



# ANNGO

Afghanistan National Nursery Growers' Organization

## Catalogue 2012-2013

True to type fruit saplings available in Spring 2013, originated from the Afghanistan National Collection



Kabul, August 2012





## Message from the Deputy Minister of MAIL, Abdul Ghani Ghuriani



I am very pleased to introduce the second edition of the ANNGO catalogue for the planting season 2013. The publication of this catalogue is a milestone in the development of horticulture in Afghanistan and upholds the overall vision of the Islamic Republic of Afghanistan's Ministry of Agriculture, Irrigation and Livestock (MAIL).

During the Spring on 2012, for the first time, almost half a million ANNGO-certified trees have been successfully marketed in Afghanistan. This year it is estimated that the production of certified trees will increase more than double.

By providing to growers an increasing number of true to type trees of marketable varieties, ANNGO is setting the foundation of modern fruit culture in Afghanistan.

This initiative is part of the ongoing larger effort to revive the horticulture industry in Afghanistan as laid out in the National Agriculture Development Framework (NADF).

The 35 % of Afghanistan's total exports is constituted by fruit & nuts. This sector has a great potential for growth and income for rural households. Moreover the valuable germplasm collection of Afghan fruit varieties has been reconstituted and is being enriched with the EU support<sup>1</sup> and the establishment of an extensive extension and farmers support network is in progress with the help of the WB<sup>2</sup>.

The ANNGO is now a reality and has established a brand name. With continuing PHDP II support the organization is stronger and it is providing better services to its associates.

With PHDP support ANNGO has not only produced and marketed certified trees but also designed the procedures for inspection, labeling, etc. This experience will be extremely valuable for MAIL in order to introduce in the Seed Law the official regulations for certification of seed and planting material.

For this purpose, MAIL and ANNGO must continue to work together and make this partnership stronger and stronger.

I congratulate ANNGO and the PHDP II friends for their achievements, and their significant contribution for the Afghanistan Horticulture.

**H.E. Abdul Ghani Ghuriani**

Deputy Minister, Technical Agricultural Affairs, MAIL, Kabul

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<sup>1</sup> Perennial Horticulture Development Project Phase I and II, 2006-2015

<sup>2</sup> Horticulture & Livestock Project, Phase I and II, 2007-2017

## Editing Board

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ANNGO Exective Board Members, From left sitting Abdul Sattar Mubariz, Esa Jan, Haji Mahfooz, Sayed Khalil, Abdul Masood, Shah Mohammad Muhaqiq and Abdul Nasir.



ANNGO Board Chairman, Abdul Sattar Mubariz, delivering speech to ANNGO General Board Members which is consist of 31 Associations in 22 Provinces of Afghanistan, representing more than 1000 nurseries growers.





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## INTRODUCTION

This is the second edition of the Afghanistan National Nursery Growers' Organization (ANNGO) catalogue, the main purpose of this document is to give to Afghan growers a solid decision making tool to develop their orchards. This catalogue includes only the saplings multiplied (in 2010-11) from Mother Stock Nursery (MSN) who were inspected and approved based on the ANNGO regulatory system.

This catalogue contains in **Part I** the **CATEGORY I**, saplings (or ANNGO-certified), multiplied in 2011-12 from Mother Stock Nursery (MSN) who were inspected and approved based on the ANNGO regulatory system.

For each specie, variety and accessions we have reported the following characteristics:

- **Specie name**
- **Variety name**
- **Accession number**

This is a unique number of identification referred to the Afghan National Collection. Each accession has different characteristics and peculiarities.

- **Flowering and ripening time.**

These data were taken from two different locations in order to provide representative information. By choosing accessions according to the maturity time, growers have the opportunity to extend the production season. These data are also shown in comparative charts before the varieties description tables.

- **Fruit characteristics.**

Fruit color, dimension and shape based on UPOV (International Union for the Protection of New Varieties of Plants ) descriptors.

- **Pollination information.**

This shows if an accession is self-fertile or cross-fertile, and which are the most suitable pollinizer. Growers can finally design their orchards choosing the best pollination combination in order to maximize the production.

- **Overall judgment and recommendations.**

This is our assessment concerning the best aptitude of the accession in terms of market utilization, fresh consumption, processing, export etc.

This second edition of the Catalogue contains also, in **Part II**, the CATEGORY 2 fruit saplings (uncertified), produced in the ANNGO register nurseries and in **Part III** ornamentals and forestry trees.





## PRESENTATION OF ANNGO

The Afghanistan National Nursery Growers Organization is a non-profit association whose purpose is the development of the nursery industry in Afghanistan, represents 31 Nursery Growers Association (NGAs) in 22 provinces. The total number of nursery members of NGAs is presently more than one thousand. The organization is open for new membership of nurseries who accept and implement the regulatory scheme for quality control and traceability of planting material. Nurseries who do not implement such regulatory system cannot be part of the organization.

The main decision bodies for the NGAs and ANNGO are the General Assembly and the Executive Board composed of seven members elected by the 31 NGAs associates.

As per its bylaw, ANNGO is currently providing to its associate NGAs a number of services including:

- Business improvement and marketing promotion services
- Laboratory services for sanitary control, soil fertility, water quality, etc.
- Monitoring of the quality of planting material
- Improvement of nursery techniques.
- Clonal rootstocks production and multiplication.
- Certification and inspection services including labeling of certified saplings
- Technical training and dissemination of innovations

ANNGO and the NGAs are being supported by the EU funded PHDP II (implemented by Agri-consulting Spa and two NGO Consortium led by MADERA and Mercy Corps).

In June 2012 ANNGO was awarded an EU **Grant** of 876,000 Euro for the implementation of the **"Nursery Industry Development Transition Project"** which will further strengthen the organization and the nursery industry in Afghanistan.



## THE REGULATORY SYSTEM FOR PLANTING MATERIAL (CERTIFICATION)

All the nurseries registered with ANNGO have voluntarily accepted the ANNGO regulatory system for planting material. This set of procedures ensure that the saplings are **true to type** and **traceable** to the **Mother Stock Nurseries** originated from the **National Collection**.

The Mother Stock Nurseries (MSNs) are the key component of the system. The MSNs can be established only from certified material coming from the National Collection and the material for tree propagation (buds or scions or cuttings) can only be taken from the MSNs.

A specific set of procedures for Citrus Mother Stock Nurseries has been added for the main purpose of preventing and monitoring the infection of virus diseases.

Eventually this regulatory system will be endorsed by the MAIL as a part of the Seed Law and then become a legal certification. In order to do so, MAIL need to establish a Certification Authority.

The implementation of the regulatory system is the main task of ANNGO and requires strict monitoring and continuous physical inspections. In this challenging task ANNGO is supported by PHDP II, who provides technical assistance, and by the two NGO Consortia led by MADERA and Mercy Corps, who provide 31 Field Officers and 8 Area Facilitators, for support and to the 31 NGAs.

## THE NATIONAL COLLECTION

The National Collection of Fruit and Nuts of Afghanistan include over 850 accessions of 21 species and is maintained in 6 Perennial Horticulture Research Centers (PHDCs) in MAIL farms in Kabul, Mazar, Kunduz, Herat, Kandahar and Jalalabad. It was completed in four years through the EU funded MAIL-PHDP (2006-2010) and is being maintained and updated by the MAIL-PHDP II (2010-2015).

A transition plan (2013-2015) has been agreed between the EU and MAIL for gradually hand over the National Collection to MAIL management. In order to do so MAIL must set up the provincial structure of horticulture based on the existing 6 Perennial Horticulture Development Centers implemented by PHDP II. In the initial phase of the process ANHDO (Afghanistan Horticulture Development Organization) will take over the NC and then hand it over to MAIL when MAIL will be ready.

The management of the National Collection is a fundamental public service to the horticulture industry. It includes the description of the varieties as per international standards, pollination trials to identify pollinators and inter-fertile combinations among varieties of apricot, plum and almond, the evaluation of the varieties from the point of view of their marketability and keeping quality.

Varieties/accessions that show market potentiality are released to the nursery industry by including them in the Mothers Stock Nurseries. This is done following the procedures set by the ANNGO regulatory system.



## BIOTECHNOLOGY LABORATORY OF BADAM BAGH

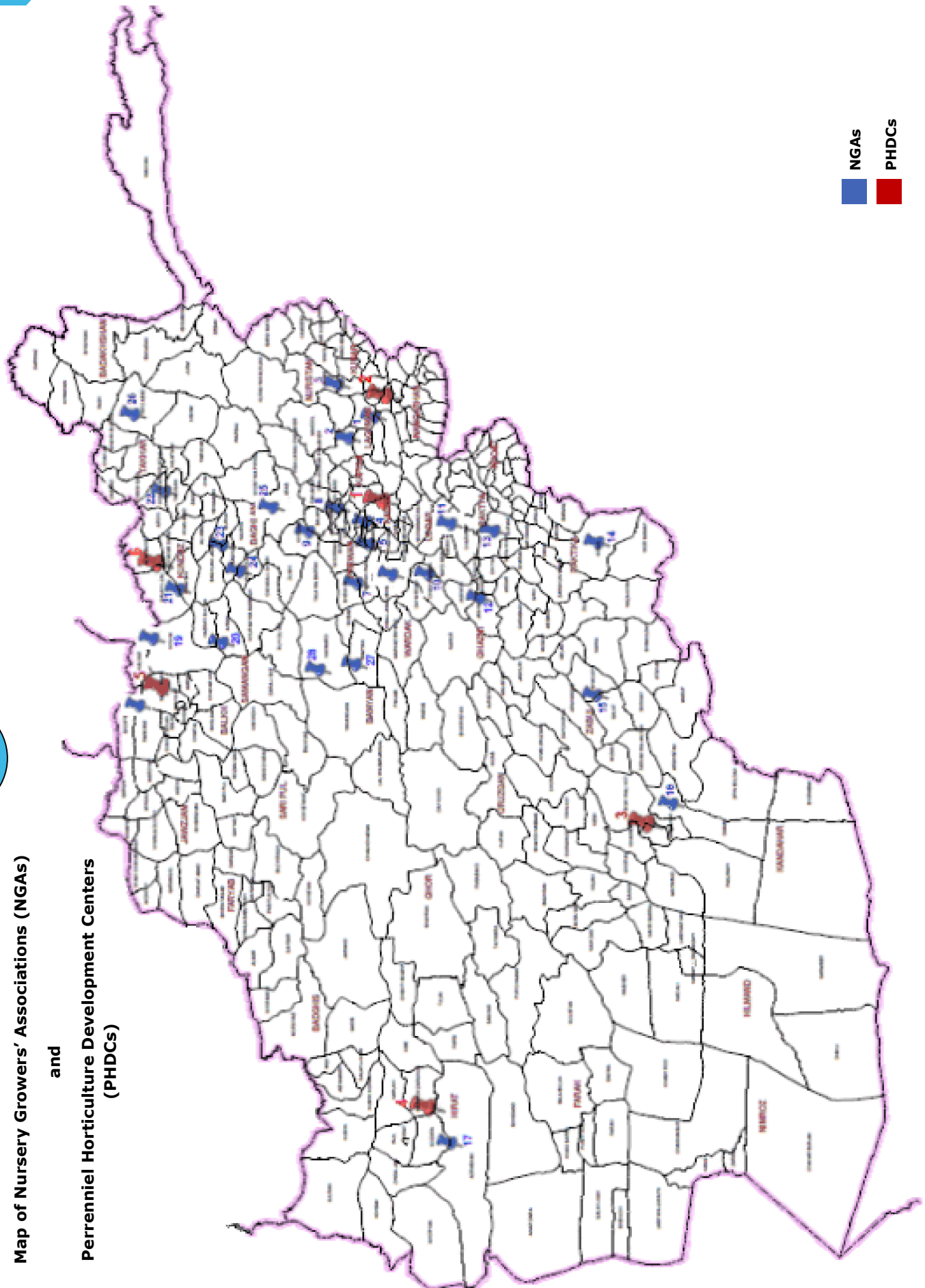
The biotechnology laboratory is another fundamental service to the horticulture industry. It is located in the MAIL- Badam bagh farm, Kabul and started its operations in 2009. The Laboratory can identify virus diseases in fruit plants (ELISA tests) and is systematically monitoring the National Collection in order to keep it virus free.

The laboratory is monitoring systematically all the MSNs in coordination with ANNGO and PHDP II. The laboratory, funded by the EU, is implemented by the Agha Khan Foundation and supported by the PHDP II.





## Nursery Growers' Associations (NGAs)



## ANNGO's National Nursery Growers Association (NGAs)

NGA	Province	District	Contact Person	Tel/Email	MSN Type
Badakhshan	Badakhshan	Baharak	Sayed Karamathullah	0775386708	Pome fruit, root-stocks
Baghlan Imam Quitiba	Baghlan	Baghlan-i-Jadid	Shah Mohed Mu-haqiq	0700616400	N/A
Chunghar	Baghlan	Pul-e-khumri	Haji Sarwar	0799038462	Stone fruit
Andarab Ha	Baghlan	Andarab	Haji Abdul Rahman	0707510652	Pome fruit, root-stocks
Kahmard/Sayghan	Bahmian	Kamard	Haji Nasrthullah	0775851690	Pome fruit
Ghazni	Ghazni	Ghazni	Haji Salih Mohed	0799471946	N/A
Helmand	Helmand	Lashkargah	Ahmad Shah	0707948377	Stone fruit
Herat	Herat	Herat	Abdul Nasir	0797126101	Stone fruit, pome fruit
Shakardara	Kabul	Shakardara	Sayed Nabi	0798718114	Pome fruit, root-stocks
Paghman	Kabul	Paghman	Haji Abdul Sattar	0700280657	Stone fruit, root stocks
Guldara	Kabul	Guldara	Abdul Samad	0773727025	Stone fruit, pome fruit, root-stocks
Kandahar dand district	Kandahar	dand	Haji Mohed Shafi	0700305406	Stone fruit, pomegranate
Kunar and Nuristan	Kunar	Asadabad	Najibullah	0700994374	Stone fruit, Citrus
Kunduz	Kunduz	Kunduz	Abdul Bashir	0799469134	Stone fruit
Loggar	Logar	Pul-i-alam	Mirwais	0774367481	Stone fruit, grapes
Laghman	Laghman	Mehtarlam	Abdul Masood	0799660670	Stone fruit, citrus, pome fruit
Umul Bilad	Mazar	Balkh	Haji Akram	0700049952	Stone fruit, Pome fruit, root-stocks
Khulm	Mazar	Khulm	Malim Qurban	0799485749	Stone fruit, pomegranate
Nangarhar	Nangarhar	Behsoud	Redwanullah	0775450552	Citrus, Pomegranate
Paktia	Paktia	Gardez	Haji Ghulam Dastagir	0797194981	Stone fruit, pome fruit, root-stocks

## ANNGO's National Nursery Growers Association (NGAs)

NGA	Province	District	Contact Person	Tel/Email	MSN Type
Paktika	Paktika	Sharana	Saidullah	0773600751	N/A
Bagram	Parwan	Bagram	Abdul Mahfooz	0700029628	Stone fruit, grapes, root-stocks
Aybak	Samangan	Aybak	Haji Noor Mohed	0799102397	Stone fruit
Takhar	Takhar	Taloqan	Sayed Abdul Majid	0700713045	Stone fruit, root-stocks
Maidan	Wardak	Maidan	Mohammad Taus	0775181237	Stone fruit, pome fruit, root-stocks
Dr.Wakil	Wardak	Nurkh	Mohammad Khalid	0799193259	Stone fruit, root-stocks
Saidabad	Wardak	Saidabad	Abdul Rasool	0799561075	N/A
Zabul	Zabul	Qualat	Haji Amanullah	0700382737	Stone fruit, grapes
Sayed Khail	Parwan	Sayed Khail	Aziz Ahmad	0700270318	Stone fruit

## Pesticide Safety – Purchase



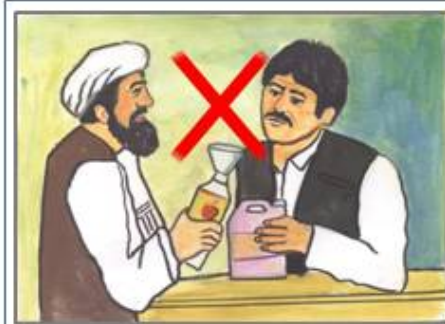
Buy the correct pesticide for the problem



Only purchase pesticides from reputable, trained dealers



Do not purchase damaged or leaking containers, or with no label



Do not purchase pesticide decanted into other containers



Keep pesticides locked up and out of reach of children



Do not transport pesticides with passengers



Do not store pesticides with food or feedstuffs



**USAID** | **AFGHANISTAN**  
FROM THE AMERICAN PEOPLE

**IDEA-NEW**  
New ideas for agriculture





## SHEEN BAN AGRICULTURAL SERVICES

شین بن زراعتی خدمات

Quality Agricultural Services and Inputs



Sheen Ban Agricultural Services Company is a community based agricultural services, inputs and capacity building company with years of experience in Afghanistan, Supply following agricultural inputs and services.

