



The effect of applying Quality Standards on Developing and Improving some Egyptian Agricultural Exports

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Abstract: Quality systems began to play an important and effective role, especially after the emergence of global economic blocs, and the spread of globalization phenomenon as there is a new global system, and global markets have become dependent on crops and products of high quality and technological development, and given the importance of the impact of the application of quality systems on the development of Egyptian agricultural exports as it is It aims to produce a high-quality crop or product that is in line with international and local standards, and to open new markets while working to maintain and control existing markets, and to work on continuous improvement, as well as training workers on the latest production methods. The research problem represents, that the importing countries set specifications for the overall quality of the agricultural crops that they import, especially the European Union countries, which leads to that Egyptian agricultural exports are facing intensive competition with the competitive countries exporting these crops. The research aims to study the effect of applying quality standards systems on the development of Egyptian agricultural exports in some export companies that have been reached through the research sample. The research used both descriptive and quantitative analysis methods using statistical methods and methods that achieve the research goals such as averages and percentages. The research relied on the published and unpublished data issued by the relevant authorities with the subject, in addition to the initial data By designing and preparing a questionnaire form for quality requirements and specifications required for external customers (importers), therefore 18 companies were chosen from about 80 companies In the field of agricultural exports and some of them apply the quality system, representing about 23% of the total export companies, and through the sample that was targeting companies to measure the impact of the application of quality systems, it became clear that there are about 12 companies that implement the quality system in full and 4 companies in the stages of processing And two companies do not apply the quality system, The questionnaire was prepared to obtain the opinion of export companies on the impact of quality application on the development of agricultural exports. And that is through direct contact, either by personal interviews, or by phone call or by using the e-mail communication. **In the light** of the results of the research, the following can be recommended: The necessity to work on applying quality standards to all agricultural crops, from the production stage to the internal and external marketing stage. Establishing centers for training on quality standards in Egypt and introducing the specifications of crops required for export. The necessity of unifying the technical specifications for quality on all internal and external institutions to be applied in the production and export stages together. Working to provide data and information related to quality standards and institutions that they adopt in Egypt and abroad, and to provide guidance in them.

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Key words: ISO International Standards Organization, **BRC** British retail consortium, **IFS** International Food Standards

Introduction:

Quality systems began to play an important and effective role, especially after the emergence of global economic blocs, and the spread of globalization phenomenon as there is a new global system, and global markets have become dependent on crops and products of high quality and technological development, and given the importance of the impact of the application of quality systems on the

development of Egyptian agricultural exports as it is. It aims to produce a high-quality crop or product that is in line with international and local standards, and to open new markets while working to maintain and control existing markets, and to work on continuous improvement, as well as training workers on the latest production methods.

Research problem:

The research problem represents, that the importing countries set specifications for the overall quality of the agricultural crops that they import, especially the European Union countries, which leads to that Egyptian agricultural exports are facing intense competition with the countries exporting these crops because the exports do not match the specifications required by the importing countries, and lack of interest By obtaining quality certificates that meet the specifications required by the importing countries for our agricultural exports, which may lead to a decrease in the quantity and value of some Egyptian agricultural exports to these markets.

Research objective:

The research aims to study the effect of applying quality systems on the development of Egyptian agricultural exports in some export companies that have been reached through the research sample. To achieve this goal, the research will study and analyze the following axes:

1. Study the current state of Egyptian agricultural exports.
2. Study the relative importance of companies holding quality standards.
3. Knowing the most important quality standards and institutions responsible for implementing them in Egypt.
4. Study the most important agricultural crops of export companies with a sample of research and sources of purchasing those crops.
5. Learn about the most important markets that companies export toward them.
6. Study the effect of applying quality standards on production and export.
7. Study the problems and obstacles facing both producers and exporters in implementing quality systems and finally identify some proposals for problems faced by some exporters in applying quality to Egyptian agricultural exports.

Research method and data sources:

The research used both descriptive and quantitative analysis methods using statistical methods and methods that achieve the research goals such as averages and percentages. The research relied on the published and unpublished data issued by the relevant

authorities with the subject of the research such as the Central Agency for Public Mobilization and Statistics, the World Trade Center database, in addition to the initial data By designing and preparing a questionnaire for quality requirements and specifications required for external customers (importers), many exporters consider it to be a top secret matter, and therefore 18 companies were chosen from about 80 companies In the field of agricultural horticultural exports and some of them apply the quality system, representing about 23% of the total export companies, and through the sample that was targeting companies to measure the impact of the application of quality systems, it became clear that there are about 12 companies that implement the quality system in full and 4 companies in the stages of processing And two companies do not apply the quality system, The questionnaire was prepared to obtain the opinion of export companies on the impact of quality application on the development of agricultural exports. And that is through direct contact, either by personal interviews, or by phone call or by using the e-mail communication.

