# An investigation into the potential for effecting change, delivering advice and supporting Irish Organic Growers through Farmer Field Schools.

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# Declaration

I declare that the work reported in this thesis was devised and carried out by myself, and has not been accepted for any previous application for a degree. All information drawn from other sources, and any assistance received has been acknowledged in the appropriate place.

# Summary

The thesis involved a study of the facilitation in the Field school process of two separate groups of five Organic growers based in the Mid-West (Counties Clare and Galway) and South West (County Cork) of Ireland. The schools took place over a five month period from the middle of November 2009 until the Middle of April 2010. During this period a total of eight Schools were conducted four for each School.

The format was for each participant to host a Field School on their holding attended by the other members of the School. A common goal for the School was decided upon by consensus at the first meeting which it was intended would run as a theme through all the Schools of that group. As well as this, each host communicated an issue that they had had success with and two areas of their business that they had problems with. Included in the format was a comprehensive walk of the host holding and a round table discussion. Towards the end of each School the attendees gave feedback to the host on the issues that had been raised, giving possible solutions to problems and finding out better what had made the successes work.

As part of the study three questionnaires were used to investigate the participants' attitudes to;

- Advice and training
- Working in groups
- Perceived levels of ability
- Preferences for the delivery of information

The questionnaires were given at the start and conclusion of the process as a tool to examine whether the Schools had any impact upon these attitudes. A recording was also made of each

School and was then used to transcribe the minutes and any quotes which were felt were relevant to the process.

The results of the study emphasize the lack of advice available to the organic horticultural sector and the need for professional advisors. It also points up how willing growers are to working in groups and the benefits of this type of interaction. The participants' perceived levels of ability improved over the course of the study and the information gained was deemed to be useful to them. There was also the social side of meeting on a regular basis with like-minded people. This engendered the beginnings of a sense of community that some felt was missing from the sector. The Schools proved to be a cost-effective, efficient and enjoyable method of delivering advice and other benefits to organic growers. Further benefits need to be investigated with regard to factors not examined in this study.

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# Chapter One. Introduction

## 1.1 The Irish Organic Horticultural sector

The market for organic horticultural produce is one of the few organic sectors in Ireland that is under supplied. There are 284 registered organic vegetable producers in Ireland. The majority, numbering 220, have holdings below 1 hectare in size. This is out of a total of 1532 of all registered organic producers (Sargent 2009). The potential for the development of this sector is substantial, but it will only happen if a number of prerequisites are in place beforehand. One of these would be the provision of advice coupled with the services of a development worker. At the moment the current economic circumstances militate against this happening not least because there is currently a moratorium on recruitment in the public sector.

As an organic grower for the last 15 years and an observer of the sector, it has become apparent that it has stagnated somewhat. The situation for existing growers and also those wishing to enter the industry is difficult. There is good educational provision up to second level but very little at third level. For people wishing to enter the sector having completed one of the various available courses, there is no back up to help them get started. It is against this background that Farmer Field Schools can be looked at as a tool for developing the sector and sustaining those already in it. Many reports in the past have focused on the potential for import substitution for the sector with good ideas to develop it, but very little has actually happened.

In the 2002 report of the Organic Development Committee, little mention was made of horticulture except to say “the horticultural sector is very undeveloped”. At that time, a target set by the government of 3% land area under organic farming by 2006 was seen as “achievable”. Today, the figure stands at 1.25% (48,911ha) with a target of 5% by 2012 (Sargent 2009).

### 1.2. Provision of advice in Ireland

The provision of advice to organic growers in Ireland has hitherto been practically non-existent. The first proponents of organic farming in Ireland were growers and they formed the Organic Growers Association in the early 1980s. This subsequently became the Irish Organic Farmers and Growers Association in the late 1980s. These growers were very resourceful pioneers in the true sense, and in those early days, advice would have been gleaned from books and also from other growers. Latterly, the internet has filled a gap in many growers' armoury of self help advice, but as far as advice from qualified professionals is concerned, there has always been a deficit.

Teagasc, the national agricultural training and advisory body, have in the last 2 years appointed four specialist organic advisers with livestock expertise. However, to date, there remains no advisor for the organic horticulture sector. The role of New Zealander, Dr Charles Merfield, went some way to filling that gap in the two years he worked in the state for the Department of Agriculture Food and Fisheries, but it was not his primary remit and he left at the end of 2008 when his contract expired.

The current Organic Farming Action Plan (DAFF 2008) which is soon to be updated still makes little mention of horticulture. In the last five years, the provision of three or four organic horticultural demonstration farms has been the only real sign of progress.

### 1.3. The Farmer Field School concept in Ireland

The FFS concept has not been used before in this country although traditional producer/discussion groups have been, particularly in the conventional dairy sector. The FFS concept is based on participatory/experiential learning whereby a group learns from each other

using the successes and problems on each of their own holdings to inform the rest of the group. In each School, every grower takes a turn as host and sets the agenda for the "School". The group visits all the farms in turn until each holding has been visited and the process is complete.

The FFS concept is something of a hybrid between a farm walk and a workshop. The choice of working with growers for this project came about through familiarity with some of the problems they encounter and because this is the sector that needed most help in relation to ongoing advice. Organic growers are often fairly independent by nature and resourceful due to working in isolated conditions. In theory, the FFS process would be enhanced by this resourcefulness and perhaps at the same time address the isolation issue.

Hopefully, by means of the discussion provoked by the FFS approach, the participants will provide themselves with solutions to shared problems. The belief that FFS could be an appropriate tool in the empowerment of Irish organic growers, give them confidence, support and a different way of accessing knowledge is at the heart of this study. If some or all of the above are achieved, it could be worth extending the approach across all sectors of the industry here.

## 1.4 Review of relevant literature

### 1.4.1 Background to Farmer Field Schools

The Farmer Field School (FFS) is a concept that has been in use in varying forms since it was first introduced in Indonesia in 1989 (van den Berg, and Jiggins, 2007). Initially, 200 schools were started to find ways of using Integrated Pest Management ( IPM) to deal with the Brown

Rice Hopper pest. There is a large body of literature documenting how FFS impacted in this area and subsequently was widely adopted across the developing world, specifically; Africa, Latin America, the Middle East and Eastern Europe.

Although initially dealing with a singular crop, the concept has been adapted to work with fruit and vegetables, cotton and other crops and indeed more recently expanded to cover livestock, community forestry, soil fertility management, food security, nutrition and water conservation.

That the concept was developed in Asia and subsequently adopted elsewhere in the developing world and that the bulk of literature available on the subject of FFS is focussed outside Europe does not preclude its validity for use in Ireland. Far from being irrelevant to future projects, this research laid the foundation for the development of FFS as a very important tool for today's farmers everywhere. Even though the focus may be on different areas of agriculture, the fundamental elements remain the same twenty years on.

### 1.4.2. How beneficial are Farmer Field Schools?

In A Global Survey and Review of Farmer Field School Experiences (Braun *et al* 2006) there is an in depth study of how field schools developed and how they can be made to work better. The most interesting parts of this report are chapters on the impact of FFS, how they stimulate farmer innovation and the research questions that remain to be answered.

Another question asked is how to measure the effectiveness of the process. Here the survey makes no apologies for the fact that this is a difficult thing to do and there is no single template that can be used for all the different incarnations of Field Schools.

The questions it asks are in relation to the efficacy of Field Schools and are as follows:

- What to measure?
- How to measure?
- How to assess results or measurement of impacts?

These are the questions that will have to be addressed in this thesis. Braun *et al* go on to look at the difficulty of categorizing the benefits and ask:

- Are they an educational investment?
- Are they an extension activity?

Finally, the survey asks whether the impacts are in areas such as:

- Change of practice
- Knowledge
- Technology used
- Productivity
- Profitability

Or whether the changes described are in:

- Human and social capacity
- Impacts on human health
- The environment

One of the research questions for this thesis is directly related to the above list of impacts and it will be addressed in the questionnaire that the growers will be given at the first school. That question is; "*How would a FFS serve as a tool to enhance a grower's knowledge on a range of issues relating to the day to day running of their holding*?"

This is a balanced survey which gives an impartial view of the benefits of Field Schools, while at the same time pointing out that they are far from perfect. "*Farmer Field Schools are not a panacea for development*" and there are certain flaws inherent.

These include the following points; "*They are vulnerable to loss of quality (and thus impact) particularly in terms of: (i) poor or inappropriate curriculum design;*

*ii) inadequate attention to the quality of the learning process;*

*(iii) poor or inappropriate facilitation."*

In summing up, the survey makes the point that the uses of Field Schools are, for the most part, beneficial to the participants. It concludes that FFS are best suited to "*issues that entail articulation and implementation of changes of behaviour within the farm enterprise*" and "*situations that can be improved through development and application of location dependent knowledge*". It also states that the comparative advantage of Field Schools relies on the skilful incorporation of the following principles.

- *learning centred, field based, experiential learning*
- *observation, analysis, assessment, and experimentation*

*over a time period sufficient to understand the dynamics of key (agro-ecological, socio-ecological) relationships.*

- *peer-reviewed individual and joint decision-making based on learning outcomes*
- *individual and group capacity building*

### 1.4.3. What and how to measure the effectiveness of Field Schools?

Initially, in developing countries there was an easy way of measuring the effectiveness of FFS. The goal with IPM was the reduction in pesticide use and possibly an increase in yields (van den Berg and Jiggins 2007).As the concept has evolved, so the aims of FFS have evolved and where they are now being used in Europe, the aim is much more defined and focused on a particular aspect of farming, such as the reduction in the use of antibiotics in organic dairy cattle (Vaarst 2007). The developmental aspects of FFS in enhancing knowledge, improving communication skills, analytical ability and experimentation amongst farmers are less measurable but still relevant as benefits of the concept.