### **Inputs:**

- ⇒ True- to- type fruit tree and nuts saplings with ANNGO Certificate.
- ⇒ Ornamental plants, flowers and roses.
- ⇒ Agricultural tool kits and fertilizers.

### **Services:**

- ⇒ Provide upgraded knowledge and skills for farmers.
- ⇒ Design and establishment of fruits tree orchards.
- ⇒ Design and establishment of green houses.
- ⇒ Landscaping.



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# Part 1

**Fruit saplings category 1**

**(CERTIFIED originated from national collection and with ANNGO labels)**



# Course on Tropical Rural Development

## University of Florence - Italy



*Università degli Studi di Firenze*



The course on **Tropical Rural Development** (second level master university degree) of the University of Florence (Italy) promotes research and professional training in the sectors of modern and sustainable agriculture, forestry and animal sciences, and identifies as preferential area of intervention the little and medium farms of the less industrialized areas of the globe.

The mission of the course is the education and training of agronomists expert in the technical and scientific areas of food production, environmental conservation, rural development.

Didactic activity is performed through lessons, lab activities, seminars and mid-term exams fully taught in English.

The Course has a normal duration of two years with 60 credits per year.

Topics of graduation thesis are agreed with students depending on their interest and provenance and can be partially conducted in their country of origin.

The courses are held in Florence (Firenze), a safe old "easy" town rich of art and cultural activities, where students from abroad find their "second home".

#### Web site

<http://www.unifi.it/clmtro/changelang-eng.html>

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Supported by ASAT (Associazione Scienze Agrarie Tropicali) <http://www.asatonline.com>

# Almond



## Flowering and Ripening Time Mazar Kunduz\*

Variety	Feb.				March				July				April				July				August			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Sattarbai Bakhmali 159																								
Sattarbai Bakhmali 2008																								
Sattarbai 168																								
Sattarbai 1001																								
Majedi 2010																								
Abdul Wahidi 1003																								
Abdul Wahidi 153																								
Carmel 167																								
Sattarbai Guldar 2006																								
Qambari 2009																								
Qambari 143																								
Khairo dini 172																								
Qaharbai 160																								
Qaharbai 1004																								
Qaharbai 776																								
Qaharbai 170																								
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	Feb.				March				July				April				July				Aug.			

 Flowering Time
  Ripening Time

\* Complete ripening time data will be available next year.



**Variety name:** Sattarbai Bakhmali 159, 2008

**Flowering time:** 1st to 4th week of March

**Ripening time:** 1st week of July

**Kernel shape:** moon shaped/narrow elliptic

**Kernel size:** medium

**Kernel color:** yellow brown/red brown

**Shell type:** thin

**Overall:** soft shelled, nut is of medium length, very narrow in shape and is appreciated in international market



**Variety name:** Sattarbai 1001, 168

**Flowering time:** 2nd to 4th week of March

**Ripening time:** 1st week of July

**Kernel shape:** moon shaped

**Kernel size:** medium

**Kernel color:** yellow brown

**Shell type:** thin

**Overall:** export quality almond, soft shelled. Nut is long, narrow and thin



**Variety name:** Majedi 2010

**Flowering time:** 4th week of February to 3rd week of March

**Ripening time:** 1st week of July

**Kernel shape:** moon shaped

**Kernel size:** medium

**Kernel color:** dark chestnut brown

**Shell type:** thick

**Overall:** hard shelled but very good in size and kernel is appreciated in the market



**Variety name:** Abdul Wahidi 153, 1003

**Flowering time:** 2nd to 4th week of March

**Ripening time:** 1st week of July

**Kernel shape:** moon shaped/ narrow elliptic

**Kernel size:** big

**Kernel color:** red brown/ yellow brown

**Shell type:** thick

**Overall:** its nut has long length and fine width, kernel color is light brown and has good market



**Variety name:** Qambari 143, 2009

**Flowering time:** 1st to 4th week of March

**Ripening time:** 1st week of July

**Kernel shape:** elliptic

**Kernel size:** big

**Kernel color:** red brown

**Shell type:** thin/medium

**Overall:** soft shelled, light brown kernel, nut is short and narrow, good export quality



**Variety name:** Sattarbai Guldara 2006

**Flowering time:** 2nd to 4th week of March

**Ripening time:** 1st week of July

**Kernel shape:** narrow elliptic

**Kernel size:** medium

**Kernel color:** yellow brown

**Shell type:** thin

**Overall:** soft shell, very narrow, thin and attractive, good for international market



**Variety name:** Khairodini 172

**Flowering time:** 2nd to 4th week of March

**Ripening time:** 1st week of July

**Kernel shape:** moon shaped

**Kernel size:** big

**Kernel color:** red brown

**Shell type:** thick

**Overall:** shell is medium hard, very long, wide and medium thick



**Variety name:** Qaharbai 160, 170, 776, 1004

**Flowering time:** 1st to 3rd week of March

**Ripening time:** 1st week of July

**Kernel shape:** moon shaped/elliptic

**Kernel size:** big

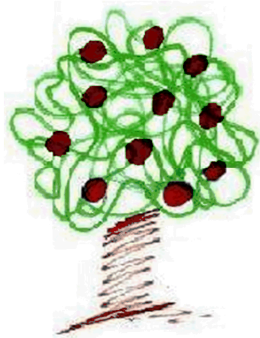
**Kernel color:** light brown

**Shell type:** thick

**Overall:** productive variety, shell is medium hard







# Herat Plant Nursery

Helping Growers Grow

**Herat Plant Nursery Company** which is registered in Afghanistan Investment Support Agency in Herat, Afghanistan with over 8 years experience should be your source for commercial and wholesale bare root fruit trees and rootstock. Our company works with only the best fruit tree varieties in the nation.

Herat Plant Nursery is a top supplier of fruit trees in western part of Afghanistan to commercial orchardists, wholesale and retail nurseries and the average backyard gardener. We grow more than 200,000 apple trees, grapevine pear trees, cherry trees, peach trees, plum trees, prune trees, apricot trees, nectarine trees and nut trees each year.

All saplings of this company produce with the highest standard and quality from improved commercial varieties and its origin base is mother stock nurseries of Afghanistan National Nursery Grower Organization (ANNGO). Saplings produced under the Perennial Horticulture Development Project (PHDP) and experienced experts. The saplings are free of pest and diseases and are true to type. All saplings of this company produced with label profile which is authorized by ANNGO. Sapling label contain information regarding variety name, rootstock, producer name, label number and produced year. The label is introduced by ANNGO and granted by company regarding true to type of each variety.

It is always our goal to meet and exceed your expectations with the highest quality trees and service we can provide you. We're proud of the individual attention that each of our trees receives.

We invite you to visit our nursery and see for yourself how we care for your trees. Herat Plant Nursery is committed to providing the highest quality tree, even if that means more time and effort on our part. Put Herat Plant Nursery's exclusive Total Care System to work for you!

## PARTNERS

Herat Plant Nursery is proud to be partner with these organizations help to improvement horticulture industry and product development in Western Afghanistan.

- SHELADIA ASSOCIATES Inc-USA
- ITALIAN COOPERATION
- IDEA NEW
- AGRICULTURE SUPPORT TO PEACE& REINTEGRATION
- WORLD VAIOSN

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 WEB: [www.heratplantnursery.com](http://www.heratplantnursery.com)

We want to give you best service possible!



[www.heratplantnursery.com](http://www.heratplantnursery.com)

# Apple



## Flowering and Ripening Time Kabul

Variety	April				May				August				Sep.				October			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Weeks																				
Red Chief 101																				
Blushing Golder 102																				
Royal Gala 110																				
Mithchgla Mondial Gala 7209																				
Double Red Deliculous 109																				
Fuji 7237																				
Galaxy 7243																				
Saturn 7235																				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	April				May				August				Sep.				October			



Flowering Time



Ripening Time



**Variety name:** Red Chief 101

**Flowering time:** 3rd to 4th week of April

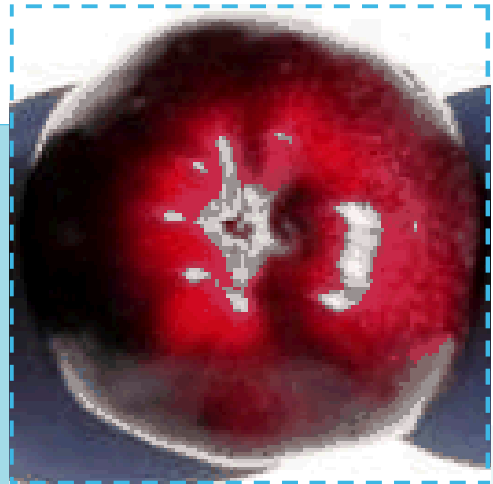
**Ripening time:** 1st week of October

**Average fruit size:** medium

**Fruit color:** dark red with white strips

**Fruit shape:** cylindrical

**Overall:** juicy and crispy texture



**Variety name:** Blushing Gold 102

**Flowering time:** 3rd to 4th week of April

**Ripening time:** 1st week of October

**Average fruit size:** medium

**Fruit color:** yellow with red over color

**Fruit shape:** conic

**Overall:** flesh is creamy yellow, juicy and crispy



**Variety name:** Royal Gala 110

**Flowering time:** 3rd to 4th week of April

**Ripening time:** 4th week of August

**Average fruit size:** medium

**Fruit color:** light streaks of reddish pink across circumference

**Fruit shape:** rounded

**Overall:** size is very good and the flesh is sweet and crispy



**Variety name:** Mithchgla Mondial Gala 7209

**Flowering time:** 3rd to 4th week of April

**Ripening time:** 4th week of August

**Average fruit size:** medium

**Fruit color:** mid red color with stripes

**Fruit shape:** cylindrical wasted

**Overall:** juicy and sweet taste, it has crispy flesh



**Variety name:** Double Red Delicious 109

**Flowering time:** 2nd to 3rd week of April

**Ripening time:** 1st week of October

**Average fruit size:** big

**Fruit color:** red

**Fruit shape:** globose; characteristic 5 point at the bottom

**Overall:** white flesh, aromatic and sweet, keep well



**Variety name:** Fuji 7237

**Flowering time:** 3rd to 4th week of April

**Ripening time:** 3rd week of September

**Average fruit size:** medium large

**Fruit color:** yellow with light pink strips

**Fruit shape:** globose

**Overall:** creamy white flesh, dense, juicy and crispy, low acidity, sweet



**Variety name:** Galaxy 7243

**Flowering time:** 2nd to 4th week of April

**Ripening time:** 4th week of August

**Average fruit size:** medium

**Fruit color:** light red

**Fruit shape:** conic

**Overall:** juicy, moderately sweet flesh, high yielding tree



**Variety name:** Saturn 7235

**Flowering time:** 3rd to 4th week of April

**Ripening time:** 4th week of August

**Average fruit size:** big

**Fruit color:** ovoid

**Fruit shape:** yellow with light Pink

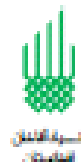
**Overall:** appreciated flavor and very good fruit size







پروژه توسعه باغداری پایدار سال



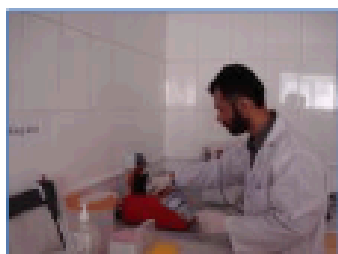
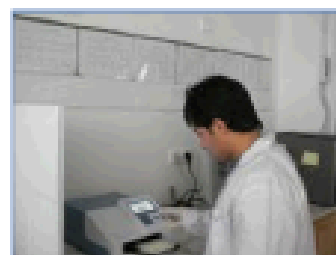
## لابراتوار بیوتکنولوژی نباتی

نخستین لابراتوار بیوتکنولوژی نباتی افغانستان، با همکاری تخنیکي بنيادآقاخان، و حمایت مالی کمیسیون اروپا، در سال ۲۰۰۹ میلادی تاسیس گردید. این لابراتوار در بادام باغ کابل، که از سلمات تحقیقی وزارت زراعت، آبیاری و مالداري افغانستان محسوب میشود، موقعیت دارد. هدف اصلی این پروژه همانا تقویه و توسعه بخش باغداری کشور از طریق بهبود و بلندتردن کیفیت نباتات ترویجی میباشد. لابراتوار بیوتکنولوژی نباتی در همکاری نزدیک با پروژه توسعه باغداری چندین ساله (PHDP) و شرکای آن قرار داشته، و وضعیت صحی جریماتسم درختان معشر داخلی و خارجی را، بمنظور توزیع تنها نباتات صحتمند و باکیفیت به قوریه داران و زراعین، مشخص و تثبیت مینماید. همه ساله، نمونه هایی از نباتات جهت تحلیل و تجزیه در این لابراتوار از زون های مختلف ایگولوژیک افغانستان جمع آوری میگردد. لابراتوار نامبرده همچنان در شملت های پالیسی سازی در سطوح بالا، بمنظور ساختن استراتیژی کنترول امراض و آفات ویروسی، و نیز گسترش صنعت قوریه داری در کشور، اشتراک فعال مینماید. لابراتوار بیوتکنولوژی نباتی مجهز با پیشرفته ترین تکنولوژی روز بوده و از پروتوکول های جدید جهت تشخیص و شناسایی امراض و بیماری های درختان میوه استفاده مینماید.



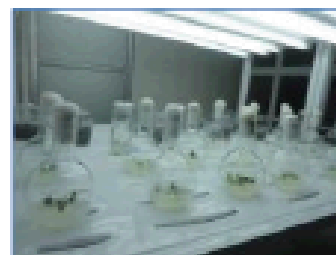
### امکانات تشخیصیه

کشف و شناسایی پتوجن های نباتی (ویروس، ویروید، فیتوپاتسماء، بکتریا و فنگس) بوسیله پیشرفته ترین وسایل و تکنولوژی روز (ELISA و PCR)



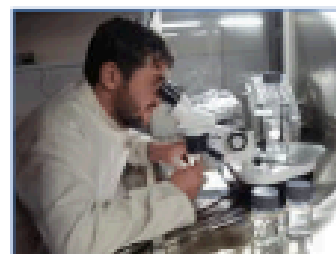
### کشت انصاج

تکثیر مایکروسکوپیگ بمنظور از دیاد نباتات صحتمند و پیوند مایکروسکوپیگ جهت پاکسازی نباتات از ویروس



### ارتقای ظرفیت

دوره های آموزشی سفرهای ساحوی فرصت های کارآموزی



# Apricot



## Flowering and Ripening Time

Kabul\*

Mazar

Variety	March				May				June				July			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Amiri 276																
Amiri 278																
Badami 6212																
Turki 6313																
CharMaghzi 6310																
Amiri Kalan 365																
Amiri Sorkh 328																
Qaisi 270																
Qaisi 4041																
Mahali (Maldani) 290																
Goldcot 265																
Shakarpara 250																
Shakarpara sorkh 372																
Qaisi 741																
Roghani 750																
Roghani 751																
Peer Naqshi 292																
Arora 7135																
Amiri 822																
Patterson 266																
Du Maghza 748																
Ambercot 268																
Pincot 7137																
Qaisi safid 760																
Saqi 5004																
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	March				May				June				July			

\* Complete ripening time data will be available next year.

