

The relationship between the farmer, researcher and the extension advisor

La relación entre el agricultor, el investigador y el asesor de extensión

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ABSTRACT

The philosophy of extension is to: “Help farmers to help themselves”. Extension approaches have evolved from linear to advisory models, which focused mainly on transfer of technology with limited interaction between role players. Modern extension approaches include facilitation and participatory models that encourage interaction amongst all role players. Previously the South African Avocado Growers Association’s (SAAGA) extension advisors served their members according to an advisory extension approach. During 2006, the Subtrop amalgamation took place, which is an umbrella organization that manages the affairs of SAAGA, SAMAC (SA Macadamia Growers Association), SAMGA (SA Mango Growers Association) and SALGA (SA Litchi Growers Association). In 2010, after the Subtrop amalgamation, a farmer satisfaction survey on extension services and research coordination functions was conducted. A structured questionnaire was developed with open and closed questions using Likert-Type scale response anchors. Survey participants had to indicate their perception and utilization of the following main extension services: farm visits, newsletters, study groups and relevant websites. Avocado farmer were also asked a) what their expectations were from the extension advisors, b) the relevance of advisors as well as the interaction and role of and between extension advisors, researchers and farmers. Suggestions to improve extension services are suggested and the role of the farmer in the research environment is highlighted.

Keywords: Approach, customer survey, programmed extension, farmer, research.

RESUMEN

La filosofía de la extensión es: “Ayudar a los agricultores a que se ayuden ellos mismos”. Las propuestas de extensión han evolucionado desde el modelo lineal al de asesoramiento, que se enfoca principalmente en la transferencia de tecnología con interacción limitada entre los participantes. Las propuestas modernas de extensión incluyen los modelos de facilitación y participación que alientan la interacción entre todos los participantes. Previamente, los asesores de extensión de la South African Avocado Growers Association (SAAGA o Asociación de Cultivadores de Aguacates de Sudáfrica) asistían a sus miembros de acuerdo con la propuesta de extensión de asesoramiento. Durante 2006, se produjo la fusión Subtrop, que es una organización coordinadora que maneja los asuntos de SAAGA, SAMAC (SA Macadamia Growers Association o Asociación de Cultivadores de Macadamia SA), SAMGA (SA Mango Growers Association o Asociación de Cultivadores de Mangos SA) y SALGA (SA Litchi Growers Association o Asociación de Cultivadores de Litchi SA). Después de la fusión de Subtrop, se condujo en 2010 una encuesta de satisfacción del agricultor sobre los servicios de extensión y la función de coordinación de la investigación de Subtrop con los miembros de Subtrop. Se desarrolló un cuestionario estructurado con preguntas abiertas y cerradas utilizando los referentes de respuesta de escala del tipo Likert. Los participantes de la encuesta tuvieron que indicar su percepción y utilización de los siguientes y principales servicios de extensión: visitas a la granja, boletines informativos, grupos de estudio y sitios web importantes. Se investigó que es lo que esperaban los agricultores de aguacates de los asesores de extensión, la importancia de los asesores como así también la interacción y su papel y entre los asesores de extensión, los investigadores y los agricultores. Se sugiere mejorar los servicios de extensión y se resalta el papel del agricultor en el entorno de investigación.

Palabras clave: propuesta, encuesta del cliente, extensión programada, agricultor, investigación.

INTRODUCTION

The philosophy of extension is to: “Help farmers to help themselves” (Terblanché, 2008). A definition of extension can be defined as a purposeful activity aimed at sustainable agricultural practise, to benefit both the environment and the social community; changing attitude to adapt new beneficial agricultural practises, to explore new market outlets or trends; and linking agricultural research with the on-farm environment. Extension approaches have evolved from linear to advisory models, which focused mainly on transfer of technology with limited interaction between role players. Modern extension approaches include facilitation models that encourage interaction amongst all role players. An extension of the facilitation models are the participatory approaches. In these approaches the farmers are in the central position where their knowledge and skills are complementary to research, extension and other stakeholders.

Previously the South African Avocado Growers Association (SAAGA) served their members according to an advisory extension approach. Currently the Subtropical Growers Association of South Africa (Subtrop) manages the affairs of SAAGA. Subtrop is an umbrella organization that originated when the South African Avocado Growers Association (SAAGA), South African Litchi Growers Association (SALGA), South African Macadamia Growers Association (SAMAC) and the South African Mango Growers Association (SAMGA) amalgamated on the 1st of October 2006. Before this amalgamation, each of the Growers’ Associations had its own offices and staff. A major reason for the amalgamation was to minimise duplicated common services like research coordination, extension, marketing and general management.