The most important results:

First: The current situation of Egyptian agricultural exports:

This part of the research deals with two axes, the first of which includes the relative importance of agricultural exports from the total Egyptian total exports during the period (2015-2017), while the second axis deals with the relative importance of agricultural crops issued by exporting companies in the research sample.

1- The relative importance of agricultural exports from the total Egyptian total exports:

It is clear from the data of Table (1), that agricultural exports represent about 21% of the total exports, which amounts to about 23.3 billion dollars as an average for the period (2015-2017). It is also clear that the total value of exports of both vegetables and fruits amounts to about 1.1 billion dollars, 1.2 billion dollars, respectively, as it turned out that vegetables exports represent about 21.6% of agricultural exports, while fruit exports represent about 24.5% of agricultural exports as an average for the period referred to.

Table (1): The relative importance of total agricultural exports, vegetables and fruits exports from the total Egyptian exports during the period (2015-2017) (million dollars)

Item Year	Total exports	Agricultural exports	%	Vegetable exports	%	Fruit exports	%
2015	21340	4901	23	1134	23.1	1123	22.9
2016	22580	4870	21.6	967	19.9	1196	24.6
2017	25900	4859	18.8	1067	22	1270	26.1
Average	23273	4877	21.0*	1056	21.6	1196	24.5

* Average percentages as geometric mean.

Source: Collected and Computed from: <https://www.trademap.org>. <http://www.msrintranet.capmas.gov.eg/database>.

2- The relative importance of agricultural crops in the research sample from total exports of vegetables and fruits:

A review of the data of Table (2), which shows the relative importance of agricultural crops in the research sample, which is represented in both potatoes and strawberries from vegetable, orange, and mango crops from fruit crops, it is showed that both exports of potatoes and strawberries represented about 19.2%, 8.2% of the total exports of vegetables as an average for the period (2015-2017), while orange exports

amount to about 512 million dollars, representing about 42.8% of fruit exports, which amount to about 1.2 billion dollars on average for the period referred to, while mango exports amount to about 27.4 million dollars, representing 2.2% of fruit exports as an average for the period (2015- 2017). The decrease in the value of strawberry and mango exports is due to a number of reasons, the most important of which is the lack of good advertising on the Egyptian side of strawberries and mangoes, and the difficulty in mobilizing each of them.

Table (2): The relative importance of agricultural crops in the research sample from total vegetables and exports fruit during the period (2015-2017) (million dollars)

Item Year	Vegetable exports					Fruit exports				
	Total vegetable exports	Potato exports	%	Strawberry exports	%	Total fruit exports	Orange exports	%	Mango exports	%
2015	1134	224.0	19.8	72.4	6.4	1123	493.9	44.0	17.1	1.5
2016	967	141.8	14.7	98.3	10.2	1196	495.1	41.4	31.2	2.6
2017	1067	262.7	24.6	89.9	8.4	1270	547.1	43.1	34	2.7
Average	1056	209.5	19.2*	86.9	8.2	1196	512.0	42.8	27.4	2.2

• Average percentages as geometric mean. **Source:** Collected and computed from:

<https://www.trademap.org>. <http://www.msrintranet.capmas.gov.eg/database>.

Second: The relative importance of companies that obtain quality standards:

This part deals with the division of companies in question in terms of whether or not they obtained a quality certificate, as table 3(data shows the relative importance of companies that have any of the different quality standards, and it is clear that there are 12 companies out of the total sample that reached 18 companies that have standards For quality, at a rate of 67% of the total sample, and the number of 4 companies on the way to obtain quality, representing about 22%, and the number of 2 companies do not have any criteria for quality, and at a rate of 11% of the total sample.

It was also found that there are companies that only have quality standards on paper and that they are

not applied within stations or farms, while there are companies that do not happen and the quality is actually applied, except that the quality standards require an integrated documentary cycle that is maintained for at least two years.

Third: The most important quality standards and institutions responsible for implementing them in Egypt:

This part of the research deals with two axes, the first of which includes identifying the most important quality standards applied in Egypt, and the second is concerned with highlighting the most important institutions responsible for implementing the quality standards.