Flowering Time

Ripening Time



**Variety name:** Amiri 276

**Flowering time:** 3rd to 4th week of March

**Ripening time:** 3rd week of June

**Average fruit size:** big

**Fruit color:** yellow green

**Fruit shape:** elliptic

**Kernel taste:** sweet

**Compatibility:** N/A

**Overall:** late ripening Afghan variety, very sweet, light yellow flesh



**Variety name:** Amiri 278

**Flowering time:** 3rd to 4th week of March

**Ripening time:** 4th week of June

**Average fruit size:** big

**Fruit color:** yellow green

**Fruit shape:** ovate

**Kernel taste:** sweet

**Compatibility:** N/A

**Overall:** attractive shape, big size, crispy and sweet



**Variety name:** Badami 6212

**Flowering time:** 2nd to 4th week of March

**Ripening time:** 3rd week of June

**Average fruit size:** big

**Fruit color:** from white to yellow green

**Fruit shape:** oblique

**Kernel taste:** sweet

**Compatibility:** self

**Overall:** high yielding, medium fruit size, good for fresh consumption



**Variety name:** Turki 6313

**Flowering time:** 2nd to 3rd week of March

**Ripening time:** 2nd week of June

**Average fruit size:** big

**Fruit color:** orange

**Fruit shape:** oblique

**Kernel taste:** sweet

**Compatibility:** self

**Overall:** high yielding, orange flesh color, very good for drying



**Variety name:** Charmaghzi 6310

**Flowering time:** 2nd to 3rd week of March

**Ripening time:** 2nd week of June

**Average fruit size:** Medium

**Fruit color:** yellow green

**Fruit shape:** oblique

**Kernel taste:** sweet

**Compatibility:** self

**Overall:** early variety, suitable for fresh consumption

**Other available clones:** 4035, 823



**Variety name:** Amiri Kalan 365

**Flowering time:** 3rd to 4th week of March

**Ripening time:** 4th week of June

**Average fruit size:** big

**Fruit color:** yellow green

**Fruit shape:** ovate

**Kernel taste:** sweet

**Compatibility:** N/A

**Overall:** late variety, attractive color, very sweet



**Variety name:** Amiri Sorkh 328

**Flowering time:** 3rd to 4th week of March

**Ripening time:** 3rd week of June

**Average fruit size:** big

**Fruit color:** yellow green

**Fruit shape:** ovate

**Kernel taste:** sweet

**Compatibility:** N/A

**Overall:** late variety, very sweet, recommended for fresh consumption



**Variety name:** Qaisi 270, 4041

**Flowering time:** 2nd to 4th week of March

**Ripening time:** 1st week of June

**Average fruit size:** medium

**Fruit color:** yellow green

**Fruit shape:** oblique

**Kernel taste:** sweet

**Compatibility:** N/A

**Overall:** early variety, medium fruit size, sweet and juicy



**Variety name:** Mahali (Maidani) 290

**Flowering time:** 2nd to 3rd week of March

**Ripening time:** 2nd week of June

**Average fruit size:** medium

**Fruit color:** yellow green

**Fruit shape:** oblique

**Kernel taste:** sweet

**Compatibility:** self

**Overall:** small fruit but good for fresh consumption





**Variety name:** Goldcot 265

**Flowering time:** 2nd to 3rd week of March

**Ripening time:** 2nd Week of June

**Average fruit size:** medium big

**Fruit color:** orange

**Fruit shape:** circular

**Kernel taste:** bitter

**Compatibility:** self

**Overall:** orange flesh color, good for drying



**Variety name:** Shakarpara 250

**Flowering time:** 2nd to 3rd week of March

**Ripening time:** 2nd week of June

**Average fruit size:** small

**Fruit color:** yellow green

**Fruit shape:** circular

**Kernel taste:** sweet

**Compatibility:** N/A

**Overall:** very sweet, small fruit size



**Variety name:** Shakarpara sorkh 372

**Flowering time:** 2nd and 3rd week of March

**Ripening time:** 2nd week of June

**Average fruit size:** small

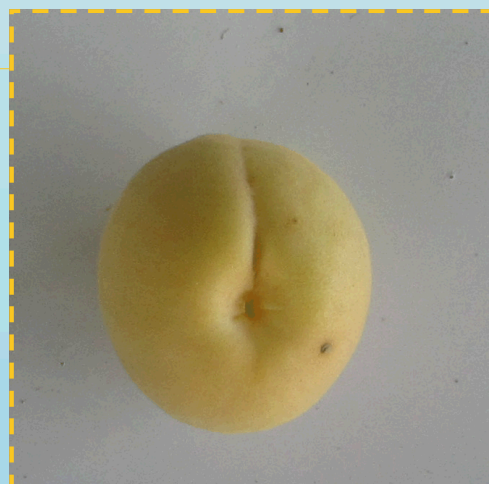
**Fruit color:** yellow red

**Fruit shape:** oblique

**Kernel taste:** sweet

**Compatibility:** N/A

**Overall:** dries on the tree, very sweet



**Variety name:** Qaisi 741

**Flowering time:** 2nd to 4th week of March

**Ripening time:** 2nd week of June

**Average fruit size:** big

**Fruit color:** yellow green

**Fruit shape:** oblique

**Kernel taste:** sweet

**Compatibility:** N/A

**Overall:** big size, good yield and very sweet



**Variety name:** Roghani 750, 751

**Flowering time:** 2nd to 4th week of March

**Ripening time:** 3rd week of June

**Average fruit size:** big

**Fruit color:** yellowish

**Fruit shape:** ovate

**Kernel taste:** sweet

**Compatibility:** N/A

**Overall:** good for fresh consumption and high quality, late variety



**Variety name:** Peer Naqshi 292

**Flowering time:** 2nd to 4th Week of March

**Ripening time:** 3rd Week of May

**Average fruit size:** big

**Fruit color:** yellow green

**Fruit shape:** oblique

**Kernel Taste:** sweet

**Compatibility:** self

**Overall:** early variety, high yielding



**Variety name:** Amiri 822

**Flowering time:** 3rd to 4th week of March

**Ripening time:** 3rd Week of June

**Average fruit size:** big

**Fruit color:** yellow green

**Fruit shape:** ovate

**Kernel taste:** sweet

**Compatibility:** N/A

**Overall:** late variety, good fruit size and shape, good for fresh consumption



**Variety name:** Patterson 266

**Flowering time:** 3rd to 4th week of March

**Ripening time:** 2nd week of June

**Average fruit size:** big

**Fruit color:** light orange

**Fruit shape:** ovate

**Kernel taste:** sweet

**Compatibility:** self

**Overall:** good for fresh consumption, less juicy and has medium sweetness



**Variety Name:** Du Maghza 748

**Flowering time:** 3rd to 4th week of March

**Ripening time:** 3rd week of June

**Average fruit size:** big

**Fruit color:** yellow green

**Fruit shape:** ovate

**Kernel taste:** sweet

**Compatibility:** N/A

**Overall:** recommended for fresh consumption





**Variety name:** Ambercot 268

**Flowering time:** 3rd to 4th week of March

**Ripening time:** 4th week of June

**Average fruit size:** big

**Fruit color:** yellowish

**Fruit shape:** obovate

**Kernel taste:** bitter

**Compatibility:** self

**Overall:** early variety, good for drying, high yielding not much sweet



**Variety name:** Pinkcot 7137

**Flowering time:** 3rd to 4th week of March

**Ripening time:** 4th week of June

**Average fruit size:** big

**Fruit color:** medium orange

**Fruit shape:** circular

**Kernel taste:** bitter

**Compatibility:** self

**Overall:** attractive food size and color, one of the early varieties and high yielding



**Variety name:** Arora 7135

**Flowering time:** 3rd to 4th week of March

**Ripening time:** 2nd week of June

**Average fruit size:** medium

**Fruit color:** medium orange

**Fruit shape:** ovate

**Kernel taste:** bitter

**Compatibility:** self

**Overall:** one of the most early variety in Afghanistan, good for fresh consumption.



**Variety name:** Qaisi Safid 760

**Flowering time:** 3rd to 4th week of March

**Ripening time:** 1st Week of July

**Average fruit size:** medium

**Fruit color:** yellow green

**Fruit shape:** ovate

**Kernel taste:** sweet

**Compatibility:** N/A

**Overall:** attractive size and color, very sweet and white flesh



**Variety name:** Saqi 5004

**Flowering time:** 3rd to 4th week of March

**Ripening time:** 2nd week of July

**Average fruit size:** medium

**Fruit color:** medium orange

**Fruit shape:** circular

**Kernel taste:** sweet

**Compatibility:** N/A

**Overall:** recommended for drying, yellow flesh, sweet and juicy



# Cherry





## Flowering and Ripening Time

Kabul

Herat\*

Clone	Variety	April				May				June				July			
		Weeks				Weeks				Weeks				Weeks			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
7218	Balaton 7218																
279	Bing 279																
7224	Lipins 7224																
7222	Skeena 7222																
7139	Burlat 7139																
7268	Sweet Heart 7268																
7225	Stela compact 7225																
7266	Moreau 7266																
7265	Ferrovio 7265																
7220	Sunburst 7220																
7227	Cherry Pie 7227																
7250	Stella 7250																
7246	Sweet Heart 7246																
7248	Blaze Star 7248																
7249	Blach Star 7249																
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		March				April				May				June			

\* Complete flowering and ripening time data will be available next year.

Flowering Time Ripening Time

**Variety name:** Balaton 7218

**Flowering time:** 3rd to 4th week of April

**Ripening time:** 1st week of July

**Average fruit size:** small

**Color of skin:** dark red

**Color of flesh:** red

**Fruit shape:** round

**Flavor:** sweet

**Compatibility:** Bing, Sweet Heart

**Overall:** red flesh and juicy, good for drying



**Variety name:** Bing 279

**Flowering time:** 2nd to 4th week of April

**Ripening time:** 4th week of July

**Average fruit size:** large

**Color of skin:** black

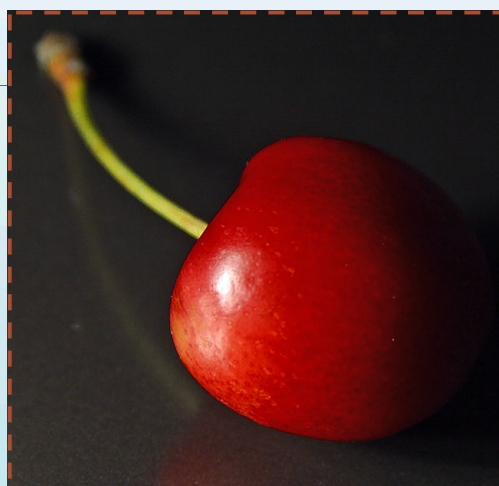
**Color of flesh:** dark red

**Fruit shape:** rein form

**Flavor:** sweet

**Compatibility:** Burlat, Sweet Heart

**Overall:** large, firm, juicy, sweet, nearly black and when ripe it has superb flavor



**Variety name:** Burlat 7139

**Flowering time:** 2nd to 4th week of April

**Ripening time:** 1st week of July

**Average fruit size:** medium

**Color of skin:** dark red

**Color of flesh:** dark red

**Fruit shape:**

**Flavor:** sweet

**Compatibility:** Bing, Lapins

**Overall:** early yielding variety and gives high yield



**Variety name:** Lapins 7224

**Flowering time:** 2nd to 4th week of April

**Ripening time:** 1st week of July

**Average fruit size:** large

**Color of skin:** dark red

**Color of flesh:** dark red

**Fruit shape:**

**Flavor:** sweet

**Compatibility:** self fertile

**Overall:** fruit is crack resistant



**Variety name:** Skeena 7222

**Flowering time:** 2nd to 4th week of April

**Ripening time:** 1st week of July

**Average fruit size:** medium

**Color of skin:** dark Red

**Color of flesh:** dark Red

**Fruit shape:**

**Flavor:** sweet

**Compatibility:** self fertile

**Overall:** firm fruit with good flavor



**Variety name:** Stella 7250

**Flowering time:** 2nd to 4th week of April

**Ripening time:** 2nd week of July

**Average fruit size:** medium

**Color of skin:** light red

**Color of flesh:** yellow

**Fruit shape:** cordate

**Flavor:** low

**Compatibility:** self fertile

**Overall:** very juicy and sweet with a typical flavor





**Variety name:** Ferrovia 7265

**Flowering time:** 3rd to 4th week of April

**Ripening time:** 4th week of July

**Average fruit size:** large

**Color of skin:** bright red

**Color of flesh:** dark red

**Fruit shape:** heart shaped

**Flavor:** sweet

**Compatibility:** Forli, Bing, Sun burst

**Overall:** popular Italian cherry, known as "queen of cherries"



**Variety name:** Sunburst 7220

**Flowering time:** 3rd to 4th week of April

**Ripening time:** n/a

**Average fruit size:** large

**Color of skin:** dark red

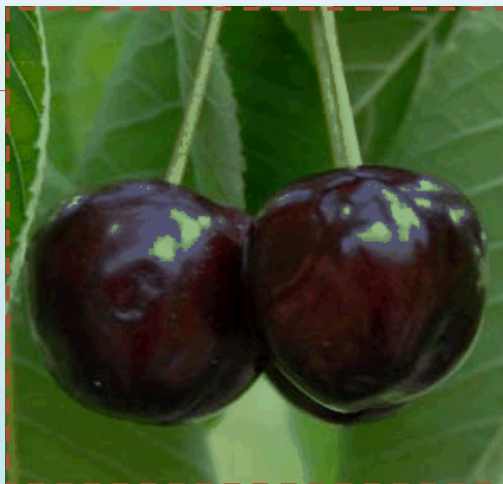
**Color of flesh:** dark red

**Fruit shape:**

**Flavor:** sweet

**Compatibility:** self fertile

**Overall:** it is outstanding for fruit size, high yield



**Variety name:** Cherry Pie 7227

**Flowering time:** 3rd to 4th week of April

**Ripening time:** 4th week of July

**Average fruit size:** small

**Color of skin:** light red

**Color of flesh:** light red

**Fruit shape:**

**Flavor:** sour

**Compatibility:** self fertile

**Overall:** mostly used for processing



**Variety name:** Sweet Heart 7268  
**Flowering time:** 2nd to 4th week of April  
**Ripening time:** 1st week of July  
**Average fruit size:** large  
**Color of skin:** dark red  
**Color of flesh:** dark red  
**Fruit shape:**  
**Flavor:** sweet  
**Compatibility:** self fertile  
**Overall:** low acid fruit, very sweet



**Variety name:** Stela compact 7225  
**Flowering time:** 2nd to 4th week of April  
**Ripening time:** 1st week of July  
**Average fruit size:** large  
**Color of skin:** dark red  
**Color of flesh:** dark red  
**Fruit shape:**  
**Flavor:** sweet  
**Compatibility:** self fertile  
**Overall:** trees are productive but sensitive to winter cold



**Variety name:** Moreau 7266  
**Flowering time:** 2nd to 4th week of April  
**Ripening time:** 1st week of July  
**Average fruit size:** medium  
**Color of skin:** dark red  
**Color of flesh:** dark red  
**Fruit shape:** heart shaped  
**Flavor:** sweet  
**Compatibility:** Bing  
**Overall:** early variety, medium resistance to cracking and diseases



**Variety name:** Sweet Heart 7246

**Flowering time:** 2nd to 4th week of April

**Ripening time:** 3rd week of June

**Average fruit size:** medium

**Color of skin:** dark red

**Color of flesh:** medium red

**Fruit shape:** reniform or heart shaped

**Flavor:** medium

**Compatibility:** self fertile

**Overall:** very sweet and juicy, crack resistant



**Variety name:** Blaze Star 7248

**Flowering time:** 2nd to 3rd week of April

**Ripening time:** 2nd week of July

**Average fruit size:** medium

**Color of skin:** dark red

**Color of flesh:** yellow

**Fruit shape:** cordate

**Flavor:** medium

**Compatibility:** Blach Star, Bing, Sweet Heart

**Overall:** very early variety, good fruit size and quality



**Variety name:** Blach Star 7249

**Flowering time:** 2nd to 4th week of April

**Ripening time:** 2nd week of July

**Average fruit size:** medium

**Color of skin:** red

**Color of flesh:** dark red

**Fruit shape:** cordate

**Flavor:** medium

**Compatibility:** Blaze Star, Sweet Heart

**Overall:** early variety, good fruit size and quality







# شرکت خدمات زراعتی سمسوربن



با عرضه خدمات بی سابقه در عرصه زراعت،  
احداث باغهای مثمر به سیستم جدید.



احداث قوریه جات و نهال های مثمر در حدود (۳۰۰۰۰۰) سالانه

تورید وسایل و سامان آلات زراعتی



عرضه ادویه جات و کود های زراعتی با کیفیت  
از مشهور کمپنی جهان.

تدویر کورسهای زراعتی.



زنبورداری و وسایل زنبورداری.



این شرکت با سابقه ۳۰ سال در عرصه زراعت کار نموده  
تمام تولیدات این شرکت به ضمانت و باکیفیت زراعتی  
عرضه می گردد.

