In Egypt, grapes are one of the most widely grown fruit crops, second only to citrus. Egypt’s grape cultivation is spread geographically from Alexandria in the north to Aswan in the south, which, combined with the production of early and late ripening grapes, enables the prolonged availability of fresh table grapes from May to November.

Egypt ranks fourth worldwide in the global production volume of table grapes, and has shown impressive growth in the past 5 to 10 years. In 2016, production of grapes in Egypt amounted to 1,691,194 tonnes on 184,254 feddan1 of cultivated land (FAOSTAT). Along with growth in grape production, Egypt has seen a rapid expansion of grape exports with an 18-fold increase between 2001 and 2015, from 46,000 tonnes in 2001 to 167,000 tonnes in 2015.

A loss assessment in the grape value chain was conducted in the area of Nubaria. The selection of this district was based on the fact that Nubaria is a very important district for national fruit production as it represents 51.7 percent of the total productive area of fruits, and specifically 50.1 percent of the total grape productive area in Egypt.

### Bottlenecks in the grape value chain

The Egyptian grape sector has experienced a period of growth over the past 15 years, achieving successful results in the export sector. Nonetheless, several weaknesses and bottlenecks were observed throughout the value chain, in addition to high levels of losses. The value chain is susceptible to fluctuations in international grape markets. Large-scale export-oriented producers and small-scale grape farmers who produce mainly for the local market experience wide disparities in the access to and the use of productive resources, finance and technology. Moreover, inadequate research and development, lack of cold chain and marketing infrastructures, insufficient coordination among value chain stakeholders, and poor phytosanitary practices and control measures pose risks to quality, productivity and exports.

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1 One feddan is approximately 0.42 hectare or 4200 m²
Estimated losses in the grape value chain in 2016 and 2017

Losses were analyzed through sampling and surveys at farm, wholesale and retail levels. The study selected 15 farms in five different villages in Nubaria District, three wholesale markets and nine retail markets (three hypermarkets, three supermarkets, and three informal markets). The total estimated losses in the grape value chain was 30.6 percent in 2016 and increased to 45.72 percent in 2017 along all stages of the value chain. The sudden increase of losses in 2017 compared to 2016, was mainly due to an increase in production costs, as a result of the Egyptian currency devaluation.
Figure 1 shows the volume of grapes lost at three value chain stages, providing an indication of the observed causes of losses.

**Value chain stage**

**Farm level**

**Losses in 2016**

Volume of losses
18.6%

**Losses in 2017**

Volume of losses
10.3%

**Causes of losses**

Decay is the biggest cause of grape loss at farm level resulting from pathological infections during the growing season.

**Wholesale level**

**Losses in 2016**

Volume of losses
5.3%

**Losses in 2017**

Volume of losses
16.4%

**Causes of losses**

Shattering, followed by decay are the biggest causes of grape losses. Shattered berries are due to rough handling and bad stacking of crates on transport vehicles, as well as poor road conditions during transportation from the farm.

**Retail level**

(Hypermarkets, supermarkets and Informal markets)

**Losses in 2016**

Volume of losses
6.7%

**Losses in 2017**

Volume of losses
19.05%

**Causes of losses**

Shattering, followed by decay are the biggest causes of grape losses. Decay is usually due to inadequate storage temperatures, as well as improper display and packing of the product. Rough handling from consumers at the hyper and super markets may also contribute to shattering and decay.
Gender roles in the grape value chain

Focus group discussions and in-depth interviews showed that women play a significant role in the grapes value chain. Grapes are a delicate fruit, and there is a general perception that women are gentler when harvesting and handling. Therefore, women are particularly involved in primary production, harvest, and post-harvest handling. They also have an important role in the agro-processing. On the contrary, women have little to no role in transportation or wholesale stages. Some women work in wholesale markets, but usually only if they inherit this role from their husbands or fathers.

*Figure 2 presents the distribution of women and men in the grape value chain, showing the relative size of the role they play at each stage.*

*Figure 2* - Description of the Grape Value Chain – Gender Roles

When both men and women are involved, a larger symbol indicates the sex of the group that is the main actor or more active at that particular value chain stage.

**Source:** Authors compilation based on study findings and adapted from FAO. 2018. Gender and food loss in sustainable food value chains – A guiding note. Rome
Recommendations to reduce losses in the grape value chain in Egypt

- Establish quality standards and regulations for the domestic market to improve fruit quality and use grading as a marketing technique;

- Improve extension services through communication materials that are tailored to users’ needs and capabilities;

- Improve post-harvest infrastructures and storage facilities;

- Improve post-harvest and marketing infrastructure, as well as access to information and financial services;

- Encourage the establishment of associations and cooperatives gathering smallholder farmers to provide services that may contribute to food loss reduction (e.g. crop collection, cold storage units, packing lines, transportation and marketing facilities);

- Establish a direct marketing center to enhance integration among value chain stakeholders;

- Promote processing, in particular grape drying into raisins, as a market-oriented activity to add value, create new marketing channels, generate more income, and reduce losses.