In Braun *et al* (2006), there are a lot of references to “diffusion” or the dispersing effect of the process on local communities. Again, this is very difficult to measure. In developing countries there may be a dividend to the local community but the ability of the FFS process to pass on the benefits to the wider community are hampered by the lack of farmer participants to pass on all that they have learned from the process. This means the benefits are not fully extended to their neighbours. The use of farmer facilitators as a method for delivering field schools means they in turn become respected in their local community and thus can be useful in the further development of the community. The self-financing of field schools and the running of schools in

conjunction with educating farmers in other fields such as water conservation, health issues, food security and marketing (van den Berg and Jiggins 2007) also shows the benefits that can accrue from their usage.

Three reports referred to in Braun *et al* (2006) (Feder, Murgai and Quizon 2004) commissioned by the World Bank point out that in small developing countries FFS do not give value for money and that the diffusion expected from the use of the FFS concept did not meet with expectations in the areas studied. This again raises the question of how you measure something that is very difficult to measure, how do you set the parameters and how do you measure the effectiveness of one study against another when there are so many variables?

In relation to this study, the method of measurement will be mainly qualitative, based on questionnaires, interviews, conversations and observations. As there has been no survey of this type conducted before in Ireland, there will be no way of measuring how effective or otherwise the process has been against previous studies. The benefits or negative outcomes will have to be looked at in without reference to other studies.

**1.4.4. Studies on Field Schools in Europe particularly those involving organic farms.**

There is a surprisingly small amount of published literature on the use of FFS in Northern Europe. It is obviously something that is still in its infancy here and it may be an instance of the developed world being led by developing world systems. This makes it quite difficult to make an informed argument on the validity of Field Schools from the available research because there is a very small resource from which to draw. However, and this is one of the positive aspects of the

Field school processes, the versatility and adaptability of the process means that it can be implemented almost anywhere with reasonable ease.

So what are some of the basic principles of Field Schools?

Farmer Field Schools are:

- conducted over a fixed period of time - usually one season
- start with a definite objective
- take place on a multiple of holdings
- uses experiential/participative learning in a field situation
- only involve the use of facilitators and do not rely on professional advice

For the purposes of this study, it is intended to concentrate solely on FFS to the exclusion of more traditional forms of interaction i.e. producer/discussion groups. That the main resource of research on FFS comes from a study of organic dairy farmers in Denmark should come as no surprise, considering how innovative the organic farmers there have had to be to build the sector in the last 20 years.

Participatory Common Learning in Groups of Dairy Farmers in Uganda (FFS approach) and Danish Stable Schools by MetteVaarst 2007 is the piece of research most relevant to this thesis. It is in a way a bridge from one of the traditional heartlands of the FFS in Uganda (Africa) to the usage of the FFS concept in Europe in one document. The other aspect of it that is very useful is that it comes with a handbook entitled “Danish Stable Schools – A Mini Manual” which, for any one in the process of starting a FFS, is a very useful document.

As has been mentioned earlier, the concept used in developing countries laid the foundation for the future evolution of FFS to the present day, but to have this distilled into a single document based on experiences in Europe makes the transfer for use in the Organic horticulture sector in Ireland that much easier.

Vaarst's work is very informative in relation to the research questions looked at in this thesis. Whereas Vaarst is looking at how FFS contribute to "*common learning and empowerment", this* study looks at collective problem solving, isolation, and the enhancement of growers' knowledge in addition to common learning and empowerment.

The methods used to gain information are also very similar; using informal interviews, observations, notes taken from the meetings and quotes from various communications. One difference from Vaarst is that this study has tried to use questionnaires to ascertain levels of knowledge and ability at the start of the process to examine whether taking part in a Field School improved these levels. In this instance, the methodology was to use a questionnaire at the end of the schools to measure any changes.

This review focused mainly on experiences recorded on the Danish Stable Schools element of Vaarst's thesis which is ordered in six parts, one of which concentrates on the Stable Schools in the body of the report and the last is the "Mini Manual" which is as a separate publication that comes after the conclusion. Stable Schools are the words used to describe the process that they developed in Denmark for a process involving livestock as distinct from Field Schools which was more for crops. They are in essence the same thing.

The first and perhaps one of the most important pieces of information gleaned from this paper was that the facilitator should be *"kept from giving out advice"*. The solutions should come from

within the group in a collaborative and fully participative way. In developing countries, facilitators are trained before getting involved in a FFS as would only be correct. With the time frame involved in this project that facility was not available, it was therefore important to look at different literature that would inform on facilitation techniques.

Vaarst also suggests correct procedure and methodology for conducting the School meetings using a "*success and problem area*" to inform the agenda on each particular holding. By holding a follow up meeting six months after the first to ascertain if the recommendation of the School been put into place and how effective it had been. This last point is very salient to the full and proper working of the process, but was unfortunately given the time frame for this project impossible to incorporate and the participants had to make do with one meeting on each of their holdings over a six month period.

### 1.4.5 Literature on facilitation techniques.

In developing countries, facilitators are trained specifically for the job they are required to do (Gallagher 2003). However, in spite of that Gallagher makes the point that "*farmers make better facilitators than extension agents*", but they still need training in specific practices. There is no history of Field Schools here in Ireland and consequently very little infrastructure for getting facilitators trained in the skill of facilitation.

That being the case, there is literature available that can be adapted to the process of Field Schools: the general principle of facilitation being similar across many disciplines. Prendiville (1995) in the booklet "Developing facilitation skills" addresses many issues pertinent to Field Schools including chapters on "How groups develop", "Evaluating and assessing" and "

Difficulties and conflicts". These chapters cover issues that arise when individuals dominate the session, evaluating the content and process of a session, scoring participation and the life-cycles group go through and includes information regarding at which stage participants are most receptive to learning. This handbook gives a good introduction to the psychology of working with groups, albeit more from a counselling perspective.

Participatory Learning and Action, A Trainers Guide ( Pretty, Guijt, Thompson, and Scoones, 1995) although published 15 years ago, is more relevant to facilitation in a farming context. It was designed primarily for use in the developing world and its publication was supported by the United Nations Food and Agriculture Organisation. There are a lot of good ideas in this manual including a large number of group exercises that could be used to help participants learn to listen, reflect, work together and evaluate their experiences. It could be used as a guide with a particular chapter, referred to as required and it contains a great many useful ideas that stimulate thought about the whole Field School process.

In the "Mini Manual," Vaarst expands on the experiences of the Ugandan and Danish FFS and puts them together in a more user-friendly way to outline the basics of the concept and how to make it work on the ground.

The Mini Manual's main points can be summarized in the following way:

- There is a need for a common goal that all the participants can sign up for and that is pertinent to all involved.
- The timing of the meeting (length) and the distance between participants are relevant in that time is a precious commodity.

- The meetings need be well structured, follow an agenda and be conducted in a business-like fashion.
- That the facilitator is just that and does not lapse into advisory mode.
- That good communications are of paramount importance in keeping the whole process going.
- That the needs for mutual trust, openness, respect and consciousnesses are intrinsic to the proper functioning of the process.

Tom Phillips is one consultant working in the field of group facilitation in the United Kingdom. He works within the conventional dairy sector with his company called "Pasture to Profit" or P2P. Tom recently did a workshop (9/12/09) for the Institute of Organic Trainers and Advisers (IOTA) and a handout from this workshop as a pre-reader proved very interesting. In it he espouses the necessary attributes that a good facilitator should have which reads almost like a check list. This is a very useful introductory document to the art of facilitation and enables potential facilitators to see just what kind of competencies they should aim to develop. Also, he makes the point that dairy farmers are very "*active, self directed learners"* and this is one of the questions that is pertinent to the two groups worked with on this project: Will they be active, self-directed learners?

**1.4.6 The level of advice available to Organic Growers in Ireland.**

Over the last 10-15 years there have been numerous reports published that attempted to stimulate the Irish Organic industry. The Western Development Commission, Bord Bia (the Irish Food

Board),The Organic Development Committee, Department of Agriculture Food and Fisheries, Teagasc ( The Agriculture Development Agency) and the Irish Organic Farmers and Growers Association(a certification body) have all produced plans, targets, policy documents and various papers. Perhaps it is not surprising that the results within these various studies are similar because many of the ideas were taken from previous reports. This duplication and lack of imagination leads to stagnation and not much happens in terms of development in the industry. Set targets come and go and not surprisingly, the industry does not advance at any appreciable speed.

As far as horticulture is concerned, it seems that because this sector uses land very intensively and therefore has very little impact on government figures for land use under organic farming, it tends to get overlooked as a sector that could have an effect on rural jobs and incomes. Consequently, there is little infrastructure in place to support growers and in a Catch 22 situation, this stifles the development of the sector. Looking at published papers in relation to the sector, the recent Organic Action Plan launched by the government in 2007 makes little mention of the organic horticultural sector at all. In an update to the document entitled Organic Farming Action Plan update December 1st 2008, there are still only three points that refer specifically to organic horticulture.

Point no 42: "*Encourage the establishment of local horticultural producer groups in the medium term*". To date this has not happened

Point no 45: "*Consideration on a pilot basis should be given to strengthening the Teagasc specialised advisory support in the area of horticulture in the short term*" This is currently "*on hold due to budgetary constraints*"

Point no 52:"*Appropriate research in horticulture should be examined as a matter of urgency in the short term*" There was "*no progress to date*" reported on this point.

As can be seen from the above, it is easy to see why growers might see themselves as the forgotten sector of the Organic industry. This, combined with the dispersed location of the current practitioners in combination with the relatively small size of holding, compounds the feeling of isolation and lack of community within the sector.

The Irish Organic Farmers and Growers Association produced a document in 2007. "A Manifesto for the Development of the Organic Industry 2007 to 2012" both in-response to, and to back up points made in the governments Organic Action Plan 2007-2012. This document included a 12 point plan, some of which, if implemented, would address the situation of horticulture.

