



THE ROLE OF SAUDI AGRICULTURAL EXHIBITIONS IN AGRICULTURAL TECHNOLOGY TRANSFER

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ABSTRACT :

This study aims at assessing the role played by the Saudi Agricultural Exhibition to meet the farmers for transferring agricultural technologies. This is achieved through: - to become acquainted with the aims of the exhibition visitors, to know visitors' attitudes toward exhibition, and to assess the extent to which visitors have been acquainted with the agricultural technologies, agricultural products and agricultural equipments, machineries and facilities. Data collected by face-to-face interviews were used to answer all the questions in the questionnaire. The questionnaire was built to fulfill all the research goals from 212 visitors. The majority (84.9) of the visitors on that day were Saudi. Also, more than 72% were employee and the farmers represented only 1.9% of the visitors.

The results shows that all the visitors would like to be acquainted with modern progress in the various aspects of agriculture and all of them (100%) indicated that as one of their goals. Moreover, the findings indicate that the agricultural exhibitions were successful in improving the visitors' knowledge in some aspects of agriculture.

The finding shows that visitors had gained knowledge in all agricultural products, it's studied, and agricultural equipment that exhibited in 25th Saudi Agricultural Exhibition with level of significant at 0.01.

INTRODUCTION:

The Saudi agricultural sector has achieved a huge advancement towards self-sufficiency in many strategic crops to make it possible for exporting the surplus to the neighboring countries.

The Saudi agricultural sector has been given a special care from the leaders of the country because of its leading role in the economic development.

The care towards agricultural sector is reflected in the efforts to spread knowledge, awareness and bringing changes in people's behaviors among people engaged in agriculture by using the mass media such as radio, television, newspapers, exhibitions, and other publics' communications methods.

The agricultural exhibitions are one off the extension and educational methods in agriculture. Companies participating in these exhibition show their production and educate

visitors about it. The exhibitions goals should be clear to all the cooperatives if they have to be successful (Edward, 1982).

In this study, the researcher wanted to know, to what extent the Saudi Agricultural Exhibitions has succeeded in technology transfer over the last 25 years.

Literature review:

The success of extension programs depend greatly on the ways of selecting the best extension methods that suit the nature and goals of the extension program and the kind of the beneficiaries and their characteristics (Seevers *et al.*, 1997).

Learning opportunities increase among many peasant sectors by using many extension's methods, and the variety of communications means and its modern techniques, played a vital role in developing the extension policies in agricultural fields (Rodewald, 2001).

In Saudi Arabia, there are various methods of agricultural extension, which are used by agricultural extensions. The Agricultural Exhibitions is one of the best tools used in agricultural extension fields (Shaibah, 1994).

Al-Odaibi *et al.* (1990) indicated that the Saudi Agricultural Exhibitions are among the ways used to spread knowledge about modern agricultural techniques. Furthermore, Al-Shnaife (1995) found out that farmers had high satisfaction about the annual Saudi Agricultural Exhibitions. Moreover, agricultural exhibitions are the best ways for elaborated guidance in agricultural extension (Al-Subaiee, 2006).

The agricultural exhibitions are useful in facilitating chances for more contacts between farmers, companies and individuals and also in developing the area in which the exhibitions are be situated (Al-Tanabee, 2000).

The agricultural exhibitions are organized in general closed areas and link many other agricultural activities and they may intend contests and prizes to competition spirit between the exhibitors (Al-Remawee *et al.*, 1995). Furthermore, the organization of the exhibitions is governed by the planning and carrying out processes and also following-up and evaluation. The exhibitions may include symposiums and lectures related to the goals and the nature of exhibitions in that year (Al-Remawee *et al.*, 1995).

Research problem and aims of the study:

Companies are trying to educate farmers through Saudi Agricultural Exhibitions during the last 25 years. However, there is no recent evaluation to these kinds of efforts.

In general, this study aims at assessing the role played by the Saudi Agricultural Exhibition to meet the farmers for transferring agricultural technologies. This is achieved through the following objectives:

- 1-To become acquainted with the aims of the exhibition visitors.
- 2-To know visitors' attitudes toward exhibition.
- 3-To assess the extent to which visitors have been acquainted with the agricultural technologies, agricultural products and agricultural equipments, machineries and facilities.

Methodology:

The researcher met all the visitors (212 visitors) on the third day of the Saudi Agricultural Exhibition. Face-to-face interviews were used to answer all the questions in the questionnaire. The questionnaire was built to fulfill all the research goals.

In this study many statistical techniques were used like percentage, Standard Deviation, means, and T-test. The statistical analysis was done by SPSS.

RESULTS AND DISCUSSION:

1- The respondents' characteristics:

Table (1) showed the distribution of visitors according to some personal characteristics. The visitors' age ranged between 18 years and 61

years. The average age of the sample visitors was 39 years with a standard deviation of 11.3. The majority of the visitors were in the age group (40 to less than 50). Moreover, the majority (84.9) of the visitors on that day were Saudi. Also more than 72% were employee and the farmers represented only 1.9% of the visitors.