Table (3): The relative importance of companies that obtain quality standards in the research sample

Item	Companies obtained and un-obtained standards	
	number	% of the sample
Obtained	12	67
In the way to obtained	4	22
Un-obtained	2	11
Total	18	100

Source: Collected and calculated from the field research questionnaire in 2019.

1- The most important quality standards applied in Egypt:

Table (4) data indicates that the most important quality standards applied in Egypt are limited to about

four quality standards, which are limited to (Total Quality Management known as ISO, European Euro Gap, BRC Certificate, and IFS Certificate) and through the results of the questionnaire it is clear that

about five Only companies from the research sample have obtained total quality management (ISO), which represents about 28% in terms of the relative importance of companies, as data from the same table indicated that about 6 companies from the research sample have European quality certification (Euro-Gap European standards), which represents About 33% in terms of the relative importance of the research sample, which is In terms of the relative importance of the research sample, which is considered the highest percentage of companies, data of the same table also indicated that the number of companies that obtained a

certificate (BRC, IFC) amounted to about 3, 2 companies from the research sample, representing about (17%,11%) In terms of the relative importance of the number of companies in the research sample, while the number of companies that obtained all quality standards in the research sample amounted to about four companies, representing about 22% in terms of relative importance in the research sample, and finally the data indicated that only about two companies You did not get any of the quality criteria, which represents about 11% of the research sample.

Table (4): the most important quality standards applied in the research sample

Name the applied quality standards	Number of companies	Relative importance (%)
Total Quality Management (ISO)	5	28
Euro Gap European standards	6	33
BRC certification	3	17
IFS certification	2	11
All of the above	4	22
don't apply	2	11

Source: Collected and calculated from the field research questionnaire in 2019.

2- The most important institutions responsible for implementing quality standards:

Through the questionnaire, it is clear that the institutions that issue and monitor the implementation of quality standards are represented in the following:

A- Internal institutions: the most important of which are:

- The Central Administration of Agricultural Quarantine affiliated to the Egyptian Ministry of Agriculture in all its affiliated entities, whether in the ministry, especially the management of brown mold for the potato crop, or agricultural quarantine departments in Egyptian airports and ports.
- The General Authority for Export and Import Control of the Egyptian Ministry of Trade and Industry.

The many routine procedures that these authorities take with exporters, in addition to the slow procedures and export permits required, are the most important defects that are taken on these bodies, which hinder the encouragement of exporters to increase the volume of Egyptian exports to foreign markets.

B- External (international) institutions: They are divided into governmental and private institutions:

Among these institutions are the comprehensive quality management ISO, the European Gap Foundation and the BRC certificate, and the IFS certificate, and to obtain a license or certificate from these institutions through their offices in Cairo or by sending delegates from abroad in cooperation with the Egyptian internal authorities.

Fourth: The most important agricultural crops for export companies with the research sample:

Most export companies produce for the purpose of export, either because most of the farms produced for export are owned by two exporters, and the second reason when contracting the crop is that exporters face some problems that hinder the application of quality standards, for example the application of Global Gap standards, part of which is applied in The farm and the other part of the export terminal, with some countries requiring the exporter to obtain these standards, such as the Netherlands and the Emirates, and through the research sample it is clear that most of these companies produce and export crops (oranges, potatoes, strawberries, and mangoes).

A review of (Table 5) data shows that about 16 companies produce and export more than one crop, representing about 89% of the total research sample of 18 companies, some of which produce potatoes, others produce oranges, strawberries and mangoes, some of which are It produces and exports potatoes and oranges. The table also shows that only about 7 companies specialize in the production and export of oranges with 60% of crops and the rest of other crops, representing about 39% in terms of the relative importance of exporting companies that produce and export in the research sample.

It is also clear from the data of the same table that there are only 6 companies specialized in the production and export of potatoes with 50% of crops and the rest of other crops, representing about 33% of the total research sample, and the number of 2

companies that produce and export strawberries by 40% and the rest of other crops that represent About 11% of the sample size, and the number of 2 companies specialized in the production and export of mangoes at a rate of about 30% and the rest are other

crops and at a rate of 11% of the total sample, and only one company that is not specialized in production and exports most of these crops by obtaining them from other companies and by a percentage 6% of the total sample.

