

CHAMP FACTS

GRAPE TRELLISING DOUBLES FARMER INCOME IN TWO YEARS

Afghan grape farmers can double their yields¹ from their vineyards by introduction of trellis poles and wiring to provide a structure for the vines to grow upon. Afghans currently grown their vines mostly on the ground in what they call a “bush” structure. Yields from the practice are low and the quality of the fruit is also low as it hangs very close to the ground. The grapes can then be impacted by molds, lack of sunlight and it makes managing the vine almost impossible. ROP introduced grape trellising to Afghan farmers starting in 2005. Now CHAMP has been scaling up the trellising efforts and have shown farmers that trellising vineyards almost doubles the harvest yield of grapes and substantially improves the grapes quality. Increased yields and quality translate directly to doubling net income.

FAST FACTS

Yield increase: 83%

Price increase: 11%

Average vineyard size = 1 acre

Projected Annual Net Income:

Traditional = \$3,600

Trellised = \$7,300

Trellising costs = \$4.25 per vine

Payback Period = 1 season

Traditionally vines growing on the ground degrades both the quality and quantity of grapes. With the new trellising system, concrete poles are installed parallel to the vines and steel wires are fixed over the poles. Each pole has a T-Bar placed at the top of it, through which three wires are pulled along the direction of the poles. This system is capable of supporting the load of the grapes at a manageable height for the average sized adult. This helps the grapes grow more abundantly and of higher quality. The farmers can then harvest their grapes more easily. Proper pruning of the vines in this new system is another critical and important activity. The CHAMP horticulture



Grape grown traditional bush style, Parwan. Note grapes on soil.



Grape growing on trellising in spring, Mir Bocha Kot, Kabul Province.

¹ Roots of Peace Trellis Study, 2007, Jean-Pierre Detry, PhD

team instructs the farmers on the techniques of how to train their vines to climb up the trellis system and prune them properly to get maximum yields with the best quality.

The trellising has other benefits. The September hailstorm in Kabul province destroyed many of the grapes grown on the ground in the traditional manner. The grapes that were growing on trellis were 100% unharmed by the hail.

ECONOMICS

INVESTMENT

CHAMP subsidizes the trellis post at different rates depending upon the adoption rates. In Kabul and Parwan province we subsidize 50% of the cost of the trellis post, or \$3.50 per post. ROP provides the remainder of the Technology Package at no cost. The farmer must pay cash for \$3.50 per post and \$1 per end post. In other areas where the adoption cycle is still very early stage, our subsidy is \$6.00 per post and the farmer pays \$1.00 per post. For one acre, the investment for the farmer is \$984 (264 trellis posts x \$3.50 and 60 end posts x \$1.00).

RETURN

For Shindur Khani green grapes, the increased income from the trellises is \$3,700 per acre. So for an investment of \$984, the farmer can increase his income \$3,700 per year. For USAID, an investment of around \$984 returns an impact of increased rural farm income 3.8 times the investment every year.

	Yield ² (per acre)	Price (per mt)	Farm Gate Proceeds (per acre)
Current Vine Structure	4.0 mt	\$900	\$3,600
Trellised Vineyard	7.3 mt	\$1,000	\$7,300
Gain	3.3 mt	\$100	\$3,700
	+83%	+11%	103%



Training farmers on post installation with ground auger, Kabul



Training farmer on T-bar installation, Kabul. Note current Bush-style grown vines.

² Based upon actual results from our beneficiary farmers in Kabul province.

Locations

CHAMP has been trellising existing vineyards in Kabul, Parwan, Ghazni, Logar, Zabul, Helmand and Kandahar. World Bank Horticulture & Livestock Program (HLP) is trellising in Shamali and Balkh. Balkh and Herat are the other large grape production areas in Afghanistan, but outside the geographic scope of the CHAMP Program.

Technical Package

CHAMP offers the following package for farmers. We limit our subsidy for only the first jerib (1/2 acre):

- Trellising materials
- Installation support
- Training for farmers to grow vines on to trellising
- Training on pruning, Giberellin application, sulfur application, fertilizer and irrigation



Construction

CHAMP contracts with a number of manufactures to produce trellis posts near the vineyards. We initially trained most of the how companies on trellis post manufacture. ROP developed quality tests to insure the trellis posts have been made to specification.

Timing of Construction

The cement in the trellis post must cure before use. It is best to initiate the procurement of the trellis posts by July for the following winter.

Design

The Roots of Peace design of the cement trellis post can be found at <http://rootsofpeace.org/resource-library> and will be posted on the www.CHAMP.af website.

Materials List

- cement
- steel rebar
- angle iron crossbar
- crossbar fastener
- bailing wire
- galvanized wire
- ground auger
- Gripple wire fasteners