Table (1): Distribution of visitors according to some personal characteristics (N = 212)

Characteristics	%	Characteristics	%
Age:		Vocation:	
Less than 30	26.4	Employee	72.6
30 – 40	22.7	Trader	12.3
40 – 50	27.3	Retired	6.6
More than 50	23.6	Student	6.6
		Farmers	1.9
Educational level:		Nationality:	
None	4.7	Saudi	84.9
Secondary	19.8	Non- Saudi	15.1
University	60.4		
Up than university	15.1		

2- The visitors' goals:

Table (2) explained the visitors aims from visiting the Saudi Agricultural Exhibition. There were six goals provided to the visitors and there were asked to select one or more that match their visit to the Saudi Agricultural Exhibition. The results shows that all the

visitors would like to be acquainted with modern progress in the various aspects of agriculture and all of them (100%) indicated that as one of their goals. The second goal which was mentioned by 43.4% of the responders is visiting the agricultural exhibition for education and getting general knowledge.

Table (2): Aims of the Saudi Agricultural Exhibition Visitors (N = 212)

Aims	Number	%
To become acquainted with the modern progress in various agricultural aspects.	212	100
Educational and general knowledge.	92	43.4
To contact with agricultural specialist.	88	41.5
To benefit from the discounts in some exhibited commodities.	82	38.7
Seeing the competition among companies and institutions.	60	28.3
Links with companies that interested in agricultural.	50	23.6
Entertainments.	22	10.4

3-Visitors attitudes toward Saudi Agricultural Exhibition:

There were twelve statements used to assess visitor's attitudes towards Saudi Agricultural Exhibition (table 3). The statement “competition among the companies engaged in the exhibition” received the highest ranking with average of 2.77 on a 3 degree scale, with standard deviation of 0.42. On the other hand, the lowest ranking statement was “the time of the exhibition is not suitable” with an average of 1.81 on the 3 degree scale and with standard deviation of 0.79.

4-The Exhibition effect on the visitors' agricultural knowledge :

The findings indicate that the agricultural exhibitions were successful in improving the

visitors' knowledge in some aspects of agriculture. The differences between the visitors' knowledge in all of the seven agricultural techniques shown in the 25 Saudi Agricultural Exhibition before and after the visit were significant at 0.01 with an average of 9.49 before and 13.69 after and the differences was 4.2 and T-value 15.07. Moreover, the highest significant difference was in the area of modern agriculture (greenhouses technologies) with average differences of 0.84 and T-value 12.02 and significant at 0.01. On the other hand, the lowest level was in the area of modern irrigation system with an average differences of 0.32 and T-value 7.04 and significant at 0.01 (table 4).

Table (3): Visitors attitudes toward Saudi Agricultural Exhibition

Phrase	Agree (%)	Agree to some what (%)	Disagree (%)	Average (%)	Stander Deviation (%)
Competition among the companies engaged in the exhibition	77.4	22.6	0.0	2.77	0.42
Littleness of exhibitors in the exhibition	2.9	22.6	74.5	2.72	0.51
I did not benefit from the exhibition	0.0	31.1	68.9	2.69	0.47
The ways of exhibiting was amusing	66	34	00	2.66	0.48
More visitors are seeking entertainment	0.0	34.9	65.1	2.65	0.48
The exhibition changes the visitors' ideas in many agricultural aspects	46.2	53.87	0.0	2.46	0.50
I have achieved my goals from visiting the exhibition	34	66	0.0	2.34	0.48
The exhibition is well planned	34	54.7	11.3	2.23	0.64
Advertisements are very satisfactory	29.2	59.5	11.3	2.18	0.61
The exhibition location is suitable	11.3	65.1	23.6	1.88	.058
The time of the exhibition is not suitable	42.5	33.90	23.6	1.81	.079

Table (4): The effect of the agricultural exhibitions on the visitors' agricultural knowledge

Agricultural technique	Knowledge average before visiting	Knowledge average after visiting	Differences between the two averages	T-value
Modern agricultural (greenhouses technologies).	1.34	2.18	0.84	12.02**
Floriculture.	1.34	2.09	0.75	10.31**
Chemical fertilizers.	1.24	1.95	0.71	10.15**
Pesticides.	1.47	2.15	0.68	13.29**
Poultry.	1.34	1.89	0.55	11.08**
Environmental control system.	1.0	1.34	0.34	7.35**
Modern irrigation system.	1.76	2.85	0.09	7.04**
General average.	9.49	13.69	4.20	15.07**

** Level of significant 0.01

5-The effect of the agricultural exhibitions on the visitors' agricultural knowledge about some agricultural products:

Table (5) shows that visitors had gained knowledge in all agricultural products and it's studied that exhibited in 25th Saudi Agricultural Exhibition, with general average knowledge after visiting 20.69 out of 33 points, and the

differences between before and after visiting was 4.58 and T-value 25.37. On the other hand, visitors did not gained knowledge in “soluble products to treat water used in birds, cattles and poultry farms”. Furthermore the highest difference was related to “animal fodder and its composition” with average knowledge 2.25 out of 3 points and the T-value was significant at 0.01.