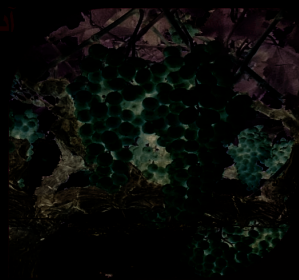


شماره تماس: 0778 871137 / 0799 618683

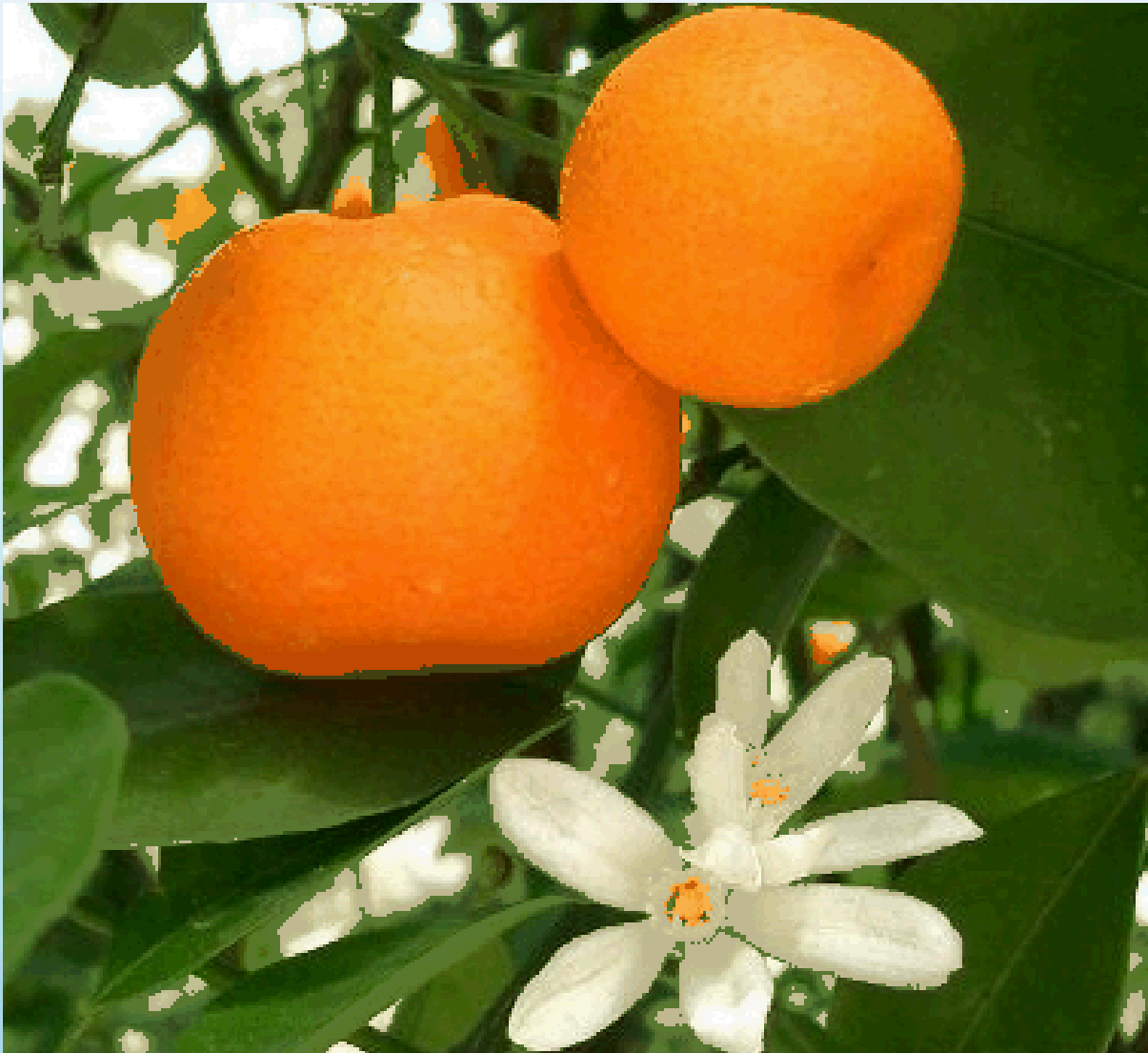
0787 712171/

درس: نگین اسیا هتل، کوئی سنگی، سرای هراتی کابل.

ایمل: Hidayat6356@yahoo.com



# Citrus



## Flowering and Ripening Time

Jalalabad\*

Specie	Variety	Weeks															
		March				April				May				June			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Orange	Newhall 7004																
Orange	Washington Navel 7005																
Orange	Thompson Navel 7006																
Orange	Moro 7009																
Grape Fruit	Marsh Seedless 7012																
Mandarin	Tardivo Di Ciaculli 7014																
Mandarin	Climentine di Nules 7015																
Tanjelo	Minneola 7026																
Orange	Olinda Valencia 7099																
Mandarin	Climentine SRA 89 7105																
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		March				April				May				June			

\* Complete data will be available next year.

Flowering Time Ripening Time



**Variety name:** Moro 7009

**Flowering time:** 4th week of March to 2nd Week of April

**Ripening time:** very early

**Average fruit size:** medium to medium large

**Fruit color:** light pink blush, or red streak at advance maturity

**Fruit shape:** sub globes, round

**Juiciness:** juicy

**Seeds:** few or none

**Flavor:** pleasant flavor

**Overall:** Moro is perhaps the best known blood orange through out the world



**Variety name:** Marsh Seedless 7012

**Flowering time:** 4th week of March to 2nd Week of April

**Ripening time:** medium to late

**Average fruit size:** medium

**Fruit color:** pale to light yellow at maturity

**Fruit shape:** completely round

**Juiciness:** very juicy

**Seeds:** seedless

**Flavor:** rich flavor

**Overall:** Marsh is very popular cultivar today in foreign markets



**Variety name:** Tardivo Di Ciaculli 7014

**Flowering time:** 4th week of March to 1st Week of April

**Ripening time:** late

**Average fruit size:** medium to large

**Fruit color:** pale orange or yellow

**Fruit shape:** flat

**Juiciness:** juicy

**Seeds:** low seeded

**Flavor:** sweet

**Overall:** late variety, it is appreciated in EU markets



**Variety name:** Newhall 7004

**Flowering time:** 4th week of March to 2nd Week of April

**Ripening time:** early

**Average fruit size:** small

**Fruit color:** orange

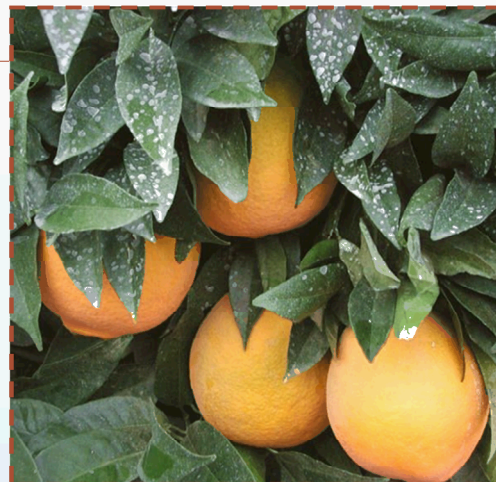
**Fruit shape:** elongated

**Juiciness:** juicy

**Seeds:** seedless

**Flavor:** sweet

**Overall:** slightly earlier than Washington Navel, flesh of darker color



**Variety name:** Washington Navel 7005

**Flowering time:** 4th week of March to 2nd Week of April

**Ripening time:** early

**Average fruit size:** large

**Fruit color:** deep orange

**Fruit shape:** ellipsoid

**Juiciness:** very juicy

**Seeds:** seedless

**Flavor:** very sweet

**Overall:** seedless, easily peeled, recommended for fresh consumption



**Variety name:** Thompson Navel 7006

**Flowering time:** 4th week of March to 2nd Week of April

**Ripening time:** very early

**Average fruit size:** medium large

**Fruit color:** pale yellow

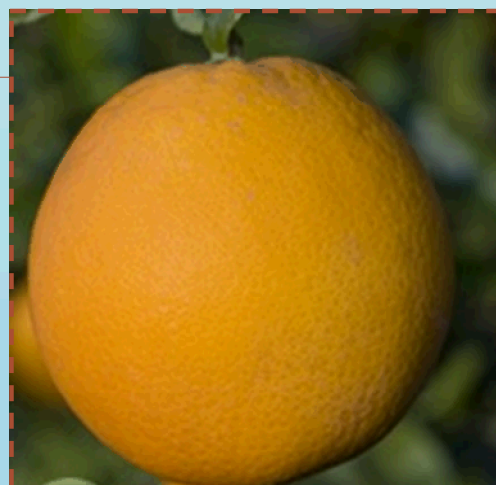
**Fruit shape:** elongated

**Juiciness:** medium juice content

**Seeds:** seedless

**Flavor:** sweet

**Overall:** well colored flesh, firm texture, good flavor



**Variety name:** Clementine di Nules 7015

**Flowering time:** 4th week of March to 2nd Week of April

**Ripening time:** early

**Average fruit size:** large

**Fruit color:** pale yellow

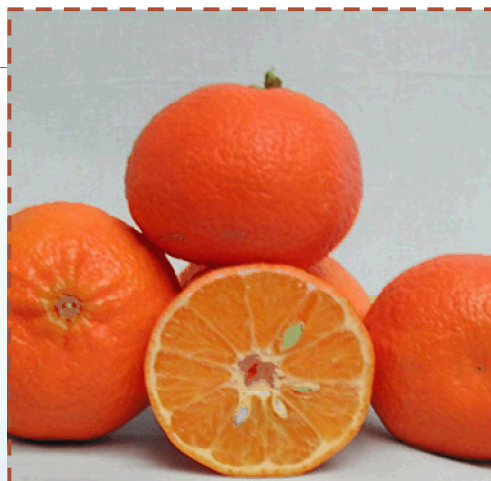
**Fruit shape:** rounded, oblate

**Juiciness:** juicy

**Seeds:** seedless to low seeded

**Flavor:** high quality

**Overall:** Clementine de nules is considered one of the best Clementine for sweetness



**Variety name:** Minneola 7026

**Flowering time:** 4th week of March to 2nd Week of April

**Ripening time:** medium late

**Average fruit size:** large

**Fruit color:** deep reddish orange

**Fruit shape:** oblate

**Juiciness:** juicy

**Seeds:** less seeds

**Flavor:** flavor rich and tart

**Overall:** its attractive color, excellent flavor, and low seed content have made it popular, also known as honey ball



**Variety name:** Olinda Valencia 7099

**Flowering time:** 4th week of March to 2nd Week of April

**Ripening time:** medium late

**Average fruit size:** medium large

**Fruit color:** orange

**Fruit shape:** longer than broad

**Juiciness:** full of juice

**Seeds:** low seeded

**Flavor:** acidic sweet

**Overall:** considered one of the best orange variety in the world





**Variety name:** Clementine SRA 89 7105

**Flowering time:** 3rd week of March to 1st Week of April

**Ripening time:** very Early

**Average fruit size:** large

**Fruit color:** orange

**Fruit shape:** spheroid shape, slightly flattened at the top and bottom

**Juiciness:** juicy

**Seeds:** seedless or few seeds

**Flavor:** sweet

**Overall:** early maturing, thin and easy peeling



# Grapes



# Flowering and Ripening Time

**Herat**

**Kandahar**

**Estimated\***

Variety	April				May				June				July				August			
	Weeks				Weeks				Weeks				Weeks				Weeks			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Flame Seedless 221																				
Emporer 222																				
Black Emerald 223																				
Fantasy 224																				
Crimson Seedless 225																				
Perlette 226																				
Red Globe 228																				
Ribier 232																				
Cheshmi Gao 237																				
Kandahari 236																				
Lal sorkh 736																				
Raucha sorkh 714																				
Sahibi 874																				
Sahibi 240																				
Sahibi spin 891																				
Shir Ahmadi 219																				
Cardinal 229																				
Exotic 230																				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	April	May	June	July	August	April	May	June	July	August	April	May	June	July	August	April	May	June	July	August

\* Under processed data, complete data will be available next year.

Flowering Time Ripening Time



**Variety name:** Fantasy 224

**Flowering time:** 1st to 3rd week of May

**Ripening time:** 2nd week of July

**Bunch size:** long

**Berry size:** medium

**Berry color:** pale black

**Seed presence:** absent

**Sugar Content:** 20 Brix\*

**Overall:** one of the early variety, good for fresh market, not so sweet



**Variety name:** Crimson Seedless 225

**Flowering time:** 1st to 3rd week of May

**Ripening time:** 2nd week of August

**Bunch size:** long

**Berry size:** big

**Berry color:** red

**Seed presence:** absent

**Sugar Content:** 21 Brix

**Overall:** late variety, sweet and juicy



**Variety name:** Perlette 226

**Flowering time:** 1st to 3rd week of May

**Ripening time:** 1st week of July

**Bunch size:** small

**Berry size:** medium

**Berry color:** green yellow

**Seed presence:** absent

**Sugar Content:** 21 Brix

**Overall:** very early variety, not so sweet

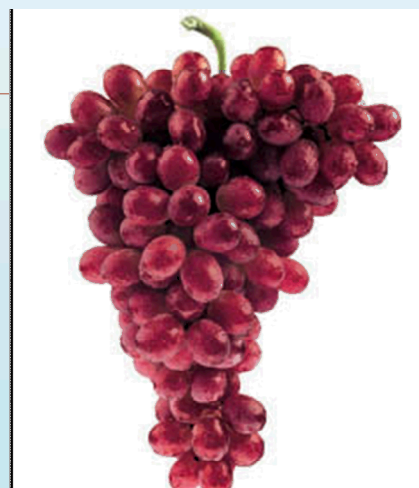


\* **Brix:** See Glossary for the definition of **Brix**.

**Variety name:** Flame Seedless 221  
**Flowering time:** 1st to 3rd week of May  
**Ripening time:** 2nd week of July  
**Bunch size:** long  
**Berry size:** medium  
**Berry color:** deep red  
**Seed presence:** absent  
**Sugar Content:** 17 Brix  
**Overall:** early variety, good for fresh consumption



**Variety name:** Emperor 222  
**Flowering time:** 2nd to 3rd week of May  
**Ripening time:** 4th week of July  
**Bunch size:** medium  
**Berry size:** medium  
**Berry color:** red  
**Seed presence:** present  
**Sugar Content:** 21 Brix  
**Overall:** good for fresh consumption



**Variety name:** Black Emerald 223  
**Flowering time:** 1st to 3rd week of May  
**Ripening time:** 4th week of June  
**Bunch size:** long  
**Berry size:** medium  
**Berry color:** black  
**Seed presence:** absent  
**Sugar Content:** 22 Brix  
**Overall:** it is early variety, recommended for fresh consumption



**Variety name:** Kandahari 236

**Flowering time:** 4th week of April

**Ripening time:** 3rd week of June

**Bunch size:** small

**Berry size:** medium

**Berry color:** dark red

**Seed presence:** present

**Sugar Content:** 13 Brix

**Overall:** early variety, it is very sweet and juicy



**Variety name:** Lal Sorkh 736

**Flowering time:** 1st to 3rd week of May

**Ripening time:** 4th week of July

**Bunch size:** small

**Berry size:** medium

**Berry color:** red

**Seed presence:** present

**Sugar Content:** 23.5 Brix

**Overall:** best for fresh consumption



**Variety name:** Raucha Sorkh 714

**Flowering time:** 1st to 3rd week of May

**Ripening time:** 4th week of June

**Bunch size:** small

**Berry size:** small

**Berry color:** dark red

**Seed presence:** present

**Sugar Content:** 16 Brix

**Overall:** one of the earliest variety, compact bunch, white Raucha is also available





**Variety name:** Red Globe 228  
**Flowering time:** 1st to 3rd week of May  
**Ripening time:** 1st week of August  
**Bunch size:** long  
**Berry size:** big  
**Berry color:** red  
**Seed presence:** present  
**Sugar Content:** 22 Brix  
**Overall:** late mid variety, good for fresh market



**Variety name:** Ribier 232  
**Flowering time:** 1st to 3rd week of May  
**Ripening time:** 4th week of July  
**Bunch size:** long  
**Berry size:** medium  
**Berry color:** black  
**Seed presence:** present  
**Sugar Content:** 18 Brix  
**Overall:** early mid variety, good for fresh market



**Variety name:** Cheshmi Gao 237  
**Flowering time:** 2nd to 3rd week of May  
**Ripening time:** 3rd week of July  
**Bunch size:** small  
**Berry size:** big  
**Berry color:** green yellow  
**Seed presence:** present  
**Sugar Content:** 16 Brix  
**Overall:** mid variety, very sweet, good for fresh market





