

Farmers' opinion about agricultural extension service in Syria¹

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1. Foreword

Syrian agriculture and related activities still play a major role in the country economy and social structure (FAO, 1999b; MAAR, 2000): rural population is about 51% of the total and agriculture represents 30% of GDP and employs 30% of the labor force.

In Syria, the Agricultural Knowledge and Innovation System (AKIS) is almost totally in public hands, with the Ministry of Agriculture and Agrarian Reform holding an almost monopolistic position. The MAAR controls, directly or indirectly, all research stations operating in Syria except ICARDA and has established local agricultural offices in 869 villages, all over the country.

Extension agents are not only responsible for providing technical advice, but they also cover an important role in agricul-

Abstract

In Syria, the agricultural knowledge and innovation system is almost totally in public hands: the Ministry of Agriculture and Agrarian Reform controls, directly or indirectly, all research stations except ICARDA and has local offices in 869 villages. Advisors are responsible for technical advice and for designing and implementing the plan, mainly for the strategic crops. The extension service co-operates with Peasants' and Women's Unions, also for input delivery and for credit provision, managed by the state-controlled Agricultural Credit Bank. Each unit covers one or several villages, with farmers organized into groups.

Sixty-nine farmers in five Governorates were interviewed in November 2000, to analyse their opinions about extension and research stations. Respondents affirm that advisors answer to most of their questions and they declare to be generally satisfied. The most appreciated method is the farm visit, followed by group meetings and field days. Courses and visits to office receive the lowest scores. Radio and TV programmes are also very appreciated. Direct relationship with researchers is limited. Many farmers think that the research stations are doing experiments on subjects that are not useful.

In the medium term, as further liberalization is introduced, it will be necessary to re-evaluate the role of the State in the production of innovations and in information supply.

Résumé

En Syrie, le système de l'innovation et de la connaissance agricole est presque totalement dans le domaine publique : le Ministère de l'Agriculture et de la Réforme Agraire contrôle, directement ou indirectement, toutes les stations de recherche, sauf l'ICARDA et il dispose d'offices locaux en 869 villages. Les vulgarisateurs sont responsables du conseil technique et pour le dessin et la mise en place du Plan, spécialement pour les cultures stratégiques. La vulgarisation coopère avec les Associations des Paysans et des Femmes, aussi pour la livraison des moyens de production et pour le crédit, géré par la Banque du Crédit Agricole, contrôlée par l'Etat. Chaque office local couvre un ou plusieurs villages, avec les paysans organisés en groupes.

69 agriculteurs en cinq Régions ont été interviewés pendant Novembre 2000, pour connaître leur opinion sur la vulgarisation et les stations de recherche. Ils affirment que les vulgarisateurs répondent d'être satisfaits par les vulgarisateurs, qui savent répondre à la majorité de leur questions. La méthode préférée est la visite à la ferme, suivie par les rencontres en groupe et par les démonstrations. Cours et visites au bureau reçoivent la plus faible appréciation. Les paysans aiment assez les programmes radio et TV. Relations directes avec les stations de recherche sont limitées et beaucoup d'agriculteurs pensent que il y a aussi des activités de recherche qui ne sont pas utiles. Dans quels années, avec la progressive libéralisation de l'économie, il sera nécessaire de re-évaluer le rôle de l'Etat dans la production des innovations et dans la diffusion de l'information.

tural planning and in the implementation of the plan, at least as far as the strategic crops are concerned (grains, cotton, sugar beet, olive oil, etc.). The agricultural extension service co-operates with peasants' unions and with the women's unions, close allies of the Government, at all levels, and also with the delivery of the inputs and for the promotion of credit, that is managed by the Agricultural Credit Bank, also state controlled.

In the last years, the economic and agricultural policy of the Syrian government has been slowly changing and the pace of change has accelerated in the recent months (Parthasarathy, 2000; Rama, 2000). Syria is discussing its membership in the World Trade Organization. As currency market begins to be less rigid, some private firms have initiated their operations in the

input supply and in the output processing and some non-governmental organizations are expanding their activities.