As agriculture is a dynamic environment, it is important that extension services stay ahead of changes and evolve as well (Jones, Diekmann & Batte, 2010). To measure the impact of the amalgamation, an extension focused survey was implemented. The survey included Subtrop members i.e. farmers and opinion leader farmers, and Subtrop extension staff. This paper will examine some of the results from Subtrop members and,

where possible, the avocado farmer and opinion leader respondents (SAAGA). Recommendations for an improved Subtrop Extension Service and the role of the farmer in the research environment will be briefly discussed.

METHODOLOGY

Surveys were conducted during 2010 in the main Subtropical fruit production areas of Limpopo, Mpumalanga and KwaZulu Natal Provinces. Levubu and Tzaneen were surveyed in Limpopo Province, Malelane and Nelspruit in Mpumalanga the North and South coast regions of KwaZulu Natal. The survey was conducted at study groups. According to Terblanché (2007) study groups are an efficient platform to conduct surveys of this nature. A total of 127 respondents were surveyed, which represents 16% of total membership. Opinion leader farmers were included in the survey to determine correlations between farmer and opinion leader perceptions. The opinion leaders were chosen on the grounds of their accessibility to other farmers and their expertise.

A structured questionnaire was developed and used for the survey. The questionnaire consisted of mainly closed questions using Likert-Type scale response anchors (Vagias, 2006), as well as open questions. Prior to the study the questionnaire was validated and piloted. Farmer and opinion leader respondents had to indicate their perception and utilization of the following extension services in Subtrop: a) Extension personnel in their respective areas; b) Study groups; c) Newsletters d) Websites and e) Technical research.

The data was coded and captured using Microsoft Excel. These data were analysed using the SPSS V19.0 statistical package. Single frequencies and frequency cross tabulations were compiled for the Likert-scaled questions. Averages and standard deviations were computed for questions with measurements as answers. The Pearson's Chi-square test was used to determine any relationships between farmer and opinion leader responses. The Fischer's Exact test was performed to compensate for the relatively small sample as this is problematic when using the Chi-square test. Results were evaluated at the 5% level of significance.

RESULTS AND DISCUSSION

Extension

Cross-tabulations were made between the farmer and opinion leader respondents of the SAAGA group and the services the extension advisors provide. The aim was to determine which of the extension services the SAAGA respondents rated as the most important. The Fischer's Exact Test was performed to validate statistically significant differences. The following results were concluded:

Individual services (indicated as a percentage of most important)

- General information (82%);
- Advice on farm (74%);
- Farm visits (74%);
- GlobalGap (68%);

There were no significant statistical differences between the two respondent groups' ratings.

Group media services

- Study groups (96%);
- Demonstrations on study groups (94%);
- Newsletters (96%);

There were no significant statistical differences between the two respondent groups' ratings.

The above mentioned results agree with a survey done amongst small scale farmers in Florida, USA. In this survey farmers indicated group media, for example county workshops, as preferred channels to obtain information (Gaul, Hochmuth, Israel & Treadwell, 2009). However, when information on new farming practises and marketing strategies were required, personal contact with extension advisors were preferred (Gaul et. al, 2009). Research done in California (USA) and Australia also indicated a relationship between farming practices and source of information used by farmers (Buchner R, Grieshop J, Connell J, Krueger W, Olson W, Hasey J, Pickel C, Edstrom J, Yoshikawa F, 1996; Vanclay, 2004). These studies also indicated that farmers still prefer personal contact;

A set of criteria was submitted to the respondents asking what they expected the Subtrop extension advisors to do. The Fischer's Exact test was done on each criteria and there were no statistical differences between the farmer and opinion leader respondent group's ratings. What extension advisors should do: be current with the newest technologies (80%) and chemical developments (64%); maintain the link between researchers and farmers (59%); continue with current services (62%); improve themselves/training (54%) and be aware of farming practises (48%).

The respondents were also requested to indicate if farm visits are important and a total of 95% of all respondents indicated that farm visits are important. The most important reasons were:

- Extension advisor needs on-farm exposure (100% farmers & 100% opinion leaders);
- Necessary to visit farmers to build relationships (98% farmers & 100% opinion leaders);
- Extension advisors see other farms; can share what they see with other farmers (97% farmers & 100% opinion leaders).

According to Figure 1 below, the extension advisors indicated that the majority (50%) of assistance was needed with regards to horticultural enquiries, while 33% of assistance was required for pathology enquiries and lastly 17% on general information. Therefore, most of their time is spent on technical related activity. It can be stated that farmer and opinion leader requirements agree with the predominantly technical nature of the extension advisors activity.