Point 1: The establishment of an Organic development Agency co-ordinating the development of all aspects of the industry including "*research, marketing and advice*"

Point 4: "*Organic fruit and vegetables account for the largest value of organic produce sold in Ireland. However there is significant shortfall in the number of horticultural producers and a lot of the produce is imported. More horticultural producers need to be encouraged into the sector to meet demand at a national level*."

Point 5: "Set up a dedicated conversion information service" to cover "*training, mentoring, networking and marketing*"

Point 6: "*Establish a comprehensive and integrated organic research and training programme*"

To date none of the above has been acted upon and it appears unlikely that they will be addressed in the near future.

### 1.4.7 Other issues addressed in the available literature.

In the paper "Implementation of farmer groups for animal health and welfare planning considering different contexts", (Vaarst and Roderick 2009) make some interesting points in relation to the use of discussion groups. They make a distinction between farmers who work with a number of employees on their farm and those farmers who work alone on their farm. They conclude that "*farmers who work alone may be more receptive to professional discussions with fellow farmers, and maybe even welcome this as a social activity.*" Those with a number of employees benefit from "*knowledge exchange*" on the farm, which may be considered sufficient. This addresses the research question posed "Will the FFS serve as a tool to enhance grower's confidence and deliver a sense of community that may be absent from their everyday work situation?" This paper makes the point that farmers may participate more readily if they are willing to work towards a "*common goal*."

# ChapterTwo. Methodology and materials.

## 2.1 Research questions

Before looking at the methodology of the study it is important to focus on the aims of the research and look at the research questions which are as follows;

- What are grower's attitudes to current levels of advice/extension available to them?

- How would a FFS serve as a tool to enhance grower's knowledge on a range of issues relating to day to day running of their farm?

- Will the FFS model increase the growers confidence and deliver a sense of community that may be absent from their every day work situation?

- Is a collective approach to problem solving going to work with people who are often the sole employee of their farm

- Could this tool be used right across the sector to empower growers?

## 2.2 Setting up the project.

Before the study could commence the first step of the process entailed establishing two Field Schools (groups) of 5 growers each in two different areas of the country. Once this had been

achieved a date was set for the first school. At the end of each meeting a date was set for the subsequent meeting. The process continued like this without drawing up a full schedule as this maintained flexibility in the process

The participants were picked from registered organic growers from various different holdings in the Mid West and South West of Ireland. Although the common denominator for all participants was organic horticulture some participants ran other diverse operations on their holdings alongside the horticulture.

The number of participants aimed for was 5 for each field school. The number chosen was a purely pragmatic decision not to have too many participants because the time frame for the study was small, and partly because two groups of 5 was a good round number for the presentation of results.

The correct number of participants was achieved for the was achieved with the group referred to as the Cork school and there was an extra member in the Clare/Galway school by virtue of the fact that one holding had two participants taking part.

In both cases to get the required 5 participants a good number of growers were contacted, many although interested, were for a number of reasons unavailable (too busy, family issues, various other commitments).For the Cork School 7 were contacted to get the 5 and for the Clare/Galway group 8 were contacted.

The participants for each group were picked primarily due to their relatively close geographic proximity to each other this is recommended in the FFS handbook (Vaarst *et al*) and makes economic and environmental sense. Growers are often very busy and every effort was made from

the outset to make the process as efficient and smooth running as possible so as to inconvenience them as little as possible.

Initial contacts were made by email to the Cork group and by mobile phone to the initial participants of the Clare /Galway group. Almost all the participants were known to the facilitator prior to taking part in the experiment, this is unavoidable in a country the size of Ireland. There was familiarity with some but not all of the farms as they had been visited over the course of the last couple of years for various reasons (farm walks, study tours, and open days).

**2.3 Day to day running of the Schools**

As the project co-ordinator after finding suitable participants my role was;

- To arrange so that the group would be at a certain holding on an appointed day.
- To make sure they had an agenda for that day
- To facilitate the smooth running of the meeting, keeping to the agenda etc.
- To record minutes
- To arrange the next school venue, date and time
- To send out minutes and agenda prior to each school

The participants decided amongst themselves who would be the host for the next meeting. The job of the host was to have an input into drawing up the agenda for the next school including setting a goal for his/her own holding and outlining a success and two problems he/she wanted to focus on at that school. A common goal for each of the 5 participants in the school was also decided on at the first meeting and used as a focus for the school at subsequent meetings.

The format of the agenda was the same for all meetings (see appendix 3) the only variation being that the Clare/Galway School always started with a field walk because this meeting was scheduled for the afternoons and necessitated doing the outside element of the school in daylight before continuing with the rest of the meeting indoors.

**2.4 Collection of data**

The main source of qualitative and quantitative data in the study came from a questionnaire given to the participants on the first and last school of the process. These questionnaires tried to establish the level of competence of the participant in different areas of their business their level of confidence and their willingness to try and make the process work. There was also a questionnaire issued after the second school which was used to get more information that it was felt had been missed in the first questionnaire, it was in effect a supplement to questionnaire one.

In addition to this a voice recording was made of the dialogue at each of the schools and transcribed at a later date to record verbal quotes and matters arising from the process. Observations were also recorded in relation to behaviour /reaction to certain issues during the schools and also attitudes to other communications in the form of text email, or telephone conversations outside of the schools.

**2.5 The design of the questionnaires.**

The first questionnaire was split into 4 sections,

- Background of the participant
- Participants attitude to current sources of advice and training

- Participants level of technical ability
- Participants attitude to the potentials for Farmer field Schools and discussion groups

The second questionnaire supplementary to the first tried to establish more definite data on all of the above sections.

The third questionnaire covered the four sections again using some questions with exactly the same wording as in the first questionnaire to ascertain if there had been any improvement in the participant's perceived ability having completed the field school process.

There were a number of different question types used in the questionnaire design.

These included the following;

- Open questions, eliciting a range of replies.
- Closed questions where a number of defined options for response are supplied.
- Single response questions usually requiring either a yes or no answer.
- Ranked responses to a number of different options.
- Rated responses to given statements or questions.

**2.6 Treatment of data**

There were 62 questions in all asked over the three questionnaires. Where they were incorrectly filled out in the case of a ranking question or rating question the response was discarded. All the results indicate the size of the sample that the results were collected from.

The two schools were treated as two separate entities for the purpose of analysing the data. The responses from each questionnaire were collated on a master copy for the purpose of presenting

the results. The results of the two schools were looked at side by side and then as a combined result, using averages.. This enabled comparison of one school against another and then either school against the combined result and gave three sets of data for each question. Statistical analysis was carried out on any data that looked like the result may have been of statistical significance.

Where ranked or rated questions are presented in the results the scoring is shown in the results table alongside the response. The numbers of responses to that particular response are also shown and the average response is shown at the bottom of the table.

# Chapter Three. Results

## 3.1 Operation of the Farmer Field School

### 3.1.1 Day to day running of the schools

A full account of the methodology used in setting up the study was reported in Chapter Two Methodology and Materials. The operation of the Field School followed a broadly similar outline to that which was recorded by Vaarst (2007) in her “Mini Manual” for Farmer Field Schools.

Once the Field School had been established and had met for the first time, the procedure for the on going operation was broadly similar. At the end of each school a date and venue for the next school was decided upon, usually being one month forward.

The minutes were written up in between meetings from recordings made on an voice recorder and an agenda was drawn up for the subsequent meeting. Initially, the agenda was drawn up in consultation with the host of the next school. This task became too onerous as the process went on and the hosts’ items for the agenda were inserted on the day of the school.

In the run up to a school being held, the facilitator texted the participants to remind them about the forthcoming school and to inform them that the minutes and agenda had been circulated by e-mail. There proved to be a few problems associated with this including,

- Participants did not read their mail.
- There were some participants that could not open the documents in the format they were sent.
- Various problems with computers printers and e-mail addresses.

For the last few schools, the facilitator brought hard copies of minutes and an agenda to the school for the participants and this seemed to work well.

For the duration of the schools, most communications were made by mobile phone usually by text message using the group function so that all five participants received the same message at the same time.

The meetings themselves lasted approximately three to three and a half hours. The Cork school met on a morning from 9.30am until 2pm and the Clare/Galway school usually from 2.30pm until 6.00pm, as this facilitated a farm walk before dark on a winter's evening. For the Cork school the meeting would have taken a full day's work for the facilitator because of the travel involved, two to two and half hours driving each way. As the Clare/Galway School participants were local to the facilitator, this was not so much of an issue.

### 3.1.2 Time schedule

The first Cork School took place on the 30th of November 2009 and this school ran until the 12th of April 2010 with four meetings. On two occasions in January, schools had to be re-arranged on account of the weather; in one instance with five inches of snow on the host farm. On another occasion in March, bereavement caused rescheduling. The Clare/Galway School started on the 14th December 2009 and finished on the 22nd of March without any interruptions.