Given this background, the Syrian Government has established a new National Center for Agricultural Policies, staffed with a group of young and highly educated economists and agronomists, who have attended a two-year training program. The authors of this report have begun to concentrate their attention on a formal ex-post evaluation

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of agricultural advice, (Davies and Dexter 1974), considered to be a pre-requisite for any institutional reform, aiming at creating a more open space and a fair level field for non governmental agencies and for private suppliers of agricultural advice.

2. Agricultural Extension in Syria

According to Darwish and Sharaf (1997), the establishment and development of extension in Syria started in 1910 when a first Agricultural School was established in Salamia (Hama) which used its fields to educate the farmers. In 1930 two Agricultural Schools were established in Buka (Latakia) and Al-Meselmia (Aleppo). In 1936, the High Agricultural Institute was established in Kharabo (Damascus), which after a few years became the Agricultural College and started to graduate agricultural engineers.

In 1947 the Ministry of Agriculture was established and within it a Department of Agricultural Extension. In 1971, agricultural extension was part of Agricultural Affairs Directorate and it produced some publications, cinema shows and extension fields.

In 1979, the Agricultural Extension Directorate as an independent directorate was established and started to provide extension services. On that year, a project for developing agricultural extension was started, within the general budget plan of the Ministry of Agriculture and Agrarian Reform. Between 1980 and 1999, 869 extension units were established throughout the country and 301 apartments were built for extension staff living in areas different from their homes.

The Agricultural Extension service of the MAAR has two main missions (MAAR-FAO, 1995):

- to increase agricultural production in quantity and quality, as to improve the living level of rural families through the general policy of comprehensive development of rural areas. This is accomplished by transferring modern technologies and skills to farmers and training them how to use these technologies;
- to co-operate with other services of the Ministry and with all other concerned authorities and organizations, for the elaboration of the Agricultural Plan and for its implementation.

The MAAR is a very complex and big structure² (Abdalla, 2000), with 23 Directorates and several Specialized Commodity Bureaus (cotton, citrus, apple, sugar beet, olive trees, veterinary drugs, Arab horses), seven Public Agricul-

tural Corporations and six Public Investment Projects. At the Governorate level, there are 14 Directorates for Agriculture divided into sections corresponding to the central directorates in MAAR Headquarters. The total number of employees, within or under the umbrella of the MAAR, goes up to 49,757.

At village level, the advisors are located at 869 agricultural extension units. Most units were established in the early 80's but the development of extension service in the countryside is still going on, with some extension units being created almost every year (FAO, 1998; FAO, 1999a). Each extension unit covers one or several villages, according with the size of the population to be served. In order to reach the highest number of farmers, these ones are organized into groups of 15-25 members.

The distribution of extension units and of extension agents, according to the different Governorates (Table 1) indicates that the average number of farmers attended by each extension agent (all personnel included) is about 109 and that each extension agent is responsible for over 9,000 dunam. Anyhow, great differences can be seen, because the range varies from 43.8 farmers per agent in Quneitra to 406.2 in the Idleb Governorate. Similar heterogeneity can be found for the surface/agent ratio, varying from 1,217 dunam in Latakia to 36,802 dunam in Aleppo. Such disparities can be partially explained with different farming systems, requiring different extension intensity, partially with non-proper distribution of personnel, but further research in this direction is needed.

In 1990, there were 3.075 field level staff in extension and this number increased by 90.5% in 1999. Two years ago, there were 1,928 male agricultural engineers, 748 female agricultural engineers, assisted by 871 technicians and 2,310 veterinary supervisors veterinarians. It is worth to comment about the change in the composition of the person-