This agrees with earlier findings above where farmer respondents clearly preferred personal contact when consultation on farm practices was required.

Farmer requests

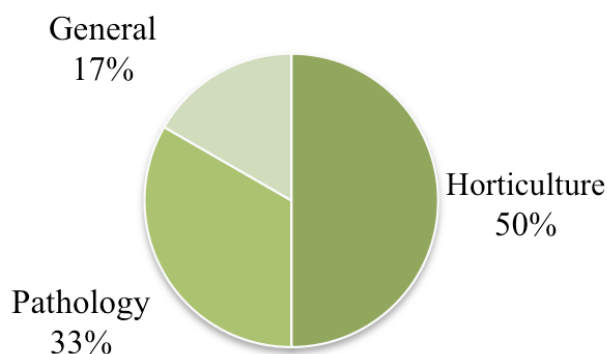


Figure 1: Aspects farmers require assistance from extension advisors

The farmer and opinion leader respondents were asked if the extension advisors are still needed in the Subtrop context. A total of 94% of all respondents indicated that the extension advisors are still needed. These results are reflected in other industries, for example the wine (Oranjerivier Wynkelders: OWK) and raisin (Droëvrugte Tegnieise Dienste: DTD) industry of South Africa who amalgamated in 2010 to join forces and save costs, as the production requirements for both industries were the same. One of the main reasons for the amalgamation was a request made by the farmers of DTD to have an extension service, as before deregulation (Groente & Vrugte magazine, Oct/Nov 2010:9). Therefore, an extension service is valued by farmers, as supported by the Subtrop survey results.

Study groups

Study groups are one of Subtrop Extension Services most important channel to communicate with farmer members. Terblanché and Düvel (2000) stated that such study groups aim to improve the knowledge of farmers to enhance farming efficiency. The farmer and opinion leader respondents had to rate the SAAGA study groups before and after the Subtrop amalgamation. The Fischer’s Exact Test was done with no significant statistical difference between the farmer and opinion leader respondent’s ratings.

Figure 2 below demonstrated a total of 36% rated the SAAGA study group before the amalgamation as above average in comparison to 40% after the amalgamation, an increase of 4%. Furthermore, a 32% rating was given to excellent before the amalgamation in comparison to 49% after the amalgamation, an increase of 17%. Figure 2 shows that the SAAGA study groups were rated higher after the Subtrop amalgamation. Therefore, it can be concluded that the SAAGA respondents were satisfied with the study groups.

The SAAGA respondents indicated attendance and participation at study groups as their main responsibilities towards the study groups. Terblanché and Düvel (2000) stated that participating and contributing study group members enhanced the efficiency of study groups and resulted in higher levels of knowledge and skills of members. Although the respondents understand the value of intercommunication and participation between members of a study group, very few realize the need to take ownership of study groups. Terblanché and Düvel (2000) concluded that strong leadership in study groups organized by farmers themselves, contributed to the efficiency of that study group. Therefore, strategies to create awareness on this point need to be investigated.

SAAGA Study groups

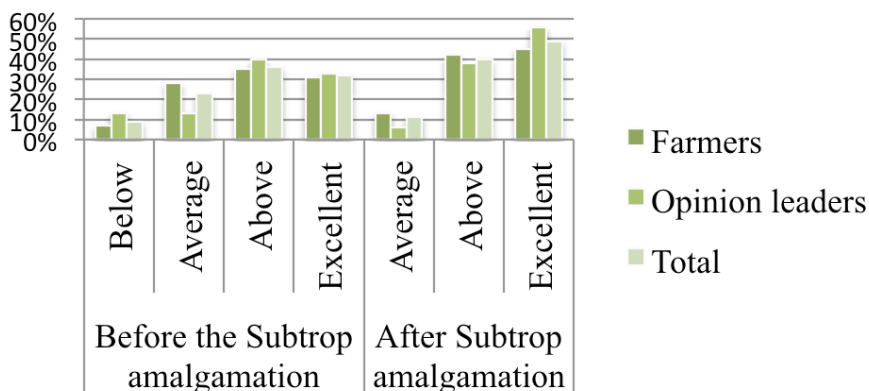


Figure 2: The rating of the SAAGA study groups’ performance before and after the amalgamation by farmer and opinion leader respondents

Newsletters

SAAGA respondents were asked to rate the SAAGA newsletter before and after the Subtrop amalgamation. The Fischer’s Exact Test was done on ratings with no significant statistical differences. Figure 3 below demonstrated that a total of 45% of the respondents rated the SAAGA newsletter as above average and 30% as excellent, before the Subtrop amalgamation. After the Subtrop amalgamation the SAAGA newsletter was rated as 41% above average and 46% excellent. This results in a 4% decrease in the above average rating but a 16% increase in the excellent rating. Therefore, according to the respondent’s ratings, the SAAGA newsletter improved after the Subtrop amalgamation.,

