower, Multan)
74. Jahangir Ahmed Malik (Mango Grower, Multan)
75. Mr. Muhammad Amin (Mango Grower, Multan)
76. Mr. Wasim Sajjad (Mango Grower, Multan)
77. Haji Nawab Din (Mango Grower, Multan)
78. Mr. Haider Ali (Mango Grower, Multan)
79. Mr Saleem Khan Alizai (Mango Grower, Shuja Abad)
80. Mr Shafqat Ali Syed (Mango Research Station, Shuja Abad)
81. Chaudhry Abdul Ghaffar (Mango Research Station, Shuja Abad)
82. Haji Ikram Arain (Commission Agent, Multan)
83. Mr Habib Ur Rehman (Mango Grower, Shuja Abad)
84. Mr Farid Khan Khakwani (Mango Grower, Shuja Abad)
85. Mr Shaukat Bashir (Mango Grower, Shuja Abad)
86. Mr Muhammad Ahmed Chaudhry (Mango Grower, Shuja Abad)
87. Mr Muhammad Amjad Chaudhry (Mango Grower, Shuja Abad)
88. Mr Tariq Khan (Mango Grower, Shuja Abad)
89. Mr Muhammad Shahbaz Shah (Mango Grower, Shuja Abad)
90. Sheikh Allah Ditta (Mango Grower, Shuja Abad)

91. Dr. Irshad Ahmed (Mango Grower, Shuja Abad)
92. Mr. Abdul Razzaq (Mango Grower, Shuja Abad)
93. Chaudhri Faqir Muhammad (Mango Contractor, Shuja Abad)
94. Haji Hashmat Ali (Mango Contractor, Shuja Abad)
95. Qaiser Din Gujjar (Mango Grower, Shuja Abad)
96. Ghulam Mustafa (Mango Grower, Shuja Abad)
97. Chaudhary Abdul Majeed (Mango Grower, Shuja Abad)
98. Mr. Ali Akbar (Mango Grower, Shuja Abad)
99. Chaudhri Babar Hussain (Mango Grower, Shuja Abad)
100. Maher Ghulam Rasool Kazmi (Mango Grower, Shuja Abad)
101. Mr. Imran Shahid (Mango Grower, Shuja Abad)
102. Mr. Babar Maqsood (Mango Grower, Shuja Abad)
103. Chaudhri Muhammad Aslam (Mango Grower, Shuja Abad)
104. Haji Iqbal Waris (Mango Grower, Shuja Abad)
105. Mr. Khawar Ali (Mango Grower, Shuja Abad)
106. Ali Ahmed Sabir (Mango Grower, Shuja Abad)
107. Muhammad Ramzan Bhatti (Mango Grower, Shuja Abad)
108. Mirza Nasir Baig (Mango Grower, Shuja Abad)
109. Malik Bashir Ahmed (Mango Grower, Shuja Abad)
110. Mr. Muhammad Azeem (Mango Grower, Shuja Abad)
111. Mr. Munawar Hussain (Mango Grower, Shuja Abad)
112. Ghulam Yaseen Aftab (Mango Grower, Shuja Abad)
113. Mr. Ijaz Ahmed (Mango Grower, Shuja Abad)
114. Chaudhri Nazir Ahmed (Mango Grower, Shuja Abad)
115. Mr. Ghulam Ishaq (Mango Grower, Shuja Abad)
116. Mr. Shaukat Ali (Mango Grower, Shuja Abad)
117. Mr. Habib Ahmed (Mango Grower, Shuja Abad)
118. Mr. Taj Muhammad (Mango Grower, Shuja Abad)
119. Dr. Muhammad Saleem (Mango Grower, Shuja Abad)
120. Mr Muhammad Amin (Mango Grower, Shuja Abad)

Annex 3: Evaluation form

ASLP-PHDEB Mango Quality Improvement Workshop

Evaluation Form

Day/Date: _____

Venue of the Workshop: _____

Personal Information

Name of Participant: _____

Role in Mango Supply Chain: _____

Contact Details:

Postal Address: _____

Email Address: _____

Cell No.: _____ Telephone _____ Fax _____

Workshop Evaluation

How easy was it to understand the information presented? *(Very Easy to Very Difficult)*

How effective was the practical on-farm demonstration in helping you to improve your knowledge? *(Very Easy to Very Difficult)* _____

How useful will be the knowledge that you gained from the workshop? *(Very useful to not useful)*

Would you like to participate in such workshops in future & how frequently? *(Very frequent to not much frequent)*

Suggestions