Table 1. *Impact ratios*

Mohafazat	1994		Advisors (no.)	Farms/ agent (no.)	Area/ agent (Dunam)
	Arable land (Dunam)	Farms (no.)			
Damascus Rural	1348490	41492	574	72,2857	2349,286
Aleppo	11842553,6	96832	321	301,657	36892,69
Homs	4059822	50370	461	109,262	8806,555
Hama	4330221,3	65909	447	147,447	9687,296
Lattakia	949697,6	48208	792	60,8687	1199,113
Deir-ez-Zor	2160958,8	42042	817	51,459	2644,992
Idleb	2983054,4	55654	137	406,234	21774,12
Al-Hassakeh	11130415,8	61089	402	151,963	27687,6
Al-Rakka	7737854,4	27824	221	125,9	35012,92
Al-Sweida	1697549,4	23286	270	86,2444	6287,22
Dar'a	2093721,6	30432	309	98,4854	6775,798
Tartous	1069668,6	58773	788	74,585	1357,447
Quneitra	152389,2	4379	100	43,79	1523,892
Total	51056262,4	613657	5639	108,824	9054,134

Source: Central Statistical Office, Agricultural Census 1994, Damascus.

²The structure of the MAAR does not stop evolving and expanding: new Directorates have been added in last years and some Directorates have been established after the splitting of previous ones. Projects of a certain relevance are often known as Directorate. For example, there is at present the Coastal and Medium Area Reclamation Project, the Al Has project for rural development and reforestation in the southern part, the South Project for rural development, etc.. The project for the establishment of a Center for Policy Analysis is also known as a Directorate.

nel: male agronomists counted in 1990 for 56% of the total working force, whereas now they represent only 33%; women extension agents have increased their number by 84% and agricultural assistants by 116%. However, the highest growth is shown by the veterinarian sector that has expanded by 324% and now represents the 39% of the whole personnel, against the 18% in 1990.

3. Materials and methods of the field survey

In order to know the opinion of the farmers concerning agricultural extension and research in Syria, a group of 69 farmers in five Governorates have been interviewed. They have been selected randomly, from the lists available at the local extension units. Great care has been put in the effort to cover a wide area in each Governorate and to select farmers living at various distances from the extension unit.

All interviews took place during the months of November and December 2000 and were made personally by the authors of this research, using a structured questionnaire, elaborated in October. The questionnaire contains 21 questions, all closed that can be grouped into three groups:

- questions 1-7 : description of the farm
- questions 8-19 : relationship with extension service
- question 20 : relationship with research stations

Question 21 invited the farmers to propose suggestions about improvements to be introduced for research and extension services.

The collected data were transferred into a database and then processed with the SPSS98, in order to elaborate the required tables.

4. Characteristics of the respondents

The distribution of the interviewed farmers reflects the average size of the Syrian farms (FAO, 1999): 75% are below 100 dunam (10 hectares). Only a few people have farms relatively large and none in the sample is over 1,000 dunam. Most farmers are full owners of their holding, while only 4.3% are growing land that is totally leased. The dimension of the labor force shows that most farmers run small scale operations, with less than five people per farm and only 3% of the interviewed farmers employ more than 20 persons. This result is similar to the one found by a previous research carried out in the Governorates of Homs, Hama and Tartous (MAAR, 1994).

This group of farmers has different levels of education, since more than one third declare only a few years of schooling, whereas a similar share has more than 10. A few farmers also have more than 15 years education. These respondents have therefore an educational level that is slightly better than the one found by MAAR (1994).

In the last years, the income of their agricultural activity has evolved positively, according to 32% of respondents, whereas a higher percentage affirms that their income has

worsen. A minority of 21% believes that their income is more or less the same as ten years ago. Relationship between size of the farm and income evolution (Table 2) shows that, at least for this group of farmers, 87.5 % of large farmers are believing that their income has decreased, while 12.5 of them affirm that their income has increased.

On the other side, 27.5 % of small farmers answer that their income has remained

constant and the rest of respondents are divided equally into two groups of the same ratio with diverging opinions.

Still, the majority (64%) of interviewed farmers think to have an income similar to the majority of the farmers in their area, while only a minority affirms to be in a better position. As we have seen before, there is one fourth of our respondents who feel to have a lower income than the average. As a matter of fact, most farmers believe they have the same yields like the people in surrounding holdings, while the other ones split into two groups of the same size, with diverging opinions.