Table (5): The most important agricultural crops for export companies in the research sample

Item / Crop	Number of companies	% Of the sample size	Specialization Percentage
Orange	7	39	60
Potato	6	33	50
Strawberry	2	11	40
Mango	2	11	30
Not specialized	1	6	--
Total	18	100	

Source: Collected and calculated from the field research questionnaire in 2019.

Fifth: Sources of purchasing crops for export companies:

Through the results of the questionnaire, it is clear that about 60% of the companies working in the field of producing and exporting agricultural crops import the seeds that they grow from abroad, especially potato seeds, which are imported from European countries that import a large percentage of those crops.

Orange Crop:

Table (6) data shows that the number of exporters who perform both production and export amounted to about 15 companies, equivalent to about 83% of companies operating in the field of export, for the orange crop that exports about 80% of its production and purchases about 20% of the markets Wholesale to complete the quantity to be exported abroad.

Potato Crop:

Table (6) data also indicates that the number of exporters who produce and export together is about 18

companies, equivalent to about 100% of companies operating in the field of export, for potato crops that export about 100% of their production after the screening process, where potatoes are distinguished by standards High quality, especially in the process of monitoring the production process, whereby the countries importing Egyptian potatoes monitor production from first obtaining seeds until the stage of sorting and exporting to protect them from brown mold disease. These companies are not allowed to purchase from abroad.

Strawberry crop:

The data of the same table shows that the number of companies that produce and export together is about 12 companies, equivalent to about 67% of companies operating in the field of export in relation to the strawberry crop, which exports about 70% of its production and purchases about 20% of wholesale markets and about 10% Through intermediaries or through other farms close to it in order to complete the quantity required to be exported abroad.

Table (6): Sources of purchasing crops for companies in the research sample

Item / Crop	The relative importance of companies		% farm dependence	% wholesale markets	% other sources	% Total
	Number of companies	%				
Orange	15	83	80	20	0	100
Potato	18	100	100	0	0	100
Strawberry	12	67	70	20	10	100
Mango	10	56	70	15	15	100

Source: Collected and calculated from the field research questionnaire in 2019.

Mango Crop:

The mango crop has a high competitive advantage in the foreign market, so the ratio of the quantity required to be exported is greater than the production volume of any company, so these companies are relied upon to purchase from abroad, as indicated by the data of Table (6), where they

confirmed that the number of companies that produce and export together is about 10 A company equivalent to about 56% of companies operating in the export field in relation to the mango crop that exports about 70% of its production and purchases about 15% of wholesale markets and about 15% through intermediaries or through other farms close to it in

order to complete the required quantity Exported to abroad.

Sixth: The most important markets that companies export to:

Comparing the most important markets to which export is made in the research sample for companies that have quality standards and non-companies, the results of Table (7) Show the following:

- European Union markets are considered the most important markets that companies with quality

standards prefer to export to, as they came in the first place in terms of the number of companies, which amounted to about 8 companies, representing about 44% of the total sample. The same table data indicated that the most important crops that are directed to European Union markets, especially countries (the United Kingdom, Germany, the Netherlands, Finland, Italy, and France) are concentrated in potato and strawberry crops.

Table (7): The most important markets that companies export to in the researches

Item The Market	Companies that obtain quality		The most important crops That are being exported
	Number	Relative importance (%)	
European Union	8	44	Potatoes - Strawberries
Arab countries	4	22	Mango - Strawberry
Asian markets	3	17	Oranges - Potatoes - Mangoes
Other markets	3	17	Orange- Strawberry

Source: Collected and calculated from the field research questionnaire in 2019.

- The markets of Arab countries come in second place in terms of preference to export to them, as the number of companies that prefer export to Arab countries reached about four companies, representing about 22% of the research sample, and the data of the same table indicated that the most important crops that are exported to Arab markets were concentrated In mango and strawberry crops.

- Asian markets occupy the third position in terms of preference for exporting companies, especially East Asian countries, then Russia, where the number of exporters to the Asian market reached about 3 companies, representing about 17% of the total sample, especially countries (Malaysia, Vietnam, China, Bangladesh, India, Singapore) Russia also data indicated that the most important crops that are exported to the Asian market were concentrated in oranges, potatoes and mangoes, and the second-grade crops are exported from fruits, except that in recent periods and specifically from 2009, importers in Russia began to care about specifications and quality requirements, and many Egyptian exporters were considered both Russian and Arabic markets named quantitative markets that the source benefits from with subsidies on every export ton. After removing subsidies from most of export crops, there was less interest in exporting to them, finely both and came in the last place that companies working in the field of agricultural crops prefer both African markets, Latin American markets, and the United States of America, especially some companies that do not enjoy the application of quality standards, where the number of companies is about 3 companies, representing about 17% of the research sample, where these companies prefer African countries and Latin American countries

because they depend on the quantities to a large scale and more than interesting the quality standards.