**Table 1a Showing the dates of the Cork schools**

| Host | Date | Successes | Problem areas |
|---|---|---|---|
| 1st meeting Kitty's | 30th November 2009 | Bare root transplants. Leeks and broccoli | Weeds, thinning, and ground preparation |
| 2nd meeting Colum's | 26th January2010 | Tomatoes an lettuce | Machinery to grow on ridges. Leaf spot on spinach |
| 3rd meeting Eileen's | 24th March 2010 | Transplant business | Physical nature of the work and ergonomic layout |
| 4th meeting Tom's | 12th April 2010 | Scale. Not enough time not enough produce | Ability to sell all he grows. |

**Table 1b Showing the dates of the Clare/Galway school**

| Host | Date | Successes | Problem areas |
|---|---|---|---|
| 1st meeting Peter and Matteo's | 14th December2009 | Over wintering onions Early and late potatoes | White rot on alliums Blight on potatoes |
| 2nd meeting Kieran's | 18th January 2010 | Education and training of people | The orchard, shade from trees and pest and diseases |
| 3rd meeting Pat's | 22nd February 2010 | Oats | The balance of time and labour. Soil fertility |
| 4th meeting Dominic's | 22nd March 2010 | The outdoor area that had been broken in using green manures | Continuity, what he will have for sale, and whether to buy in produce |

### 3.1.3 Facilitators' issues with the operation of the schools.

The problem of running two schools in tandem was made easier by accepting that there would be room in any given week to run only one school. This gave the facilitator sufficient time to prepare organisationally and mentally for the school. It did occur once, due to the pressures of schedule and unforeseen circumstances, that there were two schools in one week within a matter of three days. The pressure this created was evident. In general, there were two schools every four weeks, usually taking place within a week of each other.

As far as attendance was concerned, there was always going to be a possibility that people would drop out. Thankfully, this did not create too many problems. The Clare/Galway group started with six participants of which two (Peter and Matteo) were from the same holding. Kenneth left the school after the first hour of the first school for personal reasons which had nothing to do with the group as far as was known. This left five participants and four host farms in the Clare/Galway School. There were only two different participants absent from the four meetings of the Clare/Galway School.

The Cork School started with five participants. However, one decided not to host a school as he was building a house on his holding this year (2010) and he would not be growing commercially. He also missed the second meeting as he was busy with foundations this was the only absence from the Cork School

As to the management of the meetings, the host took control of the farm walk and was in the main, the person who did the most talking on the day. The facilitator's job was to keep the meeting running to the agreed agenda, ask searching questions if required and to try to keep things on schedule so as to finish in the time frame allotted. The hardest issue from the

facilitating point of view was maintaining a neutral stance and not getting involved in giving any advice.

The most time consuming element for the facilitator was writing up the minutes which involved editing the recording from the voice recorder and noting topics covered and recording quotes from participants.

In time, the agenda became a standardised document (see Appendix 3) which was used for both schools and, as was mentioned earlier, items were inserted on the day as required. This was not in accordance with best practice but was a necessary compromise that aided the smooth running of the schools.

### 3.1.4 The cost of running the field schools.

Prior to starting the project, an approach was made to the Department of Agriculture, Food and Fisheries for funding. On realising that this would not be forthcoming, it was decided to disregard the issue and continue. In the end all the costs were borne by the facilitator and were as follows in Table 1c. **Table 1c Cost of Field school project**

| **For the Cork school** | **Euro** |
|---|---|
| 4 days of facilitation and 4 days of preparation charged at 300 euro/day | **2400** |
| Travel at 85 cents per mile X 700 miles | **595** |
| **For the Clare/Galway school** | |
| 4 days of facilitation and 4 days of preparation charged at 300 euros/day | **2400** |
| Travel at 85 cents a mile X 150 miles | **127** |
| Total cost of Field Schools Project | **5522** |

**3.1.5 Background of the participants** Tables 3a and 3b show the number of years spent growing commercially and scale of operation of each of the participants in each school.

**Table 3a Background of the Cork school participants**

| Participant's name | Years growing commercially | Size of holding (ha) | Area under cultivation 2009 (ha) | Notes |
|---|---|---|---|---|
| Colum | 3 | 5.45 | 0.9 | Also does broilers, looking to expand his vegetable growing |
| Tom | 3 | 3.63 | 0.45 | Has broilers, laying hens and pigs and processing |
| Kitty | 2 | 14.54 | 0.9 | Farm manager of a farm owned by a religious order responsible for sheep, cows and laying hens as well as veg. |
| Francis | 3 | 2.04 | 0.5 | Not growing in the coming year2010 |
| Eileen | 1 | 0.45 | 0.22 | Growing transplants organically and small amounts of veg. |

**Table 3b.Background of the Clare/Galway school participants.**

| Participants name | Years growing commercially | Size of holding (ha) | Area under cultivation 2009 (ha) | Notes |
|---|---|---|---|---|
| Dominic | 3 | .45 | 0.5 | 2009 was first commercial year. |
| Matteo | Did Ag. Science in Florence (It) | 5.45 | 5.45 | Orchard manager at Irish Seed Savers Assoc. |
| Peter | 2.5 years | 5.45 | 5.45 | Garden manager at Irish Seed Savers Assoc. |
| Pat | Farming organic beef for 13 years | 72.72 | 0.22 of veg. 1.8 ha. of oats | Last year was first year growing commercially. |
| Kieran | Since1998 | .22 | 0.22 | Garden manager at an educational facility run by a religious order. |

## 3.2 Participants' attitudes to advice

### 3.2.1 Participants' attitude to advice at the start of the process

All the data presented in this section was derived from the first questionnaire completed by participants at the end of the starting day's field school. Participants were asked about the initial sources of advice and information they had used when they first started growing commercially. They were also asked their opinions about the adequacy of advice and training available to growers in Ireland. The results of the two schools are presented side by side for ease of comparison and also where necessary, data for the ten participants are shown combined.

#### 3.2.1.1 Participants' initial sources of information and advice and their attitudes to its provision.

The participants were asked to rank in importance from eight different sources of advice used when they started growing commercially (Table 4).

**Table 4. Participants' ranking of initial sources of advice and information when they started growing commercially (1= most important, 8=least important).Average scores shown.**

| | Average rank for the Cork school from 4 useable responses | Average rank from the Clare/Galway school from 5 useable responses | Average from combined responses from 9 useable responses |
|---|---|---|---|
| Other farmers and growers | 2 | 2.2 | 2.1 |
| Books and journals | 2.75 | 2.6 | 2.7 |
| Workshops | 5.25 | 3 | 3.7 |
| Farm walks | 4 | 3.2 | 3.5 |
| The internet | 3 | 4.4 | 3.7 |
| Commercial consultants | 7.25 | 7.6 | 7.4 |
| Government adviser | 6.75 | 7 | 6.8 |
| Organic cert. bodies | 5 | 5.8 | 5.4 |

It is interesting to see that that the response "other farmers and growers" elicited the highest ranking in this question.

### 3.2.1.2 Participants' attitude to the level of advice and training available

The participants' opinions as to whether the level of advisory and training support to organic growers in Ireland was "good, adequate, poor or inadequate" are shown in Tables 5a and 5b.

**Table 5a.Participants' opinions on the adequacy of advice available to Organic growers in Ireland. There were 4 possible responses from "good"(scoring 4) to poor (scoring 1).Table shows the number of replies to each response and average score in bottom row.**

| | Cork school | Clare/Galway school | Combined |
|---|---|---|---|
| Good(4) | 2 | | 2 |
| Adequate(3) | | | |
| Poor(2) | 3 | 4 | 7 |
| Inadequate(1) | | 1 | 1 |
| Average score | 2.8 | 1.6 | 2.3 |

As can be seen the majority of participants thought the provision of advice to be poor.

**Table 5b.Participants' opinions on the adequacy of training opportunities for Organic growers in Ireland. There were four possible responses from "good" ( scoring 4) to poor (scoring 1). Table shows the number of replies for each response and the average score in the bottom row.**

| | Cork school | Clare/Galway school | Combined |
|---|---|---|---|
| Good(4) | 1 | 1 | 2 |
| Adequate(3) | 1 | 1 | 2 |
| Poor(2) | 2 | 2 | 4 |
| Inadequate(1) | 1 | 1 | 2 |
| Average score | 2.4 | 2.4 | 2.4 |

Compared to responses on the adequacy of advice, the responses to the adequacy of training opportunities were spread over a wider range. However, they still point to the fact that 60% of the participants thought that the level of training opportunities were poor.

*Quote "As a national organisation Teagasc have not put anything into organic research" Anonymous 1st Clare /Galway school.*

*Quote "I end up advising them (Teagasc)". Anonymous 3rd Clare/Galway school*

### 3.2.1.3 Participants' views on different methods of information delivery

The participants were asked how they would like to see advice made available and to rank them in order of preference over a number of different choices. The participants were given statements relating to the usefulness of a number of methods of information delivery; workshops, farm walks, classrooms, conferences and advisors. There were five possible responses from strongly agree (scoring 5) to strongly disagree (scoring 1). The results were averaged and are presented in Table 6

**Table6. Participants' rating of methods of obtaining advice prior to the study. The table shows the average response where (5) equals "Strongly agree" and (1) equals "Strongly disagree"**

| Participants preference for receiving advice through; | Cork School average response | Clare/Galway School average response | Combined Schools average response |
|---|---|---|---|
| Workshops | 3.4 | 4 | 3.7 |
| Farm walks | 4 | 3.75 | 3.5 |
| The classroom | 3.2 | 2.6 | 2.7 |
| Conferences | 2.8 | 2.8 | 2.8 |
| A professional adviser | 4.2 | 3.8 | 4 |

A professional adviser was the preferred method of receiving advice from the averages of the two schools. Workshops scored closer to “agree” response than “undecided” response and farm walks scored in between the two responses “agree” and “undecided.

### 3.2.2 Participants’ attitude to the provision of advice at the end of the process

In this section, the responses to the third questionnaire given to participants at the end of the field school are looked at to ascertain if there had been any changes to attitudes that may have come about from participating in the field school.

#### 3.2.2.1 Participants’ preferred method of receiving advice at the end of the field school process.

This result relates to the question looked at in point 3.2.1.3 where the participants’ preferred method for dispensing advice was looked at. Table 7. shows the results with the average ranking for each different method.