5. Extension methods and media

The most common method of advice in Syria is the individual visit of the extension agent to the farmer. This is confirmed by the respondents, who generally affirm to have been visited quite recently. On the other hand, about one fourth of farmers complain that they were visited long time ago.

Cross - checking this answer with the size of the farm and with the number of farm visits (Table 3), allows us to affirm that a same percentage of small and big farmers was visited by the extension agent during the week before the interview, whereas a higher percentage of medium size owners had received the advisor's visit during the previous week.

Anyhow, the continuous presence of extension agents is quite evident, if we consider that almost one fourth of farmers in all categories had been visited during the previous month.

The close relationship between many farmers and the local extension agents is proved also by the next answer (Table 4), with 42%

Table 2. Relationship between size and opinion about income

Size of farms	Opinion about income evolution		
	Increased	The same	Decreased
Small (50 dunam)	35	27,5	37,5
Medium (51-100 du)	46,2	30,8	23,1
Big (> 100 dunam)	12,5	0	87,5
Total group	31,9	21,7	46,4

Table 3. Last visit of extension agent

Timing	no.	%
- Last week	26	37,7
- Last month	17	24,6
- Three months ago	7	10,1
- Six months ago	2	2,9
- More than six months ago	9	13
- I do not remember	8	11,6
Total	69	100

of interviewed persons who have visited the Extension Office during the week before the interview and 17.4% who visited in the last month.

Medium size owners show the closest relationship with

Timing	no.	%
- Last week	29	42,0
- Last month	12	17,4
- Three months ago	13	18,8
- Six months ago	1	1,4
- More than six months ago	3	4,3
- I do not remember	11	15,9
Total	69	

farmers. Anyhow, 37.5% of the bigger farmers have declared to have gone to the advisor's office during the previous month (Tab. 5).

These results show a relationship between extension agents and farmers much closer than another MAAR study made in 1998: in that research, only 19% of farmers

Size of farms	Visits	
	Last week	Last month
Small (50 dunam)	37,5	15
Medium (51-100 dunam)	69,2	0
Big (> 100 dunam)	31,25	37,5

had visited the Extension Office and only 15% had participated in meetings.

Another very common method is the field day, when farmers can meet on the fields of the best farmers, in order to be informed about the results of improved technologies and better cultivation methods. This type of event is appreciated by 88% of the farmers (Table 6), whereas only a very small minority does not like the field days.

Farmers' opinion	no.	%
- I like them	61	88,4
- I liked them	2	2,9
- I did not go	6	8,7
Total	69	100,0

economic problems. Many of these events are organized together with the farmers' unions or with the cooperatives and they allow sharing opinions with technicians and other farmers too.

Meetings are appreciated by 65% of respondents, who find useful to attend, whereas only 1.4% found the participation useless. Yet, more than one third does not participate, for a variety of motivations and this gives room for improvement. Contacting the farmers, with proper timing, about a forthcoming group event, can be a very difficult task, especially in places where telephone is not available in

extension service: 69% had paid a visit to the extension agents in the week before the interview, against 37% of the small farmers and 3.3% of the bigger

all houses, but it seems that the information network established by the extension service works quite well. Almost 2/3 of this group of respondents were contacted directly by the extension agent himself, supported by written communication and by other farmers spreading the news of a next meeting.

Coming to mass media, the radio programs provided by the Extension Directorate have satisfied the farmers (Table 7). Around 90 % of farmers like them and only 10% do not. Altogether, the total score received by the radio programs for farmers is 82.7/100, that means a very high level of appreciation. Similar high attention for radio programs was also found by Acunzo (1998) in the El Badiya area, inhabited by Bedouins practicing free grazing animal production.

In most cases, also the television programs provided by the Extension Directorate have satisfied the farmers (Table

7). 85 % of the interviewed persons like the television programs very much, while 15 % have a lower

Farmers' opinion	Radio	TV	Publication
1=I do not like at all	4,3	4,3	7,2
2	1,4	2,1	3,0
3	0,0	0,0	0,0
4	2,9	2,9	2,9
5	1,4	4,3	8,7
6	2,9	2,9	2,9
7	13,0	8,7	7,2
8	13,0	10,1	15,9
9	20,3	15,9	18,8
10=I like very much	40,6	50,7	36,2
Degree of appreciation	83%	85%	79%

opinion about them. The final score achieved by the TV programs for farmers is a bit higher than the one attained by the radio: 84.8/100.