**Variety name:** Sahibi 240, 874

**Flowering time:** 1st to 3rd week of May

**Ripening time:** 4th week of July

**Bunch size:** medium

**Berry size:** medium

**Berry color:** dark red

**Seed presence:** present

**Sugar Content:** 19/16 Brix

**Overall:** good for fresh consumption



**Variety name:** Sahibi Spin 891

**Flowering time:** 2nd to 3rd week of May

**Ripening time:** 4th week of June

**Bunch size:** medium

**Berry size:** medium

**Berry color:** green yellow

**Seed presence:** present

**Sugar Content:** 14 Brix

**Overall:** export quality, sweet and juicy



**Variety name:** Shir Ahmadi 219

**Flowering time:** 1st to 3rd week of May

**Ripening time:** 4th week of July

**Bunch size:** long

**Berry size:** medium

**Berry color:** green yellow

**Seed presence:** absent

**Sugar Content:** 18 Brix

**Overall:** recommended for fresh consumption and drying



**Variety name:** Cardinal 229

**Flowering time:** 1st to 3rd week of May

**Ripening time:** 3rd week of July

**Bunch size:** medium

**Berry size:** medium

**Berry color:** dark red

**Seed presence:** present

**Sugar Content:** 23 Brix

**Overall:** N/A



**Variety name:** Exotic 230

**Flowering time:** 2nd to 3rd week of May

**Ripening time:** 3rd week of July

**Bunch size:** long

**Berry size:** medium

**Berry color:** dark red

**Seed presence:** present

**Sugar Content:** 23 Brix

**Overall:** N/A





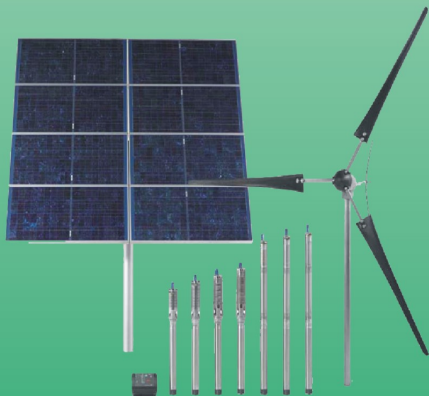
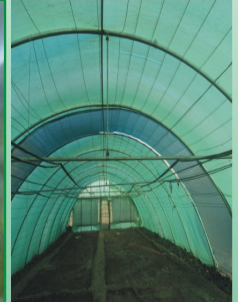
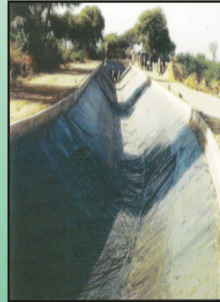




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# Peach



# Flowering and Ripening

Herat\*

Kandahar\*

Variety	March				April				June				July				August			
	March				April				June				July				August			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Florida king 6035																				
Gul basar 802																				
Flower crest 6301																				
Sun crest 260																				
Turki sorkh 804																				
Maycrest 6303																				
Maycrest 259																				
Shelil shab rang 810																				
Asadi 2000																				
Kala Gurba 401																				
Miana Ras 4057																				
Miana Ras 4033																				
Garma 371																				
Jauras 452																				
Irani dir ras 441																				
Kharbozehi 817																				
Sartani 318																				
Shelil Flower top 6219																				
Almani zod ras 440																				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	March				April				June				July				August			

\* Complete data will be available next year.

Flowering Time Ripening Time

**Variety name:** Flower crest 6301

**Flowering time:** 3rd week of March to 1st week of April

**Ripening time:** 3rd week of June

**Average fruit size:** medium

**Fruit color:** yellowish red

**Fruit shape:** ovate

**Pubescence:** present

**Overall:** N/A



**Variety name:** Sun crest 260

**Flowering time:** 3rd week of March to 2nd week of April

**Ripening time:** 3rd week June

**Average fruit size:** big

**Fruit color:** greenish red

**Fruit shape:** round

**Pubescence:** present

**Overall:** N/A



**Variety name:** Turki sorkh 804

**Flowering time:** 3rd week of March to 2nd week of April

**Ripening time:** 4th week of July

**Average fruit size:** medium

**Fruit color:** red

**Fruit shape:** round

**Pubescence:** present

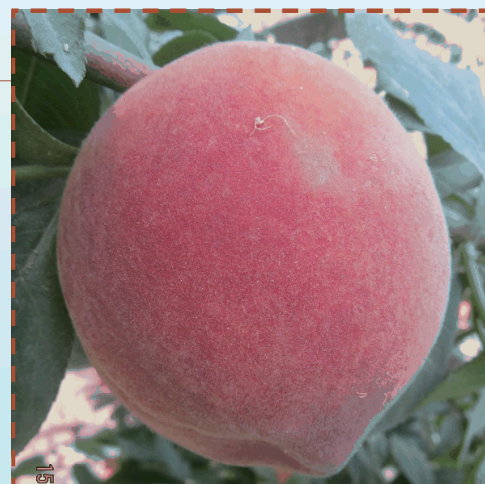
**Overall:** N/A

**No Photo  
Available this  
Year**

**Variety name:** Shelil shab rang 810  
**Flowering time:** 2nd to 4th week of March  
**Ripening time:** N/A  
**Average fruit size:** medium  
**Fruit color:** dark red  
**Fruit shape:** ovate  
**Pubescence:** absent  
**Overall:** N/A



**Variety name:** Florida king 6035  
**Flowering time:** 2nd to 4th week of March  
**Ripening time:** 4th week of May  
**Average fruit size:** big  
**Fruit color:** yellowish red  
**Fruit shape:** oblate  
**Pubescence:** present  
**Overall:** one of the earliest peaches, firm, delicious, yellow flesh



**Variety name:** Gul basar 802  
**Flowering time:** 4th week of March to 1st week April  
**Ripening time:** 2nd week of July  
**Average fruit size:** medium  
**Fruit color:** red  
**Fruit shape:** ovate  
**Pubescence:** present  
**Overall:** N/A





**Variety name:** Garma 371

**Flowering time:** 4th week of March to 2nd week of April

**Ripening time:** 1st week of June

**Average fruit size:** big

**Fruit color:** reddish yellow

**Fruit shape:** oblate

**Pubescence:** present

**Overall:** early variety

No Photo  
Available this  
Year

**Variety name:** Jauras 452

**Flowering time:** 4th week of March to 2nd week of April

**Ripening time:** 1st week of June

**Average fruit size:** medium

**Fruit color:** red

**Fruit shape:** round

**Pubescence:** present

**Overall:** early variety



67

**Variety name:** Maycrest 6303, 259

**Flowering time:** 3rd week of March to 1st week of April

**Ripening time:** 3rd week of May

**Average fruit size:** medium

**Fruit color:** dark red

**Fruit shape:** ovate

**Overall:** high yielding early variety



**Variety name:** Asadi 2000

**Flowering time:** 4th week of March to 2nd week of April

**Ripening time:** 2nd week of June

**Average fruit size:** medium

**Fruit color:** red

**Fruit shape:** elliptic

**Pubescence:** present

**Overall:** recommended for local market



**Variety name:** Kala Gurba 401

**Flowering time:** 4th week of March to 2nd week of April

**Ripening time:** 2nd week of June

**Average fruit size:** big

**Fruit color:** yellowish red

**Fruit shape:** oblate

**Pubescence:** present

**Overall:** appreciated in local market



**Variety name:** Miana Ras 4033, 4057

**Flowering time:** 4th week of March to 2nd week of April

**Ripening time:** 2nd week July/4th week of June

**Average fruit size:** big

**Fruit color:** red

**Fruit shape:** oblate/round

**Pubescence:** present

**Overall:** good for the local market



**Variety name:** Shelil Flower Top 6219

**Flowering time:** 4th week of March to 2nd week of April

**Ripening time:** 1st week of July

**Average fruit size:** big

**Fruit color:** orange yellow

**Fruit shape:** ovate

**Pubescence:** present

**Overall:** N/A

No Photo  
Available this  
year.

**Variety name:** Almani Zud Ras 440

**Flowering time:** 3rd week of March to 1st week of April

**Ripening time:** 4th week of May

**Average fruit size:** medium

**Fruit color:** creamy green

**Fruit shape:** ovate

**Pubescence:** present

**Overall:** N/A



**Variety name:** Irani Dir Ras 441

**Flowering time:** 4th week of March to 2nd week of April

**Ripening time:** 2nd week of June

**Average fruit size:** big

**Fruit color:** yellowish Red

**Fruit shape:** oblate

**Pubescence:** present

**Overall:** late variety



**Variety name:** Kharbozehi 817

**Flowering time:** 4th week of March to 1st week of April

**Ripening time:** 3rd week of July

**Average fruit size:** big

**Fruit color:** yellowish red

**Fruit shape:** elliptic

**Pubescence:** present

**Overall:** good market, juicy and sweet



**Variety name:** Sartani 318

**Flowering time:** 4th week of March to 2nd week of April

**Ripening time:** 2nd week of August

**Average fruit size:** medium

**Fruit color:** red

**Fruit shape:** round

**Pubescence:** absent

**Overall:** early variety, attractive

**No Photo  
Available this  
Year**





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## بابای دهقان

عبدالغنی شراف هستم و در سال 1356 از پوهنځی زراعت پوهنتون کابل فارغ شده ام و بعد از یک دوره مهاجرت در سال 1372 به وطن باز گشته و یک قوریه کوچک نهالهای مثمر را بنام فارم بابای دهقان در شهر مزار شریف در ساحه یک جریب احداث نمودم و در طی دو دهه فعالیت ساحه تولید نهال مثمر در قریه آسیاب شراف ولسوالی چمتال ولایت بلخ و با رعایت تناوب زراعتی به 50 جریب توسعه یافته است. این قوریه با مجوز شماره 185 مورخه 7/8/1386 ریاست محترم باغداری وزارت محترم زراعت تحت نام قوریه حاجی عبدالغنی شراف ثبت و راجستر شده است.

فارم زراعتی بابای دهقان از آغاز فعالیت همکاریهای نیک و متقابل با وزارت محترم زراعت و مؤسسات HLP ، صنعت بادم ، PHDP ، FAO ، IDEA NEW ، ACTED ، ANSOR ، MERCY CORE و غیره داشته است.

در سال 1384 و با همکاری مؤسسه محترم FAO فارم بابای دهقان از طریق آسیا و با اخذ مجوز تحت نام شرکت تخمهای بذری و خدمات زراعتی و همچنان در سال 1390 و با اخذ مجوز از وزارت محترم تجارت فعالیت تجارتي را تحت نام شرکت تجارتي بابای دهقان شروع نموده است.

فعالیتهای این مجمع تحت نام بابای دهقان تقریباً از مرز زون شمال فراتر رفته و نهالهای پیوندی بابای دهقان از قبیل انواع بادم، زردآلو، شفتالو و آلو و همچنان تخمهای بذری آن در اکثر مناطق افغانستان بفروش می رسد که چکیده فعالیتها قرار ذیل میباشد.

احداث 500 جریب باغ بادم با همکاری دفتر IDEA NEW در ولسوالی چمتال ولایت بلخ

احداث اضافه از یکصد جریب باغ بادم در زمینهای شخصی

ثبت یازده کلون به شماره های ( 2041، 2042، 2043، 2044، 2045، 2046، 2047، 2048، 2061، 2062، 2063، 2064، 2065، 2066، 2067 ) از باغ شخصی بنده در کلکسیون ملی میوه جات و مغزیاب افغانستان.

برای سال جاری انواع نهالهای بادم، زردآلو جورس و انواع مختلف آلو، شفتالو و انواع تاک از قبیل کشمش، حسینی و طایفی دو ساله برای فروش در قوریه موجود میباشد.

پروژه های تکمیل شده در بخش باغداری				
تعداد به اصله	سال	مؤسسه تمویل کننده	نام پروژه	شماره
13,000	2005	WFP	تولید نهال بادم	1
24,120	2006	Samsor ban	تولید نهال بادم و زردآلو	2
7,250	2005	FAO	تولید نهال بادم	3
3,100	2006	HIA	تولید نهال زردآلو	4
1,200	2006	CoAAR	تولید نهال بادم	5
121,116	2010	HLP-MAIL	تولید تاک	6
8,920	2010	HLP-MAIL	تولید نهال انار	7
5,082	2010	HLP-MAIL	تولید نهال زردآلو	8
13,000	2010	USAID/IDEA NEW	تولید نهال بادم	9
پروژه های تکمیل شده در بخش غله جات				
مقدار به تن	سال	مؤسسه تمویل کننده	نام پروژه	شماره
300	2005	IFDC	تولید گندم بذری	1
525	2006	FAO-MAIL	تولید گندم بذری	2
596	2007	FAO-MAIL	تولید گندم بذری	3
882	2008	Dorokhshan-FAO	تولید گندم بذری	4
1,100	2009	IRD-FAO	تولید گندم بذری	5
900	2010	MAIL/IRD-FAO	تولید گندم بذری	6
4,05	2011	JDA	تولید گندم بذری	7
0.3	2011	ICARDA	تولید گندم بذری	8
1064	2011	MAIL	تولید گندم بذری	9
100	2011	FAO	تولید گندم بذری	10
12	2011	ACTED	تولید گندم بذری	11
5,9	2011	DAKAR	تولید گندم بذری	12
25,5	2011	Private Companies	تولید گندم بذری	13



آدرس شرکت: قریه آسیاب شراف، ولسوالی چمتال، ولایت بلخ، افغانستان

شماره های تماس: 0700531001 و 0778870887

# Plum



# Flowering and Ripening Time

Herat\*

Kandahar\*

Variety	March				April				June				July				August				May				June				July			
	Weeks				Weeks				Weeks				Weeks				Weeks				Weeks				Weeks				Weeks			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Formosa 255																																
Grangej slah 4030																																
Formosa 280																																
Fortune 6311																																
Red beauty 6037																																
Fazal Manani 6222																																
Grangej zard 4031																																
Tamsoq 178																																
Beauty 274																																
Stanley 332																																
waikson 269																																
Black Amber 6305																																
Grangej zard dir ras 415																																
Formosa 1009																																
Sorkh 405																																
Sia 327																																
Lalkhon 6203																																
Red Flash 6304																																
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October

\* Complete data will be available next year.

Flowering Time Ripening Time



**Variety name:** Fortune 6311

**Flowering time:** 3rd to 4th week of March

**Ripening time:** 4th week of June

**Average fruit size:** medium

**Fruit color:** red

**Fruit shape:** round

**Sugar Content:** N/A

**Overall:** good fresh market



**Variety name:** Red beauty 6037

**Flowering time:** 3rd to 4th week of March

**Ripening time:** 2nd week of June

**Average fruit size:** large

**Fruit color:** red

**Fruit shape:** ovate

**Sugar Content:** 17 Brix\*

**Overall:** firm flesh, attractive color



**Variety name:** Fazal Manani 6222

**Flowering time:** 3rd to 4th week of March

**Ripening time:** 3rd week of June

**Average fruit size:** medium

**Fruit color:** red

**Fruit shape:** round

**Sugar Content:** N/A

**Overall:** recommended for processing



\* **Brix:** See Glossary for the definition of **Brix**.