**Table.7 Average ranking of six different methods of dispensing advice at the end of the study; where( 1) is perceived to be the most effective and( 6) perceived to be the least effective. The table shows two samples of 5 and then the two samples combined in the last column**

| | Cork School average response from 5 scores | Clare/Galway School average response from5 scores | Combined average from10 scores |
|---|---|---|---|
| Workshop | 3.6 | 3.4 | 3.6 |
| Farm walks | 2.6 | 2.4 | 2.5 |
| Classroom sessions | 4.2 | 4 | 4.1 |
| Conferences | 5.8 | 5 | 5.4 |
| Visit from adviser | 2.8 | 4.4 | 3.6 |
| Field schools | 1.8 | 1.8 | 1.8 |

This is a conclusive result and a big endorsement of the field school methods as a way of dispensing advice. Field schools scored the best score. The next nearest category is Farm walks which is 0.7 of a score behind the field school.

### 3.2.2.2. The impact of field schools on the delivery of advice

Participants were given a statement relating to whether Farmer Field schools could have an impact on the delivery of advice in the Irish Organic Horticultural sector

**Table 8.Response of participants to the statement, "Farmer Field Schools can have an impact on the delivery of advice in the Irish Organic Horticultural sector." The average rank is in the bottom row.**

| | Cork School | Clare/ Galway School | Combined both schools |
|---|---|---|---|
| Strongly agree=5 | 3 | 3 | 6 |
| Agree=4 | 2 | 2 | 4 |
| Undecided=3 | | | |
| Disagree=2 | | | |
| Strongly disagree=1 | | | |
| Average | 4.6 | 4.6 | 4.6 |

This result gives more weight to the beneficial effect of Field Schools as all participants agree that they can have an impact in the Irish Organic horticultural sector.

## 3.3 Participant's perceived level of ability

### 3.3.1 Perceived level of ability at the start of the process

All results in this section relate to questions asked in the first questionnaire which was completed at the start of the study. The process of trying to get participants to score their own ability at this point was to set a base line that could be measured against at the end of the study, to find out whether the Field School had an impact on improving the participants' perceived ability in some or all areas.

#### 3.3.1.1. Participants' level of perceived ability in different areas at the start of the process

Participants were asked to rate their own ability (as good, average, poor or non-existent) in a range of topics which are important for organic growers. It is interesting to note that only in two areas of perceived ability (agronomy and standards) did the combined average reach 3(average ability).

### 3.3.2 Participants' perceived levels of ability in different areas of their business at the end of the study.

The result looked at here relates to the result looked at in section 3.3.1.1 which was from the first questionnaire. By the time this question was asked for the second time, over four months had elapsed it can therefore be assumed that most of the participants would have forgotten what their initial response had been.

Participants were asked to rate their own ability (as good, average, poor or non-existent) in a range of topics which are important for organic growers. Responses were allocated scores from "good" (scored 1) to "non-existent" (scored 4). Results are shown in Table 9.with the results from the same question in questionnaire1 incorporated for ease of comparison.

**Table 9.Participants' rating of their level of ability in aspects of Organic Horticulture, scoring from 4 (Good) down to 1 (Non-existent).First questionnaire scores included to aid comparison.**

| | Cork Field School 1st | Cork field school 3rd | Clare Galway field school 1st | Clare Galway field school 3rd | Combined scores for the 1st Field School | Combined scores for the 3rd Field School |
|---|---|---|---|---|---|---|
| Business management, accounts, sales projections, profit | 2.2 | 3.2 | 2 | 2.1 | 2.1 | 2.65 |
| Marketing and sales element | 3.2 | 3.4 | 2.4 | 2.8 | 2.8 | 3.1 |
| Technical areas machinery, poly tunnels etc | 2.6 | 3 | 3 | 3.2 | 2.8 | 3.1 |
| Agronomy/soil management and crop production | 3.2 | 3.2 | 3 | 3.1 | 3.1 | 3.15 |
| Planning/crop planning, forward planning etc | 2.6 | 3 | 3 | 3.4 | 2.8 | 3.2 |
| Standards/ interpretation implementation and meaning | 2.6 | 3 | 3.8 | 2.8 | 3.2 | 2.9 |
| Average of each column | 2.73 | 3.13 | 2.86 | 2.9 | 2.8 | 3.01 |

For every area in both schools excluding one (standards interpretation and meaning in Clare/Galway) the perceived level of ability at the end of the field school had stayed the same or in most cases improved often by a score of 0.1 on the average but in many cases by an increase of 0.4 of a score on the average. For the Cork field school all the average scores had improved to a rating of average ability and for the Clare/Galway school the improvements were nearly as good but not consistently across the whole range of disciplines. When statistical analysis was applied using the Chi squared there was found to be a significant difference in the responses in all areas except business management when the group was looked at as whole. See Appendix4 for details of the analysis. The Wilcoxon test for standard variance analysis was also applied but this showed no significant difference as there was not enough variance in the samples to get pairs for the T/crit test see appendix4.

**3.3.2.1 Further breakdown of perceived levels of ability at the end of the study.**

In the following section, participants were asked specifically whether their level of knowledge had (with scores in brackets) “improved significantly” (5) “improved” (4) “stayed the same” (3) “deteriorated” (2) or “deteriorated significantly” (1). The scores were added and the average scores recorded in the Table10 on the following page

**Table 10.Changes in participants' perceived level of knowledge in specific areas. Sample size; five responses from each school and average scores shown where "improved significantly" is (5) and "deteriorated significantly" is (1).**

| Changes in perceived levels of knowledge in; | Cork school average score | Clare/Galway school average score | Combined average score |
|---|---|---|---|
| business management, sales projections, profit etc | 3.6 | 3.2 | 3.4 |
| marketing and sales element of business | 3.8 | 3.2 | 3.5 |
| technical areas such as poly tunnels and machinery | 4.4 | 4.2 | 4.3 |
| agronomy, soil management and crop production | 4.2 | 4.2 | 4.2 |
| relation to standards, implementation and meaning | 3.4 | 3.6 | 3.5 |

Looking at the results the two areas where there was most change apparent was in the perceived level of knowledge in relation to technical areas and agronomy and soil management. Both of these areas could be deemed to have improved from looking at the average score. All the scores were higher than the response "stayed the same" (3) and this indicates that there was improvement in all the above areas after participation in the Field School.

*Quote "I am probably going to get the most out of the group" Eileen 1st Cork field school.*

## 3.4 Participants' attitudes to group working.

### 3.4.1 Participants' attitudes to group working at the start of the process.

The questions in this section were given to the participants in the first questionnaire to examine whether the members of the two groups were amenable to working with other growers in groups and whether they had participated in group work before taking part in this study.

#### 3.4.1.1 Participants' perceived attitude to working in groups.

This question asked whether the participants liked working in groups with other growers, it was a supplementary question (questionnaire 2) to the first questionnaire and was asked to gain more of an insight into the two schools attitude to group work.

**Table 11. Participants' perceived willingness to work in groups with other growers from 5 responses from each school. This table shows the number of replies for each response and the average score in the bottom column**

| | Cork School | Clare/Galway School | Combined both schools |
|---|---|---|---|
| Strongly agree=5 | 3 | 2 | 5 |
| Agree=4 | 1 | 3 | 4 |
| Undecided=3 | 1 | | 1 |
| Disagree=2 | | | |
| Strongly disagree=1 | | | |
| Average Score | 4.4 | 4.4 | 4.4 |

The result indicates a strongly perceived willingness to work in groups with other growers.

*Quote, "Dairy guys do it (discussion groups) and it's been a real success for them, I wouldn't be here otherwise" Colum 1st Cork Field School*

### 3.4.1.2 Whether participants had previous experience of working in groups.

The two schools were asked on the first questionnaire "Have you ever been involved in a producer/ discussion group before?" From 10 responses only one member of the Clare/Galway group had had previous experience of producer/discussion groups.

*Quote, "This idea (FFS) hasn't been tried" Kieran 1st Clare/Galway field school*

### 3.4.1.3 Whether participants keep in contact with other growers during the course of a season and if so how beneficial this is.

The next two questions were designed to find out if the participants already engaged in networking and informal forms of advice giving/taking and whether this was beneficial or not. It was designed again to give an indicator as to how receptive to the Field School process the participants might be. The participants were given a statement "I keep regular contact with a grower/growers during the course of a season". Responses from "strongly agree" (scoring 5) to "strongly disagree" (scoring1) were recorded in Table 12a and with averages in the bottom row

**Table 12a Participants' response to the statement of whether they maintain regular contact with other growers over the course of the season; this table shows the number of replies to each response and the average score in the bottom row.**

| | Cork School | Clare/Galway School | Combined both schools |
|---|---|---|---|
| Strongly agree=5 | 3 | 2 | 5 |
| Agree=4 | 1 | 2 | 3 |
| Undecided=3 | | | |
| Disagree=2 | 1 | 1 | 2 |
| Strongly disagree=1 | | | |
| Average | 4.2 | 3.8 | 4 |

There was an 80% positive response to this statement, one member from each group disagreed with the statement.

The second statement followed on from the first by saying "I find this to be beneficial to my business". Responses from "strongly agree" (scoring 5) to "strongly disagree" (scoring1) were recorded in Table 12b and with averages in the bottom row

**Table 12b. Participants' response to the statement as to whether they found regular contact with other growers beneficial or not; sample 4 responses from each school as 1 from each school was deemed not applicable. Table shows the number of replies to each response and the average score in the bottom row**

| | Cork School | Clare/Galway School | Combined both schools |
|---|---|---|---|
| Strongly agree=5 | 3 | 2 | 5 |
| Agree=4 | | 2 | 3 |
| Undecided=3 | 1 | | |
| Disagree=2 | | | 2 |
| Strongly disagree=1 | | | |
| Average | 4.5 | 4.5 | 4.5 |

This result shows that those participants who did keep regular contact with other growers over the course of the season found this to be beneficial to their business.