Another research conducted by MAAR (1998) supplies us with more detailed information about the farmers' behavior with radio and TV programs: TV programs were always or sometimes seen by 77% of respondents, whereas radio emissions were followed regularly only by 69% of them.

The majority of respondents also like the printed media (Table 7): more than 100,000 copies of leaflets and booklets are produced annually by the Extension Directorate. These simple publications produced and distributed for free by the extension service of the MAAR are appreciated by 80 % of the farmers, 10% do not like and 10% have an intermediate opinion. As a matter of fact, the overall score attributed by all respondents is 79/100, lower than the previous scores attributed to television and radio.

Similar results were found also by MAAR (1998) that reports a low diffusion of printed materials amongst the interviewed people: only 11%.

Another way to reach the Syrian farmers is the moving agricultural theater, that was established in 1989 and that runs annually about 85 performances. This medium has been investigated by MAAR (1998) and it was obviously

Table 8. Relationship between educational level and opinion about extension agents

Educational level	Opinion (1 = very poor; 10 = very good)										Final score
	1	2	3	4	5	6	7	8	9	10	
- Low (up to 5 years)	3	0	0	1	1	1	6	5	5	3	0,70
- Intermediate (from 5 to 10 years)	1	0	0	0	0	3	5	5	5	6	0,80
- High (more than 10 years)	0	0	0	1	2	2	6	4	2	2	0,73
Total	4	0	0	2	3	6	17	14	12	11	0,74

Table 9. Relationship between educational level and satisfaction

Educational level	Opinion (1 = very poor; 10 = very good)										Final score
	1	2	3	4	5	6	7	8	9	10	
- Low (up to 5 years)	3	0	0	0	1	0	4	5	6	5	0,72
- Intermediate (from 5 to 10 years)	0	0	2	0	0	3	3	6	6	5	0,79
- High (more than 10 years)	1	0	0	0	5	1	2	5	2	3	0,71
Total	4	0	2	0	6	4	9	16	14	13	0,74

found that only 4% of farmers had seen any of its performances. Still, it is highly appreciated and attracts good numbers of viewers whenever a performance is scheduled.

6. General opinion regarding extension and research

In general terms, farmers believe that extension agents can answer to most of

their questions. 70 % of the respondents with a low-level education and 73 % of those with high level education believe so (Table 8). A slightly higher share (80%) of the respondents with medium schooling ensure to prefer the extension agent's help to other sources of advice.

The information method most appreciated by the farmers is obviously the visit of the advisor to their farm, when they are at home, followed at long distance by the group meeting (16%) and by the field day (10%). Training courses and visits to the office receive the lowest scores.

In most cases, farmers are satisfied by the suggestions provided by the extension agents. The relationship between educational level and satisfaction about the extension agent's job (Table 9) indicates that the degree of satisfaction is fairly good, with the same ratio for the three levels of the respondents, about 74% for all of them.

In case of problems, the information source most quoted is the local advisor, indicated by 75% of farmers, with a minority who refers to a friend and very few going to members of the family or to the owner of the agricultural store. There is a clear indication that educational level also affects the farmer's behavior. From Table 10 we can see that all respondents go first to the extension agent asking for help, but the highest ratio is in the intermediate

educational level, with about 92%. Agricultural storeowners are the last resorts for the low and intermediate educational level, but it is not the case for the high education level. Only a minority of farmers prefers the advice provided by family members or by fellow farmers.

Direct relationship between farmers and researchers is limited to few cases (Table 11). Anyhow, almost 15% of the interviewed persons affirm to have found solution to their technical problems, thanks to a visit to the local research station. Unfortunately, most people declare to live too far from the research stations and therefore they can not exploit this opportunity.

On the other hand, it is to some extent worrisome to see that many farmers think that the research stations are doing experiments on subjects that are not useful for them.