**Variety name:** Formosa 255

**Flowering time:** 3rd to 4th week of March

**Ripening time:** 1st week July

**Average fruit size:** large

**Fruit color:** red

**Fruit shape:** ovate

**Sugar content:** 16 Brix

**Overall:** flesh is yellow and firm, exciting color



**Variety name:** Grangej siah 4030

**Flowering time:** 4th week of March to 1st week of April

**Ripening time:** 3rd week of June

**Average fruit size:** small

**Fruit color:** black

**Fruit shape:** oblate

**Sugar Content:** 32 Brix

**Overall:** attractive color and size



**Variety name:** Formosa 280

**Flowering time:** 3rd to 4th week of March

**Ripening time:** 1st week of July

**Average fruit size:** large

**Fruit color:** red

**Fruit shape:** oblate

**Sugar Content:** N/A

**Overall:** flesh is yellow red, good for fresh consumption



**Variety name:** Stanley 332

**Flowering time:** 3rd week of March to 2nd week of April

**Ripening time:** 2nd week August

**Average fruit size:** Small

**Fruit color:** red

**Fruit shape:** ovate

**Sugar Content:** N/A

**Overall:** good for drying



**Variety name:** Waikson 269

**Flowering time:** 2nd to 4th week of March

**Ripening time:** 3rd week July

**Average fruit size:** medium

**Fruit color:** red

**Fruit shape:** ovate

**Sugar Content:** N/A

**Overall:** good for fresh consumption



**Variety name:** Black Amber 6305

**Flowering time:** 3rd to 4th week of March

**Ripening time:** 2nd week July

**Average fruit size:** medium

**Fruit color:** black

**Fruit shape:** ovate

**Sugar Content:** 18 Brix

**Overall:** late variety, good for fresh consumption





**Variety name:** Grangej zard 4031  
**Flowering time:** 3rd to 4th week of March  
**Ripening time:** 4th week of June  
**Average fruit size:** small  
**Fruit color:** yellow  
**Fruit shape:** round  
**Sugar Content:** N/A  
**Overall:** flesh is yellow, exciting color



**Variety name:** Tamsiq 178  
**Flowering time:** 3rd to 4th week of March  
**Ripening time:** 2nd week of June  
**Average fruit size:** medium  
**Fruit color:** red  
**Fruit shape:** obovate  
**Sugar Content:** 19 Brix  
**Overall:** flesh is red and soft, attractive



**Variety name:** Beauty 274  
**Flowering time:** 3rd week of March  
**Ripening time:** 2nd week of June  
**Average fruit size:** medium  
**Fruit color:** red  
**Fruit shape:** obovate  
**Sugar Content:** 18 Brix  
**Overall:** flesh is red and soft





**Variety name:** Sia 327

**Flowering time:** 3rd week of March

**Ripening time:** 4th week May

**Average fruit size:** Medium

**Fruit color:** Green

**Fruit shape:** Elongated

**Sugar Content:** N/A

**Overall:** Highly recommended



**Variety name:** Lalkhon 6203

**Flowering time:** 3rd week of March

**Ripening time:** 3rd week June

**Average fruit size:** large size

**Fruit color:** yellowish

**Fruit shape:** rounded

**Sugar Content:** N/A

**Overall:** recommended for processing



**Variety name:** Red Flash 6304

**Flowering time:** 3rd week of March

**Ripening time:** 2nd week June

**Average fruit size:** medium

**Fruit color:** purple

**Fruit shape:** elongated

**Sugar Content:** N/A

**Overall:** appreciated in market for its size



**Variety name:** Grangej zard dir ras 415

**Flowering time:** 3rd week of March

**Ripening time:** 3rd week of June

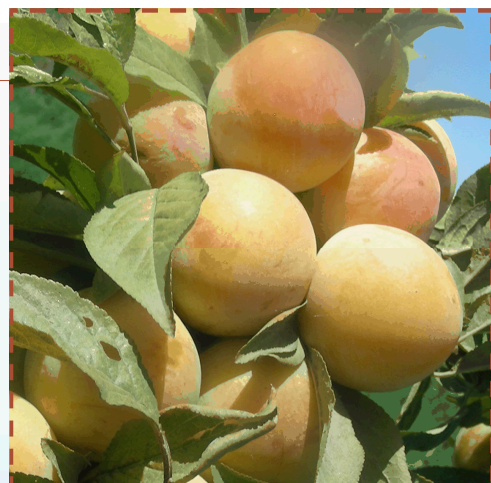
**Average fruit size:** medium

**Fruit color:** yellow

**Fruit shape:** round

**Sugar Content:** N/A

**Overall:** good for fresh consumption



**Variety name:** Formosa zard 1009

**Flowering time:** 3rd week of March

**Ripening time:** 3rd week of June

**Average fruit size:** medium

**Fruit color:** yellow

**Fruit shape:** round

**Sugar Content:** N/A

**Overall:** appreciated in market for fresh consumption



**Variety name:** Sorkh 405

**Flowering time:** 3rd week of March

**Ripening time:** 3rd week of June

**Average fruit size:** medium

**Fruit color:** yellow

**Fruit shape:** rounded

**Sugar Content:** N/A

**Overall:** good for fresh consumption





MADERA is a French non-governmental, non-profit organization which operates only in Afghanistan.

MADERA supports communities to implement integrated diversified programmes in the following fields:

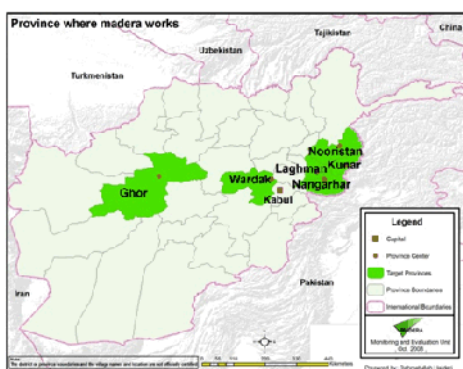
- agriculture
- arboriculture
- forest protection and management
- animal health and animal husbandry
- rural infrastructure
- handicrafts and livelihoods

Mission d'Aide au Développement des Economies Rurales – Afghanistan (MADERA) was founded in 1988, with the purpose of assisting to improve the quality of life of the people of Afghanistan and fostering the conditions necessary for peace. Its actions are oriented towards empowering rural communities by building their capacities and supporting their initiatives, with the aim of giving them greater control over their own development.

MADERA promotes, in collaboration with other partners and with the target populations, a participative and integrated approach to development, respecting the diversity of the needs of the population.

MADERA's programmes are currently supported by: the European Commission (EuropeAid), Misereor, the Agence Française de Développement, the World Food Programme (WFP), the Australian Center for International Agricultural Research (ACIAR), the French Embassy in Kabul (Fonds Social de Développement – FSD), the Afghanistan Ministry of Rural Rehabilitation and Development (MRRD), and the World Bank.

MADERA implements the Perennial Horticulture Development Programme (PHDP) since 2007.



MADERA has its main bases in Kabul and Jalalabad and implements activities in rural areas in five provinces:

- Kunar
- Laghman
- Nuristan
- Nangarhar

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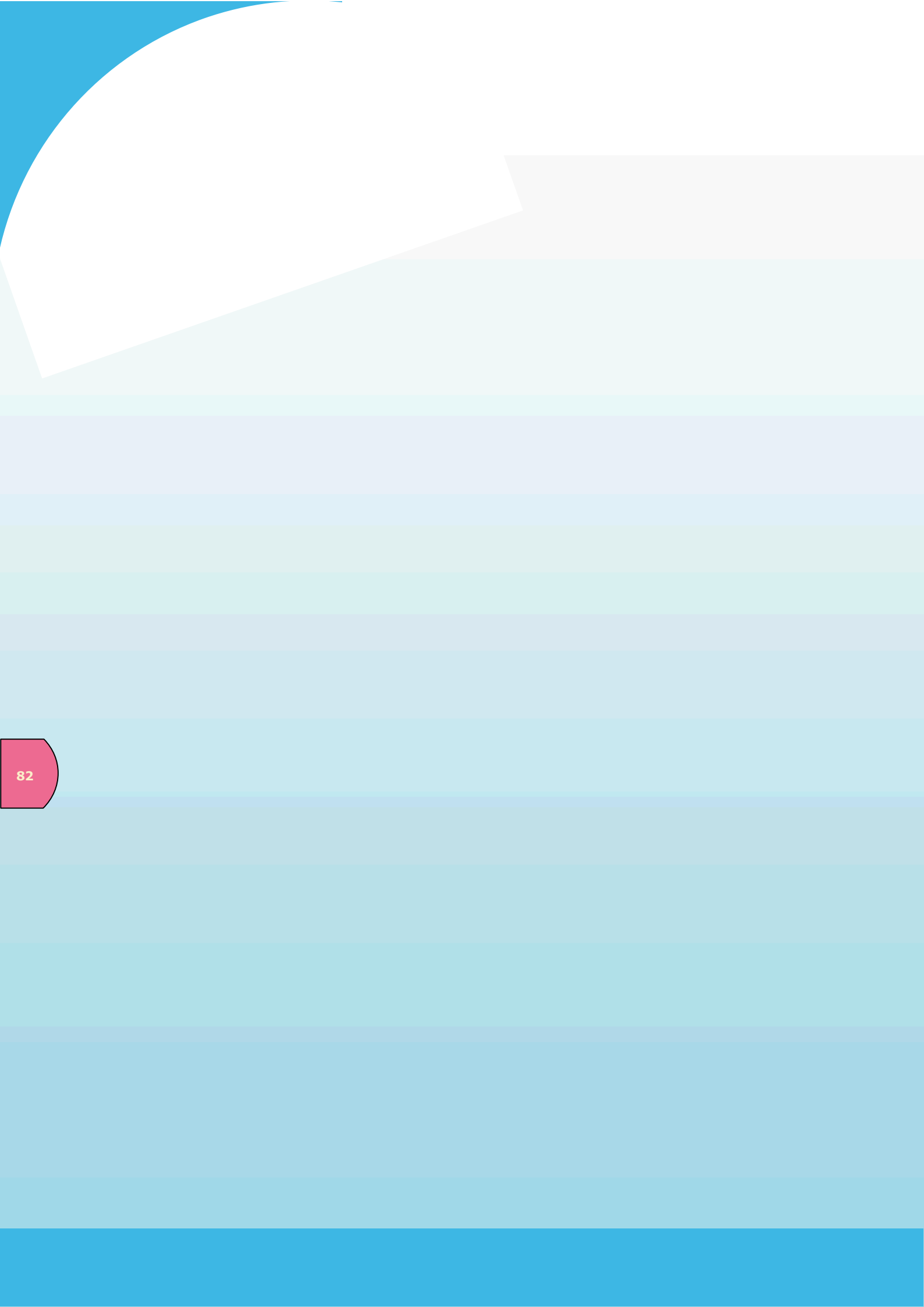


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**WFP** United Nations  
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Programme





# Pomegranate



## Flowering and Ripening Time Jalalabad

## Kandahar\*

Variety	April				May				August				Sep.				October				April				May				June				Sep.				October				Nov.			
	April				May				August				Sep.				October				April				May				June				Sep.				October				Nov.			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4								
Bedana 762																																												
Nazak post 561																																												
Spin Khug 563																																												
Sorkhak 859																																												
Thashkurghani 860																																												
Kandahari 862																																												
Kandahari 6057																																												
Wonderful 7163																																												
Ariana 7176																																												
Eve 7165																																												
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
	April				May				August				Sep.				October				April				May				June				Sep.				October				Nov.			

\* Complete data will be available next year.

Flowering Time Ripening Time



**Variety name:** Spin Khog 563

**Flowering time:** 2nd to 4th week of April

**Ripening time:** 2nd week of October

**Fruit color:** red yellow

**Seed color:** white

**Seed hardness:** hard

**Fruit size:** 98 mm

**Skin thickness:** 7 mm

**Average fruit weight:** N/A

**Flavor:** sweet

**Overall:** N/A



**Variety name:** Sorkhak 859

**Flowering time:** 2nd to 4th week of April

**Ripening time:** 2nd week of October

**Fruit color:** red

**Seed color:** rose white

**Seed hardness:** medium hard

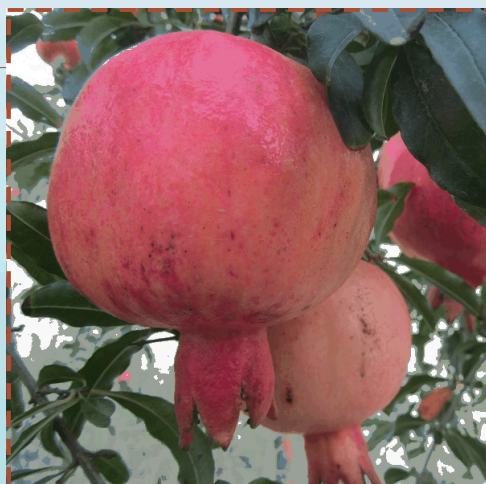
**Fruit size:** 100 mm

**Skin thickness:** 8 mm

**Average fruit weight:** 350 mg

**Flavor:** sweet acidic (may khush)

**Overall:** the production is satisfactory, nursery growers appreciate it



**Variety name:** Bedana 762

**Flowering time:** 2nd to 4th week of April

**Ripening time:** 4th week of September

**Fruit color:** yellowish

**Seed color:** rose white

**Seed hardness:** medium hard

**Fruit size:** N/A

**Skin thickness:** 5 mm

**Average fruit weight:** N/A

**Flavor:** N/A

**Overall:** appreciated for exports



**Variety name:** Nazek Post 561

**Flowering time:** 2nd to 4th week of April

**Ripening time:** 3rd week of October

**Fruit color:** red

**Seed color:** rose white

**Seed hardness:** N/A

**Fruit size:** 91 mm

**Skin thickness:** 2 mm

**Average fruit weight:** N/A

**Flavor:** sweet

**Overall:** appreciated in foreign markets



**Variety name:** Wonderful 7163

**Flowering time:** 1st to 4th week of April

**Ripening time:** 2nd week of October

**Fruit color:** red

**Seed color:** red

**Seed hardness:** soft

**Fruit size:** 95 mm

**Skin thickness:** 6 mm

**Average fruit weight:** 380 mg

**Flavor:** sweet acidic

**Overall:** N/A



**Variety name:** Ariana 7176

**Flowering time:** 3rd week of April to 1st week of May

**Ripening time:** 2nd week of October

**Fruit color:** red

**Seed color:** red

**Seed hardness:** very soft

**Fruit size:** 79 mm

**Skin thickness:** 5 mm

**Average fruit weight:** 300 mg

**Flavor:** sweet

**Overall:** this variety has very good characteristics, e.g. soft seeded, red color of skin and seed. It is also recommended by NGAs members as one of the best variety





**Variety name:** Tashkurghani 860  
**Flowering time:** 2nd to 4th week of April  
**Ripening time:** 3rd week of October  
**Fruit color:** purplish red  
**Seed color:** red  
**Seed hardness:** hard  
**Fruit size:** 91 mm  
**Skin thickness:** 5 mm  
**Average fruit weight:** 250 mg  
**Flavor:** sweet acidic  
**Overall:** N/A



**Variety name:** Kandahari 862, 6057  
**Flowering time:** 2nd to 4th week of April  
**Ripening time:** 2nd week of October  
**Fruit color:** yellowish  
**Seed color:** white  
**Seed hardness:** hard  
**Fruit size:** 84-97 mm  
**Skin thickness:** 5-6 mm  
**Average fruit weight:** 250 mg  
**Flavor:** sweet acidic  
**Overall:** N/A



**Variety name:** Eve 7165

**Flowering time:** 1st to 4th week of April

**Ripening time:** 2nd week of October

**Fruit color:** red

**Seed color:** white

**Seed hardness:** hard

**Fruit size:** 80 mm

**Skin thickness:** 4 mm

**Average fruit weight:** 250 mg

**Flavor:** sweet

**Overall:** imported from USA, it is export quality pomegranate





*Let's Grow Together*

## **Our Goal is to Provide Our Customer's With Affordable High Speed Internet Access**

**STAN Telecom** is a subsidiary of “OTC Group of Companies”, a global enterprise having diverse interests in the various disciplines of Construction, Fabrication, Building Management, Life Support Services, Logistics, Security and Communications and Information Technology Sectors.

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# Rootstocks



## Apple

### 1. B9

A cross between "M8 x Red Standard" a hardy rootstock of Russian origin. In general, B.9 is slightly more dwarfing than M.9 and has slightly higher yield efficiency than M.9. B.9 was selected as a dwarfing cold hardy rootstock and initial inoculation results indicated that it was as susceptible to fire blight as M.9. However, in field trials, trees grafted onto B.9 survived fire blight outbreaks better than trees on other dwarfing rootstocks. B.9 becomes more resistant to fire blight as the tissue ages. Requires staking or other support to keep anchored. Resistant winter cold and to collar rot. Mildly resistant to powdery mildew and scab. Suitable for most soil types, susceptible to fire blight.

### 2. M7

Genotype of unknown origin obtained in UK in pre-war times. Trees are medium vigorous, shoots growth straight and are composed of long reddish brown internodes. Leaf buds are small. The root system provides a very good anchorage in the ground. Suckering activity is common. Trees adapt their self well to all kind of soils except for heavy, asphictic and wet ones. M7 is more resistant to low winter temperatures than M9. It is sensitive to crow gall and wooly apple aphid. It is tolerant to collar rot and fire blight.

Excellent grafting compatibility with the main cultivars. In terms of production and early bearing M7 is the most efficient of medium vigorous rootstocks. Fruit size and quality are good.

M7 promotes a similar tree vigor as MM106 and is therefore suitable for medium-low density orchards. Due to its low sensibility to collar rot could be used as alternative to MM106. However it is too vigorous for high density orchards.