Table (5): The effect of the agricultural exhibitions on the visitors' agricultural knowledge about some agricultural products

Agricultural products and it's studied	Knowledge average before visiting	Knowledge average after visiting	Differences between the two averages	T-value
Animal fodder and its composition.	1.47	2.25	0.78	9.01**
New progenies of milk live stock.	1.47	2.19	0.72	9.62**
Organic fertilizers.	1.24	1.95	0.71	9.65**
Economic feasibility studies	1.24	1.94	0.70	15.94**
Detailed designs studies for agricultural projects.	1.66	2.13	0.47	9.68**
Guidance and managing studies for agricultural projects.	1.23	1.70	0.47	9.68**
Raising the excellent types of poultry.	1.71	2.00	0.29	6.59**
Seeds treatment.	1.23	1.52	0.29	6.95**
Bees cells and its good types.	1.91	2.01	0.10	3.17**
Animal health germicides.	1.71	1.72	0.01	1.42**
Soluble products to treat water used in birds, cattles and poultry farms.	1.23	1.23	0.00	-
General average	16.11	20.69	4.58	25.37**

** Level of significant 0.01

6-The effect of the agricultural exhibitions on the visitors' agricultural knowledge regarding some agricultural equipment:

Table (6) indicates 19 statements related to agricultural equipments, machines and facilities. The analysis of visitors' knowledge points out that visitors did not gain knowledge

only with regard to “drainage equipments”. moreover, the finding ranks the” sprinkling equipments” is the equipment that visitors gained the highest knowledge with differences between the two averages only 0.66 and the T-value 14.29.

Table (6): The effect of the agricultural exhibitions on the visitors' agricultural knowledge regarding some agricultural equipment

Agricultural Equipment, machineries and sprinkling Equipments	Knowledge average before visiting	Knowledge average after visiting	Differences between the two averages	T-value
Sprinkling Equipments.	1.53	2.19	0.66	14.29**
Different harvests "clover, Potato, Dates.	1.23	1.85	0.62	8.02**
Turbine engines and pumps for deep wells.	1.00	1.61	0.62	8.02**
Harvest machineries mullet usage.	1.42	1.99	0.57	10.55**
Ploughs in different kinds.	1.18	1.66	0.47	9.87**
Channel digging Equipments.	1.19	1.66	0.47	9.68**
Different animal product projects facilities.	1.19	1.66	0.47	9.68**
Distillation plants and drain age water treatment units.	1.23	1.71	0.48	6.63**
Soil Ladling Equipments.	1.53	1.95	0.42	8.80**
Irrigation Equipments.	1.53	1.95	0.42	8.80**
Irrigation equipments.	1.19	1.61	0.42	8.80**
glass culture machineries.	1.24	1.66	0.42	8.80**
Hot water distribution pumps.	1.22	1.58	0.36	6.86**
Boxes making machineries.	1.42	1.73	0.31	6.61**
Sail Setting machineries.	1.24	1.55	0.31	6.74**
Groin silos Equipment.	1.0	1.23	0.23	5.69**
Incubation Equipments.	1.0	1.23	0.23	5.69**
Palms Equipments.	1.53	1.72	0.19	4.94**
Drainage Equipments.	1.19	1.19	0.00	0.00
General average.	24.32	32.00	7.68	19.80**

** Level of significant 0.01

RECOMMENDATIONS:

Based on it's findings the study recommends:

1-Increasing agricultural exhibits to benefit the visitors in all agricultural fields and specializations.

2-The exhibition should focus on applicable technologies that lead to sustainable agricultural development.

3-The exhibition should use hands-on activities to help visitors to adopt new technologies.

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دور المعرض الزراعي السعودي في نقل التقنية الزراعية محمد شايح الشايح

عضو هيئة التدريس بقسم الإرشاد الزراعي والمجتمع الريفي
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تهدف هذه الدراسة إلى تقييم دور المعرض الزراعي السعودي في نقل التقنية الزراعية الحديثة إلى المزارعين من خلال التعرف على : أهداف زوار المعرض, اتجاهات الزوار نحو المعرض, التعرف على معارف الزوار قبل وبعد الزيارة لكل من التقنية الزراعية، المنتجات الزراعية, والمعدات والآلات والمنشآت الزراعية. وقد تم جمع البيانات من قبل الباحث عن طريق الاستبانة بالمقابلة الشخصية لعدد ٢١٢ لتحقيق أهداف الدراسة. وتبين من نتائج الدراسة أن الغالبية الزوار من السعوديين حيث بلغت نسبتهم ٨٤.٩%، وأن ٧٢% يعملون بالوظائف الحكومية. وكانت نسبة المزارعين المتفرغين للزراعة ١.٩%. وقد بينت النتائج كذلك أن هدف الزوار التعرف على التقنيات الحديثة في مجال الزراعة. وتبين تحقيق المعرض للنجاح في رفع المستوى المعرفي في عدد من التقنيات والمنتجات الزراعية وكذلك المعدات الزراعية الحديثة.