### 3.4.2 Participants' attitudes to working in groups at the end of the process.

All the questions referred in to in this section came from the third questionnaire given to the participants at the end of the final school.

#### 3.4.2.1 Did the participation in the field school change attitudes to working in groups?

The participants were asked "has taking part in the process changed your impression of working in groups for better or worse?" There was a unanimous "yes" response to this question. However having looked at the question again the response is flawed as the reply should have offered the choice between "better" and "worse" not "yes" and "no".

#### 3.4.2.2 How beneficial was the Field School process?

When asked the above question the participants were given the option of four responses from "very beneficial" to "no benefit at all".

The Cork school responded with three "very beneficial" and two "beneficial" scores

The Clare/Galway school with three "very beneficial" and two "beneficial" scores

| |
|---|
| *Quote "I found it very inspiring and a great way to share knowledge" Kieran , 4th Clare/Galway school* |
| *Quotes When asked by the facilitator if the process had been beneficial Kieran responded "Absolutely" and Dominic replied "I think it's been brilliant", 4th Clare/Galway field school.* |

### 3.4.2.3 The field schools ability to increase confidence in participants business

The participants were asked for a straight "yes/no" response question as to whether the field school process had increased confidence in their business. The result of 10 "yes" responses was very positive.

> *Quote "I think I have more to gain (than the others in the group) because I am just at the start" Dominic 4th Clare/Galway School.*

### 3.4.2.4 Participants' intention to use ideas generated by the field school

This statement tried to ascertain the likelihood of participants using ideas that were generated on their holding when they hosted the group. It was a way of asking how effective the schools had been at finding solutions to problems. A statement was given to participants asking whether they would implement ideas suggested by the group. Responses from "strongly agree" (scoring 5) to "strongly disagree" (scoring1) were recorded in Table 13 with average scores in the bottom column.

**Table13. Responses to the statement "I intend to implement some of the ideas the group came up with when I was host," from 5 responses from each school. Table shows number of replies to each response and average score in bottom row.**

| | Cork School | Clare/Galway School | Combined both schools |
|---|---|---|---|
| Strongly agree=5 | 2 | 2 | 4 |
| Agree=4 | 2 | 3 | 5 |
| Undecided=3 | 1 | | 1 |
| Disagree=2 | | | |
| Strongly disagree=1 | | | |
| Average | 4.2 | 4.4 | 4.3 |

This is a very positive result with 90% of the combined group agreeing that they intend to implement ideas generated during the field schools.

*Quote "Good to get feedback (from other growers)" Pat 3rd Clare/Galway field school*

### 3.4.2.5 General feeling about the field school process

The next two statements were designed to see how the participants felt about the schools without asking them directly. The reasoning behind the first inquiry as to whether they would participate in another school was that if they expressed an interest then they must have felt this school was worthwhile. Table 14 below shows participants' intentions in response to taking part in another school.

**Table 14.Participants'response to a statement expressing interest in taking part in another Field School. Table shows the number of replies to each response and the average score in the bottom row.**

| | Cork School | Clare/Galway School | Combined both schools |
|---|---|---|---|
| Strongly agree=5 | 3 | 2 | 5 |
| Agree=4 | 1 | 2 | 3 |
| Undecided=3 | 1 | 1 | 2 |
| Disagree=2 | | | |
| Strongly disagree=1 | | | |
| Average | 4 | 3.8 | 3.9 |

The Cork school was in broad agreement with this statement with three members "strongly agreeing," the Clare/Galway school was a bit more circumspect, but the combined average indicates an almost total agreement.

For the second statement in relation to recommending the process to other growers, this was a way of getting the participants to put their reputation on the line. The logic behind it is that the participants would not recommend the process if they did not rate it highly enough.

When participants were asked whether they would recommend the process to a fellow grower, there was a 90% positive response. One questionnaire was not marked for that question this was probably because the question was on the back of a sheet and was overlooked.

*Quote "Lovely to walk someone else's garden" Colum 1st Cork field school*

### 3.4.2.6 What other areas of business did the Field School process contribute toward?

**Table15. Written responses from questionnaire 3 to the question, "what other areas of your business did the field school contribute to?"**

| |
|---|
| *I found it contributed just talking to other producers and discussing all our problems and the resulting answers. Tom, Cork school* |
| *Helped me to focus on planning and being more efficient. Eileen, Cork school* |
| *Networking and developing business relationships with other growers locally+ identifying markets + other opportunities. Kitty,Cork school* |
| *Crop planning. Colum, Cork school* |
| *Forged beneficial contacts and made working connections for in increasing our seed guardianship network. Raised awareness about our (Irish seed savers) work with local organic growers. Peter, Clare/Galway school* |
| *Communications and networking, Matteo, Clare/Galway School* |
| *Technical aspects of growing in general, Dominic, Clare/Galway school* |
| *Opening up possibility of field scale vegetable growing, Pat, Clare/Galway School.* |
| *Improved confidence in general- also good to see other techniques equipment in use e.g. watering system at Dominic's, Kieran, Clare/Galway school* |

| |
|---|
| *Quote " Good to go to other peoples places and pick up ideas" Kieran, Clare/Galway 4$^{th}$ field school.* |

### 3.4.2.7 Barriers to the field schools work

Participants were asked "What barriers hindered the work of the field school?" This was a written reply response and comments are presented below in Table 16

**Table16. Written comments to the question, "what barriers hindered the work of the field school?"**

| |
|---|
| *Time. Tom, Cork School* |
| *Finding the time away from your holding is always difficult. Eileen, Corks School* |
| *Weather. Time. I felt the field school flowed well and felt a strong sense of openness, trust and sharing knowledge within the group. Kitty,Cork School* |
| *Travel Colum, Cork School* |
| *I can't think of any barriers- unlike farm walks, the field school allowed for closer questioning and more in-depth discussion Kieran, Clare/Galway School* |
| *Our group was very diverse, this also made it more interesting……Overall I was very entertained and impressed. It could easily spill over to the autumn. Pat, Clare/Galway School* |
| *Synchronizing people's time Dominic, Clare/Galway School* |
| *Timing…….. could have been a bit more structured. Peter, Clare/Galway School* |

**3.4.2.8 Improvements for future groups.** Participants were asked "What do you think could improve the field school process for future groups?"Again, this response was required to be written by the participant in Questionnaire 3. Table 17 below contains some of the responses.

**Table 17. Written responses to the question of improving field schools for future groups.**

| |
|---|
| *Matching groups to the scale of the enterprise. Kitty, Cork School* |
| *Skilled facilitator……..this is essential for any group work. Francis, Cork School* |
| *Trips to bigger units and demonstrations of machinery. Tom, Cork School* |
| *Do less questionnaires and concentrate on one common goal, trying to find practical solutions to real problems Matteo, Clare/Galway School* |
| *We were asked at the start to chose a common goal- perhaps we could have returned to the area briefly each time to see how each holding was working in that context. Peter, Clare/Galway School* |
| *More field schools countrywide of different levels of proficiency. Dominic, Clare/Galway School* |
| *Longer time frame. Women* (there were none in this group*). Direct access to soil analysis advice. Pat, Clare/Galway School* |
| *Re visiting each holding at a different time of year to see changes or improvements suggested by the group. Kieran, Clare/Galway School* |

### 3.4.2.9 Field schools as a tool for delivering change to Organic Farmers in Ireland.

All participants responded unanimously "yes" when asked "Do you think the farmer field school concept has a future as a tool for delivering change to Organic farmers in Ireland?"

### 3.4.2.10 The participants' enjoyment of being part of a group.

In response to the statement "I enjoyed being part of the group" four Cork school members "strongly agreed" and one "agreed." Three Clare/Galway members "strongly agreed" and two "agreed" with the above statement.

*Quote " It was a good mix" Pat 4th Clare/Galway school in response to the make up of the group*

*Quote "It has been very sociable I have to say" Pat 4th Clare/Galway field school.*

### 3.4.5 Participants' attitude to organic farming in general

*Quotes " Lifestyle is good, could be a bit slower," Pat 3rd Clare/Galway field school.*

*"I am very positive about the future," Tom 1st Cork field school.*

*" I love it all the same" ( despite the hardship involved in growing), Eileen 3rd Cork field school.*

*"You never have a problem selling it is growing that is the problem" Colum 3rd Cork field school.*

*"That was brilliant" Eileen 1st Cork Field school*

*Written quote "I am uncertain about my own future as a grower," Francis, final questionnaire*

# Chapter Four. Discussion of results

## 4.1 The participants

All the growers that were approached were genuinely interested in the proposal. Those that could not take part for whatever reason were disappointed, but also seemed genuinely sorry that they could not take part.

Most of those that consented to take part were known to the facilitator prior to the study commencing. This is not surprising as there are not very many organic growers in Ireland. What was worthy of note was that most of them had been growing commercially for only two to three years. It also transpired that in the main they came from very different types and size of holding there being only two producers from Cork who were working on a similar scale to each other.

## 4.2 Attitudes to advice and training.

The research question that this section is focussed on is;

*"What are grower's attitudes to current levels of advice/ extension available to them"*.

It is important to find out if there is a perceived deficit of advice and if so how and whether Field Schools may help to redress this. The question about training was included because the two fields are often looked at together and a Field School would potentially cover both areas.

### 4.2.1 Attitudes to advice and training at the start of the process

In the first questionnaire and supplement to it (questionnaire 2) one of the main focuses was on the attitudes to advice at the start of the process. It was interesting to note that the option “other farmers and growers” scored highest in participants’ ranking of initial sources of information. In conversation during schools, the participants were frequently dismissive about the current level of advice available. The fact that “other farmers and growers” ranked so highly was a good indicator as to how the participants would work in the Field School situation. Despite being spread out around the country, growers are very generous and helpful towards others looking for information and advice.