### 3. M9

Originated from seedling of the French cultivar "Paradis Jaune de Metz" released in the market in 1930. Weak vigor with intermediate growth habit. The root system is not very spreading, superficial, and composed of fragile primary roots and hairs. Anchorage in the soil is poor and trees need a support. Average suckering activity. Plants easily produce roots and can be propagated by the common layering methods. Not suitable for hardwood cutting. This rootstocks prefers fertile, permeable and irrigated soils, and do not perform well in dry or heavy and/or moist soils. Its early flowering, makes it sensitive to low winter temperature. It is also sensitive to fire blight, crown gall and wooly apple aphid. Medium sensitive to apple scab and resistant to collar rot. Grafting compatibility with the main cultivars is very good. Bearing starts very early and production and yield efficiency are high. Fruits tends to ripen early. It is suitable for high density orchards on fertile and irrigated soils if grafted with medium/high vigor varieties of standard growth habit. Not suitable in combination with weak varieties even in fertile and plain soils.



### 4. M26

Hybrid of the rootstocks "M16 x M9", commercially introduced in 1959. Trees are slightly more vigorous than M9, and show an intermediate growth habit. Shoot growth straight, are reddish brown and medium pubescent. The root system is stronger and better developed vertically than the one of M9. Anchorage is not always satisfying, and according to the soil type, a support might be needed. Trees produces few suckers. The rootstock has a high rooting potential and can be easily propagated in stool beds, hardwood cutting root fairly well, while micro propagation leads only modest results. Problems concerning compatibility might occur with bud grafting (for ex. In Granny Smith and Imperatore ). M26 prefers fertile permeable and irrigated soils and does not thrive in asphictic conditions; drought could be tolerated until a certain extent.

Tree vigor is negatively affected by the high tendency to produce burr knots which leads to irregular growth of trunk and branches. The rootstock is suitable for medium density orchards.



### 5. MM106

Hybrid of "Northern Spy x M1", commercially introduced in 1952. Trees are medium high vigor with upright growth habit, shoot produce feathers. The root system is well developed both vertically and horizontally, anchorage is good and no support is needed. Low suckering activity and production of burr knots at the base is very scarce. MM106 is very susceptible to collar rot, and tomato ring spot virus. Low susceptibility to fire blight, and apple scab. Resistant to wooly aphid. This rootstock generally adapts well to all kinds of soils but fears asphictic and wet conditions. On sandy soils they remains less vigorous than on M7. Grafting compatibility is very good with the main cultivars. MM106 encourage a prolonged vegetative period of the trees delaying the leaf fall. This could also may give sensitivity to low winter temperatures and to fire blight. Trees are medium vigorous and enter early into productivity. Fruit size and quality are lower with respect to other dwarfing clones as M9 clones. This rootstock is recommended for medium low density orchards, in combination with spur type or generally not very vigorous cultivars. MM106 has confirmed its suitability for the cultivation of "red delicious type". Its susceptibility to collar rot makes it not reliable for orchards established in valleys and on humid soils.

### 6. MM111

Hybrid of "Northern Spy x Merton793", commercially introduced in 1953. Tree are very vigorous with upright growth habit. The shoots growth straight, are reddish brown and very pubescent. The root system is well developed, and provides a very good anchorage (no support needed). Plants have high rooting ability and can be easily propagated by stool beds, by mound and trench layering, as well as hardwood cuttings. MM111 adapts well to different kind of soils especially dry and calcareous ones. It is moderately sensible to waterlogging but very resistant to winter frost. The rootstocks shows low susceptibility to collar rot (*Phytophthora cactprum*), fire blight (*Erwinia amylovora*). It is resistant to woolly apple aphid. This rootstock is particularly recommended for non-vigorous or spur varieties. Medium density orchards could be established in rain fed or scarce fertility areas, hilly or mountainous zones with poor soils. The MM111 is too vigorous for standard type of varieties especially on fertile soils where it tends to produce smaller fruit and make the orchard management difficult.





## Almond and Peach

### GF677

Natural hybrid of "*P. persica* x *P. amygdalus*" selected by INRA and released in 1960. Young shoots are green, grown upright and produce feathers. Is a very vigorous rootstock, with high grafting compatibility and promoted elevated productivity. The rootstock is suitable for dry and calcareous soils with high percentage of lime. It is sensitive to waterlogging (less than peach seedlings), is fairly resistant to *Phytophthora* and very susceptible to *Agrobacterium tumefaciens*, *Armillaria* and root knot nematodes. Good fruit quality is observed on almost all kind of soils. Its productivity is slightly reduced if trees are grown on fertile soils, in high density orchards and if grafted with early and/or vigorous varieties. GF677 is propagated mostly by micro propagation (in vitro), and it's one of the most popular rootstock on the market. It represents the standard for poor dry and calcareous soils. Despite these favorable traits GF 677 is excessively invigorating on fertile soils and summer pruning is required to balance the tree.



## Apricot and Plum

### Myrobalan 29C

Clone selected from a progeny of *Prunus cerasifera*, released for the first time in 1980. Suitable for calcareous soils, moderately resistant to *Agrobacterium tumefaciens* and leptonecrosis, susceptible to *Pseudomonas syringae* and resistant to root knot nematodes. This clone adapts itself well to different soils (calcareous and dry ones) and is moderately resistant to waterlogging. It promotes early bearing and suckering activity is generally low. Myrobalan 29C is the most widely used rootstock for plum. It is appreciated for its adaptability as well as for the promotion of good yields and fruit quality. Recommended also for apricot.

### Marianna G.F. 8/1

Hybrid of "*P. cerasifera* x *P. munsoniana*" selected by INRA and released in 1970. Suitable for most of the soils and tolerant to waterlogging, Resistant to calcareous, basic and salty soils. Marianna is well anchored into the ground and encourages and intermediate tree vigor between Myrobalan B and 29C, it promotes high and regular productivity, good yield and crop quality. Usually resistant to low winter temperatures. Easily multiplied by hardwood cuttings and trench layering. The rootstock is moderately tolerant to *Agrobacterium tumefaciens* and *Armillaria*. Very invigorating rootstocks particularly suitable for the plum. The use in almonds is limited due to the lack of compatibility with some varieties.



## Cherry

### 1. Colt

Hybrid between "*P. avium* x *P.pseudocerasus*", commercially introduced in 1977, could be used for sweet and sour cherries. This rootstock is suitable for most type of soils included heavy and wet ones. It is sensitive to high lime contents and to water shortage, tolerates replanting. It is quite sensitive to low winter temperatures, and crown gall. It is medium tolerant to bacterial canker and has a low susceptibility to root and collar rot. Grafting compatibility is very high to the main sweet cherry cultivars. Tree vigor is similar as on sweet cherry seedlings (*P. avium*), or might be increased by 20%. Could cause a slight delay in flowering and ripening time. This rootstock is particularly recommended on tired and/or heavy soils. It is also suitable for specialized and irrigated cherry orchards of medium-low (300/400 trees/ha) or medium (500 trees/ha)

### 2. Mahaleb SL64

*P. Mahaleb* is autochthonous of central-south Europe. Tree are very vigorous and have an intermediate habit. The root system is composed of very deep growing and poorly ramified tap roots. Trees are firmly anchored to the ground and suckering activity is very low. The rootstock needs light and well drained grounds and thrives also in stony and marginal soils. Trees are very tolerant to high lime contents and perform well also in dry rain fed conditions; very sensitive to water logging and replant disease, but resistant to low winter temperatures. It is little sensitive to crown gall and collar and white rot. Good grafting compatibility has been reported with the main cultivars of sweet cherry. Tree vigor may vary by 80/90% more than *P. avium* seedlings. Mahaleb is considered a very rustic rootstock suitable for rain fed orchards of medium density (400/700 t/ha).

### 3. Mazzard

Large, vigorous tree, not precocious, Adapted to loam to clay-loam soils, Moderately tolerant of poorly-drained soils, Can be produced in stool beds. Standard rootstock for sweet cherries; unpruned tree height of standard varieties is 30-40 ft.; trees may be held to any height with summer pruning. Vigorous, more tolerant of wet soils than Mahaleb, but good drainage still required. Resistant to root knot nematodes and oak-root fungus. Well anchored. Relatively cold hardy.



### 4. Gisela 5

Dwarfing hybrid between "*P.cerasus* x *P.canescens*" introduced commercially in 1990. The root system is well developed with roots growing mainly horizontally. Suckering tendency is very low, anchorage is very low, trees therefore needs a support . Gisela 5 thrives well on different kind of soil, provided they are fertile and well supplied of water. Could endure short periods of water logging, but fears loamy soils. It is moderately tolerant to chlorotic conditions but do not adapt itself to poor and dry soils. The rootstock is sensitive to root and collar rot and very sensitive to bacterial cancer especially under wet conditions. It has an high rooting potential and it can be easily micro propagated. Good grafting results are obtained with summer budding of dormant buds (T or chip budding). Also winter grafting leads to good taking rates both in the field or by bench grafting. Gisela 5 has good compatibility with the main cherry varieties . Trees are 60/80% weaker than on seedlings depending on environmental conditions.

This dwarfing rootstock is suitable for high density orchards (800/1500 t/ha) on fertile and well irrigated soils, requires heavy and regular pruning in order to avoid overload.



## Pear

### 1. Farold 40

Clonal rootstock deriving from the cross between "Old home x Farming dale" released in the market in 1950. Trees are more vigorous than BA 29, but less than the common pear seedlings. Growth habit is upright, central and lower branches spreading. The rooting system is moderately developed, superficial, composed by many fasciculate and tender roots. The anchorage is good. Suckering tendency is low. This rootstock is mainly propagated with in-vitro techniques. The performance in the nursery is satisfying. Farold tolerates low temperatures and rather high lime contents, but its utilization is problematic in loamy and asphictic soils. Grafting compatibility is good with the main cultivated varieties, but trees bears late compared to quince. In spite of their strong vigor, trees produce good yields and high quality fruits. In order to achieve highest results Farold 40, requires an accurate orchard management (e.g. irrigation), and can be utilized for the establishment of low density orchards (<2000 t/ha).

### 2. Quince BA 29C

Clonal selection of "Quince of Provence" obtained by INRA and released in 1967. Trees are more vigorous than other quinces, growth habit is spreading, the root system is strong fasciculate and provides good anchorage. Suckering tendency is low. Rooting tendency is good and the propagation is made mainly by stool beds and by hardwood cuts. Trees growth well on different kind of soils but prefers fertile and fresh ones, tolerating a maximum lime content of 6/7%. It is sensitive to fire blight, pear decline and nematodes. BA 29 reduces tree vigor by about 60% with respect to the pear seedlings. Grafting compatibility is medium good; incompatibility problems have been reported on "Kaiser" and "Williams", for which an interstock is required. This quince delays the bearing but guarantee high and constant yields. Fruits are of good quality and size. This rootstock is suitable for medium or medium low density plantation (<2500 t/ha), also on slightly calcareous soil which are in general not suitable for dwarfing rootstocks.



### 4. Quince Adams 332

Clonal selection of "Quince of anagers" released commercially in 1980. This is a dwarfing rootstock, trees are poorly vigorous, the growth habit is semi-upright. The root system is fasciculate and superficial, poor anchorage makes support necessary. Suckering tendency is medium high. Adams a good rooting attitude therefor multiplication in stool beds and by cuttings is easy. Performance in the nursery is satisfying. Due to its superficial rooting system it prefers fresh and fertile soils, it is sensitive to low winter temperatures. Accurate orchard management (fertilization, irrigation and pruning) is necessary to avoid critical situations and to optimize the dwarfing effect of the rootstock. Adams is sensitive to iron chlorosis and intolerant of lime contents exceeding 4/5%. Most of the varieties are compatible while for "Williams" an interstock is required. It is also suitable for vigorous varieties and promotes early bearing and high production. Yield efficiency is high and fruits have good size.





**ANNGO's General Board Meeting**



**HE Asif Rahimi, Minister of Agriculture, talking on ANNGO's Certified Saplings**





# Part 2

**CATEGORY 2 Fruit saplings produced in ANNGO Registered Nurseries  
(Uncertified)**





# Apple

## 1) Red Chief

**Flowering time:** late

**Ripening time:** late

**Main characteristics:**

Tree used as pollinator, fruit dark red. High chilling requirement, high yielding, fruit can be stored for long time.

## 2) Lebnani zard

**Flowering time:** late

**Ripening time:** late

**Main characteristics:**

yellow skin colour, sweet flash, high yielding, appreciated apple in Afghanistan.

## 3) Lebnani zard

**Flowering time:** late

**Ripening time:** late

**Main characteristics:**

yellow skin colour, sweet flash, high yielding, appreciated apple in Afghanistan.

## 4) Lebnani sorkh

**Flowering Time:** late

**Ripening Time:** average

**Main Characteristics:**

one of the old varieties at Afghanistan, can be planted with Lebnani zard for pollination.

## 5) Royal Gala

**Flowering time:** average

**Ripening time:** average

**Main characteristics:**

with a thin skin and crisp sweet flesh, the Royal Gala is a very special apple. Its outstanding appearance and eating qualities have made Royal Gala one of the world's premium varieties.

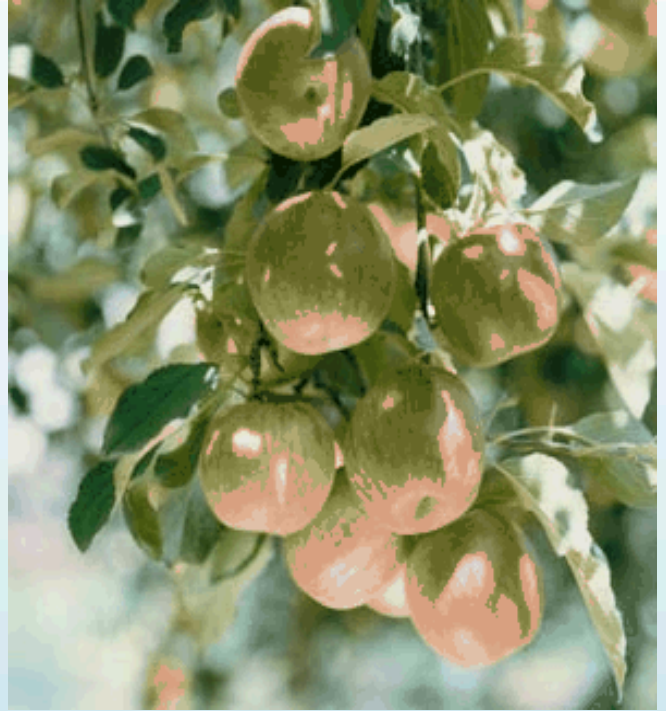
## 6) Gow Rakhash

**Flowering time:** late

**Ripening time:** late

**Main characteristics:**

considered to be one of the famous local varieties but not so common. Same as Rakhash variety but bigger in size.



## 7) Shakari

**Flowering time:** average

**Ripening time:** average

**Main characteristics:**

fruit very sweet, medium size Fruit.

## 8) Swati

**Flowering time:** early

**Ripening time:** early

**Main characteristics:**

tree self fertile, large size fruit, grown in lower elevations.

# Fig

## 1) Siah

**Flowering time:** early

**Ripening time:** early

**Main characteristics:**

early variety black fig, seeded, fresh and dry consumption.

## 2) Kandahari

**Flowering time:** average

**Ripening time:** average

**Main characteristics:**

large size tree, whitish yellow in colour fruit. Good for drying.

## 3) Spin

**Flowering time:** Average

**Ripening time:** average

**Main characteristics:**

almost same as Kandahari.



## 4) Tor Kandahari

**Flowering time:** early

**Ripening time:** early

**Main characteristics:**

large tree, early variety, not good market and can

# Loquat

101

## 1) Mahali Early

**Flowering time:** early

**Ripening time:** early

**Main characteristics:**

small fruit, sweet and trees are off types.

## 2) Mahali Late

**Flowering time:** Late

**Ripening time:** Late

**Main characteristics:**

medium size fruit, very sweet and trees are off types.



# Mulberry

## 1) Khodi

**Flowering time:** average

**Ripening time:** average

**Main characteristics:**

very sweet, white and light pink in color.

## 2) Shir Tot

**Flowering time:** early

**Ripening time:** early

**Main characteristics:**

large berry, white, very sweet.

## 2) Bedana

**Flowering time:** early

**Ripening time:** early

**Main characteristics:**

very sweet, seedless, tree self fertile, good for drying and fresh consumption.



# Persimmon

## 1) Pakistani

**Flowering time:** early

**Ripening time:** early

**Main characteristics:**

medium size, very sweet, strangent.

## 2) Tajiki

**Flowering time:** average

**Ripening time:** average

**Main characteristics:**

medium size tree, medium size fruit, stringent.





# Pear

## 1) Balkhi

**Flowering time:** average

**Ripening time:** average

**Main characteristics:**

upright tree, medium fruit, white flesh, satisfactory yield.