Seventh: The effect of applying quality standards on production and export:

This part of the research deals with studying the effect of applying quality standards on the percentage of losses, costs, profits, and the efficiency of resource utilization and the efficiency of the production process and the development of employee performance.

1- The effect of applying quality standards on the percentage of waste:

Through the results of the research sample, it was found that about 10 companies who obtained the quality system have sorting and grading stations, representing about 56% of the total sample, in which the crop is collected and all production and marketing operations are carried out to prepare the crop before the export process, while the rest of the companies, which amount to about 6 Companies that implement the quality system and two companies that do not implement the quality system, representing about 44% of the sample size, as they have confirmed that they are performing screening operations at leased stations, which increases the costs of the process, especially in the process of transporting the crop from the production place to the place of processing. These companies also confirmed that the large percentage of crop sorting is directed to export abroad except for crop sorting products that are directed to the local market, which reaches about 10-15%.

By reviewing the data of Table (8), which clarify the effect of applying quality standards on the percentage of production to be exported, the percentage of screening, and the percentage of losses in the research sample from companies applying to

quality and companies that have not applied the quality standards, the following is clear:

Orange crop:

For companies that meet and apply quality standards, the average percentage of exports is about 67, 5% of the production supplied to the stations, while the sorting rate after washing is estimated at about 30%, which is sold to wholesalers and deals with the same treatment as the exported fruits, or is directed to manufacturing companies, while the percentage The loss is about 2.5%.

As for companies that do not apply to any of the quality standards, the average percentage of exports is about 52% of the production supplied to the stations, while the sorting rate after washing is estimated at 43%, they are sold to wholesalers and deal with the same treatment of exported fruits, while the percentage of losses is about 5 %.

Potatoes Crop:

For companies that have applied and applied to quality standards, Table, (8) data indicates that the average percentage of exports of potato crops amounts to about 65% of the supplied production to the stations, while the screening rate is estimated at 32%, directed to the local market or to the chip manufacturers, while the percentage The loss is about 3%.

As for the percentage of exports in companies that are not applied to quality, it is estimated at 50% of

the supplied production to the stations, and the screening rate is about 44%, while the loss rate is estimated at 6%.

Strawberry crop:

Regards to companies that have applied and applied to quality standards, the data of Table No. (8) shows that the average percentage of strawberry crop exports in the research sample is about 85% of the supplied production to the stations, while the screening percentage is estimated at 13.5%, which is directed to the local market or juice and jam companies., While the loss rate is about 1.5%.

With regard to the percentage of strawberry exports in the research sample for companies that do not apply quality standards, it is estimated at about 60% of the supplied production to the stations, and the screening rate reached 30%, it is directed entirely to the local market or to the companies of jams and juices, while the average loss rate is estimated at 10%.

Mango Crop:

As for companies that have applied and applied to quality standards, the data of Table (8) Shows that the average percentage of mango crop exports in the research sample is about 80% of the supplied production to the stations, and the screening percentage is about 18%, while the loss rate is estimated at about 2%.

Table (8): The relative importance of the quantity of exports, sorting, and losses of crops to the applied companies and not applied to the quality standards in the research sample

Item The crop	Companies that apply quality standards			Companies that do not apply quality standards		
	% Exports	% Sorting	% Waste	% Exports	% Sorting	% Waste
Orange	67.5	30	2.5	52	43	5
Potato	65	32	3	50	44	6
Strawberry	85	13.5	1.5	60	30	10
Mango	80	19	1	60	32	8

Source: Collected and calculated from the field research questionnaire in 2019.

As for the percentage of exports in the research sample for companies that do not apply quality standards, it is estimated at about 60% of the supplied production to the stations, while the screening rate is about 32%, and the percentage of losses is about 8%, and the percentage of losses is calculated from the screening rate in the export stations, Noting that the percentage of losses decreases in the stations applying the quality standards due to the presence of a quality management representative during the picking, transport, aging in the station, and examination after arriving at the station.