“Books and journals” category was the next best ranked. This was a surprising result. Ten to fifteen years ago, before the internet became more widely available; these two methods of getting advice would have been practically all that was available in Ireland. It is therefore interesting that they are still the most popular, at least amongst this group.

The poor level of advice available to growers in Ireland is something that has stymied the development of the sector for a long time and will continue to do so until it has been addressed (McGloin, 2009). When 70% of participants think that the availability of advice is poor or inadequate it is a sad indictment of the support agencies in Ireland.

The level of training was rated a bit more positively and this could be due in part to recent courses run by the National Organic Training Skillnet (NOTS) and also some training that was done by Charles Merfield in 2007 and 2008.More than half of the responses (60%) thought that the provision of training was inadequate and this is a disappointing figure.

The lack of a horticultural development officer/advisor for the sector has already been noted in the review of literature. Work being done by the Organic Growers of Ireland, a voluntary representative body for organic growers, is focusing on this issue as a key to developing the sector.

In relation to the above, it is no surprise that the preference of the two schools for the delivery of advice is through a professional advisor. This response ranked highest in participants' responses above workshops, farm walks, conferences and the classroom, in that order.

### 4.2.2. Attitudes to advice and training at the end of the process.

Participants were asked a similar question about the most effective method for the delivery of advice at the end of the study but with the inclusion of "Field Schools" as a category. The result was broadly in favour of Field Schools ahead of farm walks and a visit from an advisor.

Having gone through the Field School process, the participants were in a position to make an informed decision on this. There may, however, have been a problem of introducing bias in asking the question at the end of the study while the process was still so fresh in participants' minds. Nevertheless, it can still be seen as an endorsement of the process and could be an indicator that Field Schools may be a tool for delivering advice in the future.

All the participants agreed that Farmer Field Schools could have an impact on the delivery of advice in the Irish Organic horticultural sector.It would be fair to say that if Field Schools were the participants' preferred method of receiving advice, then they would naturally enough think that it could have an impact.

The use of Farmer Field Schools by Teagasc could be used as step on the way to fulfilling its commitment to The Organic Action Plan point 42 "*Encourage the establishment of local horticultural producer groups in the medium term*". A Farmer Field school could be used as a catalyst in starting up producer groups.

### 4.3. Participants' perceived level of ability

The results of this section should be looked at as a very subjective opinion of the participants' own levels of ability before the process started and then again after it finished. These questions were intended to provide further insight into the research question that asked;

*"How would a Farmer Field School serve as a tool to enhance growers' knowledge on a range of issues relating to the day to day running of their farm"?*

Rather than try to look at knowledge per se, it was decided to look at a scoring of the participants' perceived level of ability in certain areas. This is not quite the same as knowledge, but to have the ability one must have the knowledge.

#### 4.3.1 Participants' perceived level of ability at the beginning of the process.

Participants were asked to score their own ability in the various skills required in the day to day business of being a grower. Being a commercial grower is a multi disciplinary occupation, particularly on a small scale, and it means that the grower must have a reasonable level of ability over a large range of skills. The focus of these questions was mainly on what were deemed by

the facilitator to be the five or six most important ones, to establish the level of ability participants perceived themselves as having.

It must be noted here that there was a wide range of abilities represented in the two groups from participants who were only one or two years out of a college, to participants who had been farming or growing for 15 years. For this reason, it would have been impossible to compare one participant with another and the best way of looking at the responses was to look at the perceived changes across the two schools from the start to the end of the study.

At the beginning of the study, only in the two areas of standards interpretation and agronomy, did the participants score themselves as being of average ability.In the four other areas marketing, planning, business management and technical areas, they were close to average.

These ratings were, in effect, the base-line for the study and in asking them again in the third questionnaire, what was looked for was an improvement from this base line. One must bear in mind that there was at least three months between the first and third questionnaire and that it is to be assumed that participants would not remember how they had rated their ability when they came to do it a second time.

### 4.3.2 Participants perceived level of ability at the end of the study

In looking at the difference in scores from the first to the third questionnaire, all participants perceived that their level of ability had improved in the average rating in the same areas as at the start of the process. The exception was in standards, where the Clare/Galway School rated themselves as having deteriorated from a score of 3.8 to 2.8.

This shows that the Field Schools were effective in improving the average of the participants' perceived ability over a number of important skill areas of their business, but not each participant independently. All the areas that were improved upon were a regular feature of the School discussions, but standards was one area that did not feature so much. However, it is difficult to account for a deterioration in ability in the area of standards for the Clare/Galway School.

The range of issues covered during the schools is hard to convey in this thesis. The minutes of the meetings (see appendix 2) give some insight into the variety, depth and detail in all areas of the business of organic horticulture that were dealt with. Experiential learning is very hands-on and practically based from a farmer demonstrating on site the watering system that he is using, to another picking up a hen and showing the other participants an infestation of red mites. It is knowledge that would be impossible to pass on in a class room, and it is all the more persuasive when it comes from another farmer.

The areas most covered in the day to day business of the schools, were marketing, agronomy and technical areas. It is obvious that the issues that the participants are most conversant with will be the issues they covered most during the School. It was mentioned on a number of occasions that the participants who had the least experience stood to gain the most from the process, but it can be equally said that the more experienced participants gained too, but in a different way.

### 4.4 Participants' attitudes to working in groups

Looking at attitudes to working in groups was a way of trying to answer the research question;

*"Is a collective approach to problem solving going to work with people who are often the sole employee of their farm?"*

One of the participants expressed regret at the isolating nature of the work; however, this was not the case with the majority of others. Some participants were in close contact with family members some of whom were working with them as well. In the case of the four participants working for Non Governmental Organisations, the nature of their work was far from isolating as they were dealing with other team members and members of the public on a regular basis.

### 4.4.1 Participants' attitudes to working in groups at the start of the study.

The first questionnaire looked at the participants' willingness to work with other growers. Only one member of the two schools had reservations about working with other growers, he had encountered problems with another grower in the marketing of produce, although this seemed to be the exception in the group.

It was good to see that all the participants were willing to work with other growers as it would have made the study very difficult if there had been any inter-personal problems. As it turned out, there were very few problems of this nature, if any. As the study progressed, the participants became very relaxed and comfortable in each others' company.

The other interesting aspect to their willingness to work with other growers was that only one participant had previously worked with a discussion/producer group. This could have meant that the participants would have been suspicious of working in a group at the start, but this was not the case and the participants were very open to the process.

A figure of 80% of the sample said that they already made use of regular contact with other growers over the course of a season and that of those, 80% found this contact to be beneficial to them. This showed that the participants were open to the kind of trust and open communication that is conducive to the good functioning of the Field School.

### 4.4.2 Participants' attitudes to working in groups at the end of the process.

All participants agreed that having gone through the Field School process, it had changed their attitude to working in groups for the better. However, with only one participant having previously participated in a group, these were not opinions coming from an informed position.

All participants thought the Field School had been "beneficial" and 60% thought it had been "very beneficial". The school also increased confidence in their business and participants agreed that they would try and implement some of the ideas that had arisen when they were the host farm.

Participants' willingness to take part in another Field School and also their readiness to endorse the process to fellow growers was also seen as very positive outcome. The process takes quite a lot of time, even in its truncated format. Over the five months that it was run, it would have taken at least 30 hours out of a participant's schedule. For growers, time is often one resource that is at a premium. When they expressed the opinions that they would do it again, or in the case of the Clare/Galway School that they would like to continue, it showed that they were committed to the concept and that they had gained something from it.

In addition to the above, the Field School contributed towards the following areas in the participants' businesses: networking and efficiency; trouble-shooting; raising awareness and developing business relationships.

All of the participants agreed that they enjoyed being part of their respective group (70% "strongly agreed") and this was clear from the general demeanour of both groups and also the fact that there was good attendance at the schools.

The above are all very positive pointers as to how effective the Field School had been in empowering the participants.They are consistent with the findings of studies done by (Vaarst 2007), (Gallagher 2003) and (Pretty *et al* 1995).

Phillips in his paper "Effective group facilitation" asked did the participants become *"active self directed learners"*. This occurred on a number of occasions where the participants saw it as fit and proper to pass on information they had recently received to the rest of the group. They took control of their own and the groups learning because they thought that the information was that important to the group. This is a very powerful way of delivering advice within a peer group and is something that future Field Schools could use to great effect.

**4.5 Participants' change in confidence and a sense of community.**

This section relates to the research question;

*"Will the Farmer Field School model increase the growers' confidence and deliver a sense of community that may be absent from their everyday work situation?"*

In Questionnaire Three, the participants were asked whether the Field school had increased their confidence in their businesses. The unanimous response of "Yes" was very impressive.

There was also a question in the first questionnaire as to whether the Organic horticultural sector lacked a "sense of community" and 60% of responses thought that it did. There was no follow up

to this question in the third questionnaire. This was an error of omission and means that it is not possible to answer the second part of the research question. Anecdotally, there were the beginnings of a sense of community emerging as the Field Schools developed and if the process had gone on for another six months, this would have probably become even more apparent.

**4.6 Funding issues.**

When the project was in its development stage, the Department of Agriculture Food and Fisheries was approached for funding to help with the costs incurred in the running of the schools. At the time (October 2009), public finances had had severe restrictions placed upon them as a result of the global downturn and there was no funding available.

The cost of the project can be seen in Table 1c in the Results chapter and it would be interesting to see how the costs would compare with other forms of delivering advice such as workshops, farm walks, discussion groups and classroom sessions. One cost that does not arise with Field Schools is the cost of a venue as each host provides this free for each School.

If a case can be made that Field Schools are cost effective ways of delivering advice, there may be more funding opportunities open to them especially in the current economic climate.