## 2) Yakhnak

**Flowering Time:** late

**Ripening Time:** late

**Main Characteristics:**

mostly grown around kabul, medium size fruit, need for polinator, flash white and crispy.

## 3) Fransawi

**Flowering time:** late

**Ripening time:** late

**Main characteristics:**

upright tree, selffertile, large fruit with good taste.

## 4) Kandahari

**Flowering time:** early

**Ripening time:** early

**Main characteristics:**

spreading tree, high yielding, white flesh and juicy.

## 7) Beruti

**Flowering time:** late

**Ripening time:** late

**Main characteristics:**

upright tree, medium size fruit.

## 12) Zamistani

**Flowering time:** late

**Ripening time:** late

**Main characteristics:**

mostly grown around Kabul, medium size fruit, need for polinator, flash white and crispy.



## 9) Garma

**Flowering time:** early

**Ripening time:** early

**Main characteristics:**

early variety with high yield, more juicy fruit.

## 10) Awal Ras Garma

**Flowering time:** early

**Ripening time:** early

**Main characteristics:**

early most, with spreading tree, small size fruit.

## 11) Fransawi Dir Ras

**Flowering time:** late

**Ripening time:** late

**Main characteristics:**

upright tree, self fertile, large fruit with good taste.

## 14) Conference

**Flowering time:** late

**Ripening time:** late

**Main characteristics:**

tree selffertile, fruit long and narrow with juice and flesh is firm.

# Pistachio

## Khasak

**Flowering time:** late

**Ripening time:** late

**Main Characteristics:**

small nut

widly grown

mostly propagated by seed

available in local markets



# Walnut

## Khasak

**Flowering time:** late

**Ripening time:** late

**Main characteristics:**

small nut

widly grown

mostly propagated by seed

available in local markets





## ANNGO trainings for farmers and students







# Part 3

Ornamentals and forestry trees



# Rose

Roses are one of the oldest ornamental flowers in cultivation and still considered one of the most popular garden flowers today.

Roses grow best in full sun but will grow satisfactorily if they have 6 hours of sun daily. Early morning sun is preferred since it gives the foliage a chance to dry early in the day. Damp conditions favor the development of diseases.

Roses should not be planted too close to trees or shrubs where they will compete for light, nutrients, water and air. Plant at least 40 centimeters to 60 centimeters away from buildings or solid barriers (except for climbers). Walls can be used to advantage if roses are located so the barrier provides protection from north winter winds.

Following classes of roses are found with NGA in Afghanistan.

1. **Bush Roses**
2. **Climbing Roses**
3. **Shrub Roses**



# Cupressus

The genus Cupressus is one of several genera within the family cupressaceae that have common name cypress. With other conifers extensive cultivation has led a wide variety of forms, sizes and colours that grown in parks and gardens throughout the world. A few species are grown for their timber, which can be very durable and light. Cypress trees are also valued for their firewood and oil. The wood is easily to split, dries quickly and burns clean. In addition oil from the tree is used for shampoo and other beauty products. They are evergreen trees or shrubs, growing 5-40meters tall.

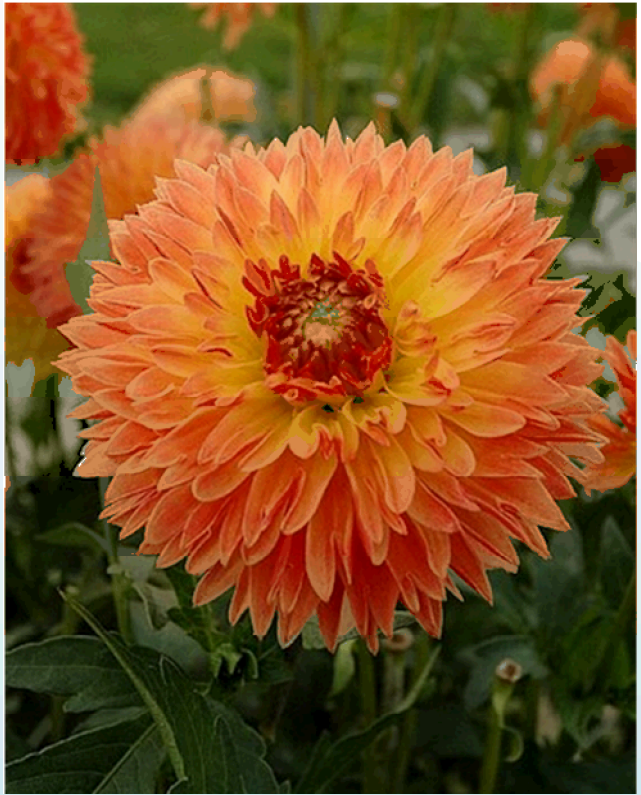




# Dahlia

The dahlia is a native of Mexico and Central America where it grows wild, even on the mountain slopes. The dahlia, in botany is a member of the "Compositae" family, capable of self-pollination. Dahlias grown today are hybrids of several other varieties. For that reason, seed from named dahlias will not produce the same blooms as the parent, but will be a mixture of the colour characteristics of the parents of that plant. Therefore, it is necessary to plant a root or a cutting of a particular variety in order to have flowers of that variety. Dahlias are classified according to the shape and arrangement of their petals. Single flowering dahlias have no more than a few rows of petals and show a central disc. Double flowering dahlias have multiple rows of petals and display no central disc.

Depending on the varieties and types selected, dahlias may be planted in borders, along fences or walls, in pots, in beds or in rows. Dahlia grows best in full sun but will tolerate some shade. Try to select a planting area that gets 6 hours of sun a day. Dahlias should be staked and the stake set before the tuber is planted.



# Eucalyptus

Eucalyptus is a fast growing tree and has about 625 species and sub-species with several varieties and hybrids. It can be planted on agricultural lands both as monoculture and as a component of agro-forestry programmes. One of the principal factors for its widespread introduction is the ease of cultivation. Besides this, easily obtainable seed supplies, good germination and its adaptability to varying soil and climatic conditions are the other important characteristics of Eucalyptus.

Due to its ability to resist water logging and tolerance to salinity, this tree is largely used in water logged areas and as "wind breaker".



# Jasmine

Jasmine is one of the important flower which is liked by most of the people. Due to the fragrance only the demand is more. Concrete (essence) is also extracted from the flower. So, the demand in the market is both for the fresh flower and concrete.

Jasmines are usually propagated by cutting and layering. Seed propagation, though uncommon, is necessary for crop improvement through planned hybridization. Multiplication through sucker, grafting, budding and tissue culture has also been found successful. The different methods used for propagation is described here.



# Pelargonium

Pelargonium is a genus of flowering plants which includes about 200 species of perennials, succulents, and shrubs, commonly known as geraniums. . They are extremely popular garden plants, grown as annuals in temperate climates.

Pelargonium leaves are usually alternate, and palmately lobed or pinnate, often on long stalks, and sometimes with light or dark patterns. The erect stems bear five-petaled flowers in umbel-like clusters called pseudumbels. The shapes of the flowers have been bred to a variety ranging star-shaped to funnel-shaped, and colors include white, pink, red, orange-red, fuchsia to deep purple. The Pelargonium flower has a single symmetry plane (zygomorphic), which distinguishes it from the Geranium flower which has radial symmetry (actinomorphic).





# Pinus halepensis

Its Scientific Name is *Pinus halepensis* Mill and Common Names is Aleppo pine, halepensis pine, Jerusalem pine, pine. It belongs to family pinaceae.

Aleppo pine (*Pinus halepensis*) has been widely cultivated as a street and forestry tree in the temperate areas. Primarily a weed of drier temperate regions that invades open woodlands, forests, grasslands, roadsides, disturbed sites and waste areas. A large evergreen tree growing 5-50 m tall.

Young branches are often silvery-grey in colour but the older trunks develop a rough, greyish-black coloured bark that is narrowly furrowed.

The leaves are very thin (i.e. linear) and needle-like in appearance. They are light green in colour, hairless (i.e. glabrous), glossy and sometimes slightly twisted. These leaves (4-12 cm long) are arranged in groups of two and their bases are enclosed in a light brown or greyish-coloured sheath. When the leaves are shed, they fall in complete units still attached within the sheaths.



# Pistachio

The origin of pistachio is not known but most of the experts agree that it probably originated in Central Asia. Most of the pistachio production occurs in countries with arid climate.

Pistachio trees thrive on heat; better nut filling and less blanks are produced in hot-weather climates. However, winters need to be cold enough to complete their dormancy (a rest period during winter.) About 1,000 accumulated hours of temperature at 7 degrees Centigrade or below are required for pistachio trees to break dormancy and start normal growth in spring. Pollination is carried only by wind. Therefore, mild winds during pollen shed would help fruit set. Strong desiccating winds in spring may interfere with pollination and reduce crop set. Pistachio trees grow in virtually all soils. However they grow better in deep, sandy loam soils. Trees density should be increased in poorer soils.





# Populus

Populus is a genus of 25–35 species of deciduous flowering plants in the family Salicaceae, native to most of the Northern Hemisphere. English names variously applied to different species include poplar. Poplars are amongst the fastest growing tree species under appropriate agro climatic conditions.

Clones of hybrid poplar can be harvested in 5 to 7 years. Poplar timber is used mainly for poles, box manufacturing, paper manufacturing and other industrial uses.

The genus has a large genetic diversity, and can grow from anywhere between 15–50 m tall, with trunks of up to 2.5 m.

Very well drained fertile soil with assured irrigation should be selected for raising nursery stock. The area should be given preparatory irrigation and thereafter properly leveled and ploughed when the soil is under optimum moisture condition. Suitable well leveled flatbed should be prepared for planting of cuttings. Cuttings should be prepared with a very sharp tool to obtain a very clean and smooth cut. Length of the cuttings should be around 20 to 22cms and upper cut of the cuttings should be slightly above an active bud as far as possible. The best time for planting of cuttings is Feb-March. Spacing for setting of cuttings in nursery beds should be 80x20cms.



# Walnut

The scientific name of walnut is *Juglan regia* and belongs to family Juglandaceae. *J. regia* is native to the mountain ranges of Central Asia, extending from Xinjiang province of western China, parts of Kazakhstan, Uzbekistan and southern Kirghizia and from lower ranges of mountains in Nepal, Bhutan, Tibet, northern India and Pakistan, through Afghanistan, Turkmenistan and Iran to portions of Azerbaijan, Armenia, Georgia and eastern Turkey. In these countries, there is a great genetic variability, in particular ancestral forms with lateral fruiting. No commercial orchards available in Afghanistan.

*Juglans regia* is a large, deciduous tree attaining heights of 25–35 m, and a trunk up to 2 m diameter, commonly with a short trunk and broad crown, though taller and narrower in dense forest competition. It is a light-demanding species, requiring full sun to grow well.

*J. regia* 'Buccaneer' produces an abundant crop of seeds. A self-fertile cultivar, it produces pollen over a long period and is thus a valuable pollinator for other cultivars. The tree is about the same size as an open-pollinated walnut, it comes into leaf very late and so usually avoids damage by late frosts.

It is cultivated extensively for its high-quality nuts, eaten both fresh and pressed for their richly flavored oil; numerous cultivars have been selected for larger nuts with thinner shells.

Walnut trees grow best in rich, deep soil with full sun and long summers. Mature trees may reach 50 feet in height and width, and live more than 200 years, developing massive trunks more than eight feet thick.

In Afghanistan walnut saplings are seedling of walnut. The concept of grafting is very poor. The nuts found are either soft shelled, semi soft shelled or hard shelled.



ANNGO recognized methods for propagation are

- Tongue grafting
- Cleft grafting
- Patch budding

## GLOSSARY

**Accession** - a collection of plant material from a particular location. An accession is assigned an identification number, which usually is preceded by the abbreviation PI (plant identification).

**ANNGO** - Afghanistan National Nursery Growers' Organization.

**Brix** - A scale used to indicate soluble solids content: °Brix = grams of sucrose per 100 grams of liquid at 68°F (20° C).

**Bud** - a structure of compact embryonic tissues, frequently enclosed in scales and becoming obvious in winter during plant dormancy.

**Bud union** - the junction between a scion or bud and its supporting rootstock.

**Budding** - a type of grafting that consists of inserting a single bud into a stock. It is generally done in late July and August, the latter part of the growing season.

**Budstick** - a shoot of the current season's growth used for budding. Leaves are removed, leaving ½ inch of leaf stem for a handle.

**Clone** - a group of plants derived vegetatively from one parent plant, identical to each other and to the parent.

**Compatible** - plant parts (scion and rootstock) that are capable of forming a permanent union when grafted together.

**CPN:** certified production nurseries.

**Cross-pollination** - the process in which pollen is transferred from an anther (the upper part of the stamen in which pollen is produced) of one flower to the stigma (the pollen-receiving site of the pistil) of a second flower of a different cultivar.

**Cuttings** - detached vegetative plant parts which when placed under conditions favourable for regeneration will develop into a complete plant with characteristics identical to the parent plant.

**Drupe** - a stone fruit (cherry, plum, peach). Many berry-like fruits are technically small drupes, like huckleberry.

**ELISA** - Enzyme Linked Immuno-Sorbent Assay - method to test for virus diseases.

**Fleshy fruits** - classification of fruits that includes the berry, drupe, and pome. They have a fruit wall that is soft and fleshy at maturity.

**Flower** - a shoot of determinate (limited in number) growth with modified leaves that is supported by a short stem; the structure involved in the reproductive processes of plants that bear enclosed seeds in their fruits.

**Globose** - shaped like a globe; spherical.

**Graft** - to unite a stem or bud of one plant to stem or root of another plant.

**Graft union** - the region where rootstock and scion come together; there can be slightly deformed growth at the union that is noticeable, but does not affect the function of the tree.

**Grafting** - describes any of a number of techniques in which a section of a stem with leaf buds is inserted into the stock of a tree.

**Horticulture** - horticulture is the science or art of cultivating fruits, vegetables, flowers, or ornamental plants. Etymologically, "horticulture" can be broken down into two Latin words: *hortus* (garden) and *cultus* (tilling).

**Hybrid** - the offspring of two plants of different species or varieties of plants. Hybrids are created when the pollen from one kind of plant is used to pollinate and entirely dif-



**Oblique** - lop-sided, as one side of a leaf base being larger, wider or more rounded than the other.

**Oblong** - longer than broad, with the margins parallel except at the extreme basal and apical ends.

**Obovate** - inversely ovate, broadest above the middle.

**Oval** - Twice as long as broad, widest at the middle, both ends rounded.

**Ovate** - Egg shaped, broadest below the middle.

**Perennial plant** - A plant that lives for more than 2 years, often living for many years. Almost all woody plants and many herbaceous plants are perennials.

**Perfect flower** - A flower having both functional stamens and pistils; a plant with both functioning male and female parts.

**PHDP** - Perennial Horticulture Development Project.

**Pollinator** - an agent (bees, insects, people) of pollen transfer.

**Pollinizer** - the plant species or variety that produces the pollen.

**Pruning** - removal of plant parts such as buds, developed shoots, and roots to maintain a desirable form by controlling the direction and amount of growth.

**Rootstock** - the portion of a grafted plant that provides the root; grafted plants typically consist of a scion, which develops into the shoot or crown and a rootstock that provides the root system; rootstocks may include a significant length of stem, called standards, commonly used for weeping trees or shrubs.

**Scion** - a short length of stem, taken from one plant which is then grafted onto the rootstock of another plant. The portion above a graft that becomes the trunk, branch, and tree top; the cultivar or variety.

**Seedling** - refers to a plant grown from a seed.

**Self-pollination** - the process by which pollen is transferred from the pollen producing section of the plant to the pollen receiving part of the plant of the same flower or another flower of the same cultivar.

**Tissue culture** - the growing of masses of unorganized cells on agar or in liquid suspension. Useful for the rapid asexual multiplication of plants.

**UPOV** - the International Union for the Protection of New Varieties of Plants.

**True-to-type** - Inbred plants that breed true and are kept as a named variety with distinct qualities in cultivation.

**Variety** - subdivision of a species having a distinct though often inconspicuous difference, and breeding true to that difference. More general, also refers to clones.

#### CATALOGUE CONTENTS DISCLAIMER

User of this catalog can gather information of ANNGO Species, varieties, and above all clones/accessions, characteristics and availability. ANNGO underlines that this catalogue contains preliminary results, and some plant or fruit characteristics or behaviors may vary for different developers, growing environments and/or techniques. Every year ANNGO will publish a new edition of the catalogue with refined data accuracy, and includes new releases from the national collection.

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