From the aforementioned, it is clear that companies that implement quality standards in production and marketing increase the quantities

exported from the supplied production to the station by a rate ranging from 15-25% compared to companies that do not apply quality standards in addition to the lower percentage of screening that is marketed locally and also the percentage of losses, on Unlike companies that do not apply quality standards, the percentage of the source crop of production supplied to the plant decreases, and the percentage of screening that is marketed locally increases, and also the percentage of losses is large, which is almost twice the loss in companies that apply quality standards, which shows that the application of quality standards to production And export in order to work on developing and increasing Egyptian agricultural exports.

2-The effect of applying quality standards on costs:

Table (9), data indicates the effect of applying quality standards on costs, as it is clear from the research sample that was represented by export companies that have quality standards and do not have approval rate for items describing the relationship between costs and the application of quality standards amounted to 78%, in contrast The disapproval rate was about 22% of the total sample, and the items were as follows:

- The high costs of the production process: The approval rate reached about 72% of the total sample.

- The high costs of services and marketing operations: which are represented in workers training, sorting, processing, packing and transport operations, with an approval rate of about 78% of the total research sample.

- High wages: starting from the wages of workers in agriculture for workers trained in quality standards from the beginning of the production process to the export process, with an approval rate of about 83% of the research sample.

Table (9): The effect of applying quality standards on costs in the research sample

Item	Agree		Disagree	
	Number of companies	%	Number of companies	%
High costs of the production process	13	72	5	28
High costs of services and marketing operations	14	78	4	22
Rising wages	15	83	3	17
Average	%78		%22	

Source: Collected and calculated from the field research questionnaire in 2019.

From the above, it is clear that the application of quality standards leads to increased costs, especially in the early stages of application, and as confirmed by the exporters, this increase is compensated directly by some of the application because the application of quality leads to reducing the percentage of losses in addition to increasing the profits produced by exporting.

3-The effect of applying quality standards on profits:

It is clear from the data of Table (10), which explains the effect of applying quality standards on increasing corporate profits while increasing market share, opening new markets, increasing product price and export price in addition to increasing production and increasing exports and the percentage of increase confirmed by the research sample on items that describe quality dimensions, which are:

- The application of quality standards leads to an increase in corporate profits by 25%.

- It also leads to an increase in the market share and the opening of new markets by a rate ranging between (10 - 15%).

- The research sample also confirmed that by applying quality standards, the price of the product increases by 20% over the normal price, due to the distinction of production from other regular production.

- The results also indicated that the application of quality standards leads directly to an increase in the export price by about 30% over the price of crops not applied to them, especially as they are under the control of importing agencies and their cost is higher.

In addition to the decrease in the percentage of losses by (15-20%) of the crop, which in turn is reflected in the increase in production with the same percentage of the crop that does not meet the quality standards.

- The research sample also confirmed that the increase in exports is a direct natural result of the crops to which the quality standards are applied, at an estimated rate of about 35% over other crops.

Table (10): The effect of applying quality standards on profits in the research sample

Item	Number of companies	Percentage of increase(%)
Company profits	16	25
Market share and opening new markets	14	10-15
The price of the product	12	20
Export price	12	30
production quantity	14	15-20
Amount of exports	14	35

Source: Collected and calculated from the field research questionnaire in 2019.

4- The effect of applying quality standards on the efficient use of resources and the efficiency of the production process and the development of employee performance:

Table (11) data indicates that the percentage of those who do not agree with the existence of the effect of applying quality to the efficiency of resource

utilization and the efficiency of the production process and developing employee performance represents about 15.7% of the total research sample. The previous table data also indicated that the average approval rate for the positive impact of quality application on all The indicated elements are about 84.3% of the research sample for all companies.

Table (11): The effect of applying quality standards on the efficient use of resources and the efficiency of the production process and develop the performance of workers

Item	Agree		Disagree	
	Number of companies	%	Number of companies	%
The relationship of quality implementation with the training of workers	12	67	6	33
The relationship of quality implementation to job descriptions for workers	15	83	3	17
The relationship of quality implementation with the exploitation of productive resources	17	94	1	6
The relationship of quality implementation to the efficiency of the production process	16	89	2	11
The relationship of applying quality to reducing the error rate	14	78	4	22
The relationship of quality implementation to the continuous development of the institution	17	94	1	6
Average	84.3 %		15.7 %	

Source: Collected and calculated from the field research questionnaire in 2019.

Eighth: The problems facing the exporters and the required quality specifications:

This part of the research deals with identifying the most important problems facing exporters in the research sample, and these problems were divided into production, marketing, and financing problems, and problems related to the application of quality standards.