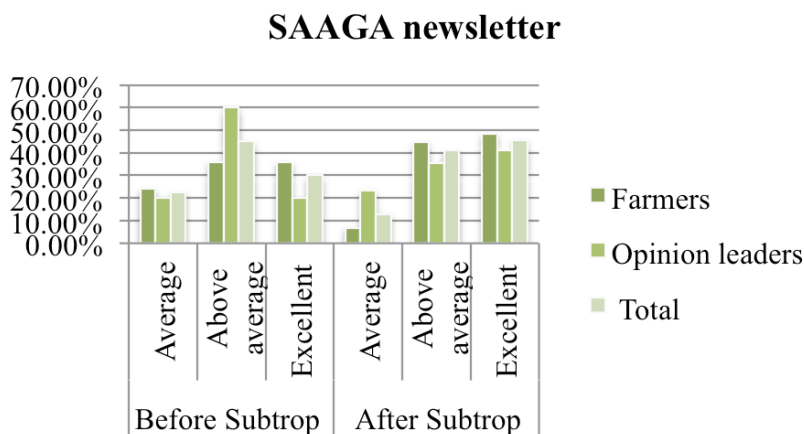


Figure 3: Rating of SAAGA newsletter before and after Subtrop amalgamation by Subtrop respondents

The Subtrop Websites

The respondents had to indicate if they use the Subtrop websites and their satisfaction with these websites. The following indications were provided:

- 1) More farmers (64%) than opinion leader (42%) respondents indicated that they do not use the Subtrop websites, with a Fischer Exact test value of 4.8, p = 0.041;
- 2) Motivations for not using the websites were as followed:
 - Not aware that a web site existed (23 respondents);
 - Do not use websites to gain information (21 respondents);
 - Do not know the website address (15 respondents).
- 3) The respondents who did use the websites indicated that they used them for technical knowledge and market related information; and
- 4)The respondents who use the websites also indicated that they were satisfied with the standard of the website, as well that the website was user friendly.

The Research function of Subtrop

Respondents were requested to indicate the relevance of research being done with regard to (a) their farming enterprise; and (b) to the industry as a whole. Figure 4 below demonstrated sixty nine (69%) percent of the respondents indicated SAAGA research as extremely relevant to industry; while only 48% indicated the research as extremely relevant to the farming enterprise. Therefore SAAGA research has 21% greater relevance to the greater industry than to on-farm practice. According to the Fischer’s Exact test the differences between the farmer and opinion leader respondents’ ratings were not statistically significant with values <5 and p-values > 0.05.

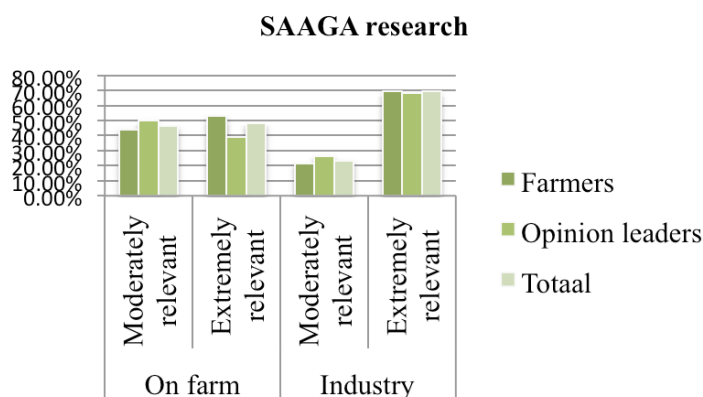


Figure 4: The relevance of SAAGA research

To motivate these perceptions from a closed set of criteria, 51 of the 127 Subtrop respondents indicated additional market research was needed while 40 respondents indicated that research was only relevant to larger farmers. This could possibly explain why research was rated more 'extremely relevant' to industry than to farming enterprises.

The participation of the respondents within the research function was investigated with the following results:

- A total of 55% of farmers and 89% of the opinion leaders indicated that they submitted their research priorities at study groups. There was a significant statistical difference between the farmer and opinion leader respondent groups' indications with the Pearsons Chi-square test value of 12.8, $p < 0.0001$;
- Most of the opinion leaders indicated that they understood the research process, while most of the farmers indicated that they did not;
- Cross tabulation tests show that those who submit their research priorities and therefore involve themselves with research, have their problems addressed by the research;
- When asked about their role within the research function, the majority of respondents agreed that 1) participation, 2) support and the 3) identification of research priorities were the most important;
- The rating of the SAAGA research function was higher after the Subtrop amalgamation.