The respondents express a clear need (Table 12) for a clo-

Table 10. Relationship between educational level and first source of information (%)

Educational level	First source				Total
	Other farmer	Extension agent	Family member	Store Owner	
- Low (up to 5 years)	24	76	0	0	100
- Intermediate (from 5 to 10 years)	0	92	8	0	100
- High (more than 10 years)	26,3	52,6	5,3	15,8	100
Total	15,9	75,4	4,3	4,3	100

ser relationship with the advisors, who "should spend less time at office and more with us". This suggestion gets a total score of 74/100, followed by a precise demand for mo-

Table 11. Visits to research stations

Farmers' answer	no.	%
- I did not go, because there is no research station here	40	57,97
- I did not go, because their work is not useful to me	11	15,94
- I went but they had no good suggestion for my problems	8	11,59
- I went and I found a good solution for my problems	10	14,49
Total	69	100

Table 12. How to improve performance of extension service

Suggestions	Score
- Advisors should spend less time at office and more with us	0,74
- We need more information for marketing	0,73
- Extension agents should listen more to our problems	0,66
- Extension agents should have more practical experience	0,63
- We need more meetings on technical problems	0,58
- Research station should make more useful research	0,51
- More radio and TV programs	0,50
- More extension agents	0,44
- More publications (leaflets and journals)	0,42
- Other suggestions	0,26

re market-oriented advice. Farmers also wish to have extension agents more open to listening (score 66/100) and with more practical experience.

The need for more useful research is expressed relatively strongly, with a general score of 51/100.

About extension methods and media, we have seen already that Syrian farmers like the direct interpersonal contact, but they also call for more meetings, more radio and TV programs and also for more printed information.

7. Conclusions

The relationship between the Agricultural Extension Service of the MAAR and the Syrian farmers appears to be quite positive: the farmers, who also affirm to have a general good opinion of the advisors' work, appreciate all methods and media. On the other hand, there is room for improvement, because also some weaker points have been found and several suggestions were collected.

Extension plans and programs should be more based on information from farmers about their problems. Farmers should be more involved, true ad hoc committees, in the planning and evaluation of extension activities, at all levels. Continuous coordination with the peasant union should be fostered, for delivering lectures, carrying out field days and exhibitions. Village people could participate in choosing the topics to be developed by the extension unit.

Also the coordination between research stations and extension units, at local level, could be improved, with a greater involvement of the Farmers Association too.

More authority could be delegated to the Heads of extension units, to identify topics of field days and lectures, due to the differentiation of country districts, of the local farming systems and to the very heterogeneous nature of technical problems. Cumbersome and time-consuming bureaucratic tasks should be removed from the advisors, who could consequently have more time for technical and economic advice.

Taking into account the small number of field advisors, and the great number of farmers asking for support, individual contacts should be limited and greater emphasis should be given to group activities (field days, courses, demonstrations, etc.). Mass media utilization should also be increased, with a higher use of agricultural TV and radio programs, pamphlets, brochures and leaflets (printed media)

More attention should be paid to themes like farm management and product marketing, introducing new concepts to the farmers such as the market economics, export, marketing, packaging, for encouraging their competitiveness in the local, Arab and world markets.

Monitoring and evaluation activities should be improved so as to ensure a regular flow of information to the management, at all levels. M&E should be properly planned and executed and their results should be used for improving the next activities and for the continuing education of the ex-

ension staff;

Further research is needed in order to acquire better knowledge about the behavior of Syrian farmers, vis-à-vis of the different methods and media, and about the relationships between communication, adoption and impact of the innovations.

In the medium - long term, as further liberalization will be introduced in Syrian agriculture and in Syrian agro-industries, it is likely that information delivery could become a tool for market competition used by private companies. In this context, it is also likely that civil society organizations (cooperatives, associations, chambers of agriculture) will be more active in this field, for the benefit of their members.

Therefore in due time, necessary steps will be therefore needed, in order to re-evaluate the role of the State in the production of innovations and in the supply of information, as to establish a fair level ground where all actors could play for the benefit of the Country.

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