1- Productivity problems:

Table (12) data shows the relative importance of the most important production problems facing exporters who perform the production process, and a study of the relative importance of these problems shows that the problem of fluctuating domestic production represents about 29.6% of the total interests of exporters and comes first, followed by

second in terms of The relative importance of the exporters The problem of water is not suitable for irrigation (sewage or agricultural wastewater), as most of the cultivations take place in the new desert lands, in which there is no regular irrigation water and dependence on groundwater represents about 25.9% of the exporters' problems, and then came in the third place With a percentage representing about 22.2%, the problem of production on different dates and lack of commitment to the dates of agriculture, then followed in the fourth place the problem of not producing varieties suitable for consumer taste, and at a rate that represents about 18.5%. From the views of the exporters on the most important production problems to their meeting during the export process.

Table (12): The relative importance of the most important productive problems in the research sample

The problem	Number of exporters	Relative importance%
Domestic production fluctuation	16	29.6
Water not suitable for irrigation (sewage or agricultural water)	14	25.9
Production on a different date and not sticking to the dates of agriculture	12	22.2
Not producing items suitable for consumer taste	10	18.5
The producer does not have quality standards	2	3.7

Source: Collected and calculated from the field research questionnaire in 2019.

2- Marketing problems:

Table (13) data shows the relative importance of the most important marketing problems facing exporters in the study sample, and a study of the relative importance of these problems shows that the problem of high transport costs to the export port represents about 33.3% of the total interests of exporters and comes first, and this problem is considered comprehensive. Most of the companies that work in the field of exports, whether they have quality standards or not, and secondly followed by the problem of farmers' inexperience with quality specifications, as the quality system in Egypt is new especially to farmers and must be trained in quality

standards at the beginning. From the stage of agriculture and production to the export stage, especially for old land farmers, this problem represents about 25.9% of the exporters' problems, then came in the third place the problem of not having enough sorting and packing stations with a rate that represents about 16.7%, then followed by the fourth problem of high transportation costs to stations. Sorting with the same percentage, which represents about 13%, came in the last place, the problem of the lack of a place for refrigeration and storage, and with an estimated rate of 11.1% of the opinions of exporters about the most important marketing problems to meet during the export process.

Table (13): The relative importance of the most important marketing problems in the research sample

The problem	Number of exporters	Relative importance (%)
Increased transportation costs to the export port	18	33.3
Farmers' lack of experience with quality specifications	14	25.9
Not enough sorting and filling stations	9	16.7
Increase in transportation costs to sorting stations	7	13.0
There is no place to cool and store	6	11.1

Source: Collected and calculated from the field research questionnaire in 2019.

3- Funding problems:

Table (14) data shows the relative importance of the most important financing problems facing exporters and a study of the relative importance of these problems shows that the problem of a significant risk in agricultural work represents about 27.6% of the total interests of exporters and comes in the first place, followed by the problem of lack of second Specialized banks to finance exports, representing about 25.9%,

and then came in the third position, representing 24.1%, the problem of raising support and guarantee for export crops, then comes in the fourth place, the problem of high interest rate on loans in banks, and with a percentage representing about 22.4% of the opinions of exporters on the most important The problem Finance to meet them during the export process.

Table (14): The relative importance of the most important financing problems in the research sample

The problem	Number of exporters	Relative importance%
There is a great risk in agricultural work	16	27.6
The absence of specialized banks to finance exports	15	25.9
Lifting subsidies and guarantees on export crops	14	24.1
High interest rate on loans in banks	13	22.4

Source: Collected and calculated from the field research questionnaire in 2019.

4- Problems of applying quality standards:

Table (15) data shows the relative importance of the most important problems facing the application of quality standards, and a study of the relative importance of these problems shows that the problem of the absence of trained workers represents about 25.7%, which is the first concern of exporters and comes in the first place for exporters, followed by the problem of high costs Obtaining the standards, which represents about 24.3% of the total interests of the exporters, as it came in the third rank with the same percentage, the problem of not providing the necessary information on quality, and it represents about 22.9%

of the interests of the exporters, then it came in the fourth rank, with a percentage representing about 20%, the problem of the decline of stations and farms applied to Quality standards, followed by the fifth and final rank, the problem of the absence of companies granting quality standards, at a rate that represents about 7.1% of exporters' interests.

Ninth: The most important proposals to solve the problems mentioned in the research sample

This part of the research deals with the proposals submitted by exporting companies in the research sample through which a set of solutions was developed by exporters, to overcome production,

marketing, financing, and problems applying quality standards.