Therefore, from the above results it is clear that the farmers should become more involved. The farmer's own experience and knowledge should be considered with formal research. This correlates with participatory extension approaches and therefore confirms the need of farmers to be a co-partner in research (Terblanché, 2008; Blum, 2007; Hewitt, 1996 & Paxton, 1980).

CONCLUSION

The SAAGA / Subtrop respondents (farmer + opinion leaders) indicated their satisfaction with the Extension Services and study groups. The farmer respondents were generally unaware of how the SAAGA / Subtrop research functions. Perceptions indicated the research had more relevance to the broader industry than to farming practices. The newsletter was rated as improved after the Subtrop amalgamation, while the websites proved to be somewhat valuable. This survey seems to indicate greater farmer involvement with extension and research.

RECOMMENDATIONS

Study groups

Grobbelaar and Koch (1989) stated that people become involved when planning is done with them and not for them. In order to increase farmer involvement and study group management it is suggested that each area form a SAAGA study group committee.

The newsletters

It was indicated that the newsletters were successful with Subtrop respondents satisfied. The following recommendation will be made:

- Combined newsletter: a combined quarterly newsletter is recommended. Each commodity will retain its own section and identity in this newsletter. This will not only reduce costs, but will also save on the extension advisor's time for writing articles. A combined newsletter will also provide farmers with an opportunity to experience and "cross-pollinate" with other Subtrop commodities.

Subtrop research

According to Sulaiman, Hall & Raina, (2006) the nature and quality of the relationship between researchers and extension is important, which has to be reflected in more joint activities. Furthermore, both research and extension needs linkages with a wider range of role players. Interdependence should be encouraged and not independence (Sulaiman et al., 2006). It was indicated in the survey that some uncertainties exist as to the research function of Subtrop. Therefore the following recommendations are suggested:

- Research committees in respective areas to be appointed by farmers at study groups: The survey indicated low farmer participation. It is suggested that farmer involvement be enhanced in some way.
- Research priorities must be discussed at study groups: This will ensure more participation and involvement from farmer members. Farmer involvement is crucial as they have their own knowledge of local conditions and problems and have found ways to overcome these barriers, which can be valuable to the applicability of research knowledge (Vanclay, 2004);
- Researchers to give feedback and address farmers at study groups:

Information and progress report articles on research in Subtrop newsletters: Newsletters can be used to provide feedback on research projects to farmer members.

Websites and market related information

The survey indicated a lack of awareness of the websites. It is therefore recommended that the websites and their benefits be promoted at events like study groups and at symposiums.

Extension services

Based on the findings of this survey, it is recommended that relevant Subtrop stakeholders hold an extension strategy session or workshop. The outcome of this workshop can be used to develop updated policy, strategy for the extension services. In Australia and Germany, farmer participation and involvement in setting extension policies and priorities has resulted in favourable results (Marsh & Pannel, 1999, Hoffmann, Lamers & Kidd, 2000). However, Vanclay (2004) stated that farmer representation does not necessarily mean participation.

Programmed extension as working method: The Subtrop Extension Service is currently advisory in nature which focuses on transfer of technology. Therefore, the onus is on the farmer to access technical advice and support (Worth, 2006; Terblanché, 2008). Programmed extension aims to

achieve participation of relevant role-players; and involves the planning of coordinated activities to bring about purposeful changes to improve farming practises (Düvel, 2008). Extension advisors design extension programmes based on avocado farmer's priorities in each of the avocado production areas. It also involves evaluation and feedback to improve extension programmes (Düvel, 2008).

Combined commodity area committee with sub-area committees: To avoid duplication, the suggested area committees could combine the role of research and study group committee per commodity. Therefore, an area with the full representation of four Subtrop commodities will have four area committees. Where relevant, sub-areas may have their own committee from which a representative will be selected to serve on the area committee.

Customer satisfaction surveys: Annual customer satisfaction surveys should be performed to evaluate progress and make improvements in extension programmes where necessary. Customer satisfaction surveys can also be used to establish the impact extension programs make in the farming community of Subtrop (Radhakrishna, 2002). It has been suggested that Extension Services should benchmark on three important aspects: 1) the relevance of extension programmes, 2) the quality of the extension programmes and 3) the accomplishments of these extension programmes (Radhakrishna, 2002).

In conclusion as mentioned before, the farmer is in the central position where their knowledge and skills are complementary to research, extension and other stakeholders. Therefore, the farmer must be an active role player in all sectors of sustainable agriculture.

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