Table (15): The relative importance of the most important problems facing the application of quality in the research sample

The problem	Number of exporters	Relative importance (%)
Lack of trained labor	18	25.7
The high cost of obtaining standards	17	24.3
The lack of necessary information on quality control	16	22.9
Decreased stations and farms applying the quality standards	14	20.0
Lack of standards donors countries	5	7.1

Source: Collected and calculated from the field research questionnaire in 2019.

By reviewing the data of Table, (16), it was found that the establishment and establishment of training centers and training courses for agricultural employment represented about 22%, that is, the first suggestion for exporters to train on correct practices by government agencies such as agricultural extension and activating the role of extension, which has become absent at the present time, and comes in The first rank for exporters, and the establishment of quality registration offices affiliated to the Ministry of Agriculture, whose wages are symbolic and represent about 18% of the total interests of exporters in the second place in terms of the relative importance of exporters, and the third came to provide export support when exporting and represents about 17% of the interests of the exporter Yen, then came in the fourth rank in the same proportion, there is a guarantee to recover the value of exports in cooperation with the commercial representation offices, and appropriate

guarantees or insurance must be provided, then followed by the fifth place conducting advertising in a way that is suitable for Egyptian agricultural exports, especially in many countries of the world that do not know anything about Egyptian exports are estimated at 14%, and it came in the sixth and last rank. Providing information about consumer tastes and quality requirements through controlling exports and imports, at a rate that represents about 12% of the submitted proposals.

Summary and recommendations:

The quality of agricultural exports is one of the most important foundations for the development and improvement of these exports to global markets, and then the study of the effect of applying quality standards on increasing agricultural exports is one of the most important determinants for improving the system of those exports.

Table (16): the most important suggested solutions to the problems mentioned in the research sample

Suggested Solution	Number of companies	Relative importance (%)
Establishing and set up training centers and training courses for agricultural workers	18	22
Establishing quality registration offices affiliated with the Ministry of Agriculture	15	18
Providing export support upon export	14	17
There must be a guarantee to recover the value of exports	14	17
Carrying out advertising for the Egyptian agricultural exports	12	14
Providing information on consumer tastes and quality requirements	10	12

Source: Collected and calculated from the field research questionnaire in 2019.

By studying the relative importance of agricultural crops in the research sample, which is represented by potatoes and strawberries from vegetable, orange, and mango crops from fruit crops, it was found that exports of potatoes and strawberries represented about 19.2%, 8.2% of total vegetable exports as an average for the period (2015-2017), while orange exports reached About 512 million dollars, representing about 42.8% of the fruit exports, which amounted to about 1.2 billion dollars as an

average for the period referred to, while the mango exports amounted to about 27.4 million dollars, representing 2.2% of the average fruit exports for the period referred to. The decrease in the value of strawberry and mango exports is due to a number of reasons, the most important of which is the lack of good advertising on the Egyptian side of strawberries and mangoes, and the difficulty in mobilizing each of them.

By studying the effect of applying quality standards on agricultural crops from the beginning of production to export, it was found that the application of these standards leads to reducing agricultural losses from the crop by between 15-20%. Likewise, the application of quality standards leads to an increase in costs in the production and marketing of the crop, but in return, the increased costs can be compensated for by increasing the profit by increasing their prices at home and abroad in addition to benefiting from the percentage of losses that are provided.

With regard to studying the effect of applying quality standards on profits, it leads to an increase in corporate profits by 25%. It also leads to an increase in the market share and the opening of new markets by a rate ranging between (10-15%). The results reached also indicated that the application of quality standards leads directly to an increase in the export price by about 30% over the price of crops that do not meet the quality standards.

The results of the research indicated that there are no unified standards for quality, whether at the level of internal bodies or at the level of external institutions and the quality standard is different from one institution to another and from one country to another.

Likewise, the absence of a specific body to training workers on quality specifications, in addition to the lack of support by the state to implement quality standards in Egypt.

In the light of the results of the research, the following can be recommended:

1- The necessity to work on applying quality standards to all agricultural crops, from the production stage to the internal and external marketing stage.

2- Establishing centers for training on quality standards in Egypt and introducing the specifications of crops required for export.

3- The necessity of unifying the technical specifications for quality on all internal and external institutions to be applied in the production and export stages together.

4- Working to provide data and information related to quality standards and institutions that they adopt in Egypt and abroad, and to provide guidance in them.

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