**4.7 Impacts of the Field School**

Braun et al looked at the type of impacts that the Farmer Field School concept could have on participants under a number of headings. Those most applicable to this study included the following;

- Change of practice
- Knowledge

- Technology used
- Productivity
- Profitability
- Human and social capacity
- Impacts on human health
- Impact on the environment.

It is interesting to look at these different impacts in the light of this study.

### 4.7.1 Change of practice

The question asking whether participants intended to implement some of the ideas that the group came up with refers to this point. All agreed that they would implement some of the recommendations and this could bring about a change of practice.

### 4.7.2 Knowledge.

A very specific question in Questionnaire Three asked participants if their level of knowledge had changed in specific areas since participating in the field school (point 3.3.2.1).The averages for these responses showed definite changes of knowledge in the marketing and agronomy and soil management.

### 4.7.3 Technology used.

There were a lot of discussions on the use of new technologies, including new precision seeders, bed makers, ridge makers, poly tunnels, watering systems etc. The motivation behind the interest was for increased efficiencies on the holding and a reduction in the manual labour element of the operation.

### 4.7.4 Productivity

The use of equipment that would facilitate increases in scale and therefore increases in productivity was also discussed. For these increases in productivity to be measured the field school would have had to run until the end of this particular growing season to see if the changes that were implemented had any effect on productivity.

### 4.7.5 Profitability.

The impact of the Field Schools on profitability may not be immediate and it could well take time for some of the ideas to be assimilated and put into action. With efficient, new technology and increases in productivity there could be increases in profitability.

### 4.7.6. Human and social capacity

This is one dimension to the field school that was difficult to measure. However, the participants' clear enjoyment in working together in a group and visiting each other's holdings would have had some impact on human and social capacity.

### 4.7.7 Human health.

This is something that the study did not look at and perhaps is more relevant in a developing country context where subsistence agriculture is practised.

### 4.7.8 Impact on the environment

Organic farming generally strives to have a low impact on the environment, but again the investigation of this was not a feature of this study.

### 4.8 Improvements for future groups

There were a number of pertinent comments offered on the question of future improvements in questionnaire three. One idea put forward was that the members of the group should have holdings of similar scale and another that the participants should all be at a similar level of proficiency. In an ideal world, this would be best practice, but in Ireland at the moment, the location of Organic growers is so dispersed that it would mean excessive travelling to get groups together on this basis.

The length of time for the study was also an issue and it had to be pointed out on a number of occasions during the process that, ideally, the time period allotted should be 12 months and that each holding should be visited a second time within that timeframe.

#### 4.8.1 Suggested improvements for future work

In hindsight there are a lot of the component parts of this study that could be improved upon were it to be carried out another time. These include the following:

Re. questionnaires.

- More rigorous research into questionnaire design.
- Trialing questionnaires more extensively before implementing.
- Paying more attention to the methods of scoring questionnaires so as to be able to compare results more easily between questionnaires.
- Encourage more diversity of response by giving more response options

- Looking at how the results of the questionnaire would be statistically analysed when the questionnaire was completed.
- Being careful not to overlap questions or ask the same question twice

Re. facilitation.

- Training in group facilitation techniques
- Paying more attention to the layout of meetings and covering all items on the agenda
- Training in observational analysis
- Facilitator did not use the common goal to good effect.

Re. The participants.

- Sample could be bigger if process longer up to a maximum of eight participants over 12 months would work.
- There could be an end “goal” incorporated into the structure which the Field School leads into, the formation of a producer group or cooperative for example. The Field School could be used as a forum to get all the participants familiar with each other and build up teamwork while focusing on the “goal”.

Geographically if the participants were closer this would make for a more effective process, as there would be less time spent travelling and it could also build a more long lasting sense of community.

**4.9 Facilitator's issues with the field school.**

There were many issues arising from the facilitation of the meetings and as this is one of the most important aspects of the study, they will be looked at in depth. If the Farmer Field School concept is to be of use across the organic sector, or indeed across the farming sector, it is imperative that these issues with facilitation are recognized and dealt with.

*Farmers make better facilitators than extension agents (Gallagher 2006)*

From this statement you might suppose that all that is required is to find a farmer and leave them to facilitate a field school. There is a lot more to running a successful field school than this.

The benefits and problems associated with this study are best addressed by a SWOT analysis

<u>What went well? (Strengths</u>)

- The general running and organization of each school.
- Interaction amongst the participants.
- Timing of meetings on the day.
- Discussion of successes and problem areas.
- The engagement in the process of each of the host participants.
- Participants' taking ownership.
- Facilitator's empathy with the participants.
- The amount and depth of subject areas covered in the meetings.
- Neutral standpoint of the facilitator.

What didn't go well? (Weaknesses)

- The forwarding of agenda and minutes.
- The use of a common goal for each school.
- Facilitator's ability to not offer advice.
- Facilitator's ability to elicit quotes about the process.
- Facilitator's ability to record observations during the Schools.

What might work better in the future? (Opportunities)

- Working with other groups having learnt from these two groups.
- May be easier to work in a sector where the facilitator has less experience e.g. livestock.
- Properly trained facilitator with the ability to use observational analysis.
- 12 month school rather than a 6 month School.
- Maintain focus on the common goal for each School.

What could threaten future work? (Threats)

- Negative word-of-mouth comments about this study.
- Personality clashes within the group
- Funding, or lack of it.
- That participants' would find it not useful and disengage.

Tom Phillips, in his paper Effective Group Facilitation- Farm Discussion Groups, gives pointers to the range of skills a good facilitator should have. This is a long list and it could be argued that no one person could excel in all the skills he suggests a good facilitator need be conversant in.

Phillips gives a number of definitions of what facilitation is;

"*Effective group facilitation is an artful dance requiring rigorous discipline"*

To expand on the above, (Vaarst 2007a)in summing up her thesis, made the point that Field Schools "*are vulnerable to loss of quality (and thus impact) particularly in terms of poor or inappropriate facilitation*" She also makes it clear that "*Facilitators should be kept from giving advice"*.

The second point was very difficult to put into practice and despite best intentions, it would be fair to say that the facilitator was not wholly successful in adhering to this point. That is not to say that he constantly gave advice merely that where he was in possession of information that others were not, he found it very difficult not to pass this knowledge on to the school.

# Chapter Five. Conclusions and Recommendations.

## 5.1 Conclusions

**5.1.1** The participants' attitudes to current levels of advice available to them are very negative. The study indicates that the two main sources of advice currently preferred by growers in this group are other farmers and growers and books and other literature. That said the availability of advice from good professional advisors in the area of organic horticulture is practically non-existent in Ireland.

**5.1.2** The participants expressed the opinion that Field Schools were the best method of delivering advice. This was felt to be valid despite it being asked so close to the finish of the School.

**5.1.3**The participants' perceived levels of ability improved over the duration of the study. This was the collective experience calculated by looking at the average response from each of the two schools. Individually, some participants' perceived level of ability in some of the areas measured improved while some remained the same. There was no real difference between the responses from the two Schools to the various questions and statements and the samples were too small to analyse statistically any difference that there may have been. See appendix 4

**5.1.4** There was a strong willingness to work with other growers, which was evident even before the project began. This attitude was enhanced by the process and this meant that at the end of the study, the participants had no reservations about working in groups and few about participating in another Field School.

**5.1.5** All participants said that they intended to implement some of the recommendations generated when they were the host farm. This would suggest that the information they gained from the other participants was valuable to them.

**5.1.6** The interest shown by the Clare/Galway group in re-convening the school in the autumn illustrates the strong sense of ownership that evolved from taking part in the school and also the sense of fraternity and community. That was also illustrated by the participants' willingness to offer specialist advice where they saw fit. It makes the case for a twelve month process with a follow up visit to each of the holdings rather than a shortened process.

**5.1.7**Participants were happy that there existed the requisite level of trust in the two schools for the process to work. They reported very few barriers to the smooth running of the school and there were no incidences of participants falling out with one another.

**5.1.8** The issues surrounding the facilitation of the schools highlighted in the discussion are of great importance and the training of skilled facilitation personnel is critical in making the best use of this concept.

**5.1.9** Spending time together, sharing ideas and problems with growers involved in similar businesses, is a very enjoyable experience. The diffuse benefits to the larger community may not all be immediately apparent in this study. The benefits of Field Schools should not be underestimated, but looked into further as a cost efficient and effective method of empowering participants and effecting change.

## 5.2 Recommendations for further work.

### 5.2.1 Areas for further research

- A cost benefit analysis of the Field School concept compared to other methods of delivering advice would be one area that would be very useful to investigate for future research.
- A parallel study with livestock or arable organic farmers using the same questions as were used in this study to ascertain whether responses to the process would be as good, better or worse than the two groups in this study.
- A detailed manual for the facilitation of Farmer Field Schools and use of observational analysis to enhance the effectiveness of the process and permit it to be better compared and evaluated.

### 5.2.1. Development of organic horticulture advisory services.

The sector is currently very badly lacking in advisory services of any kind as has been mentioned earlier in this study. If the sector is to develop at all in the next five to ten years, it is of the utmost importance that this deficit be addressed. The current economic climate is conducive to an increase in numbers entering the sector, not least on account of the current boom in domestic gardening. Now that there are fewer well-paid jobs available, organic horticulture is beginning to look more attractive and in Ireland a great many people have the necessary access to land to become the commercial growers of the future

A good number of the pioneer, or early adopters of commercial organic methods were previously interested in and practicing self sufficiency. Whereas ten years ago these innovators required little help to enter the industry, today, those considering this course of action need more help. There is no suggestion that Farmer Field schools are in themselves, the sole answer to addressing this problem, but used in combination with the services of an advisor, a development officer, farm walks and workshops they most certainly have a valuable role to play.

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## Appendix 1 Copies of the three questionnaires used in the Field School study.

**Questionnaire for evaluation at the start of the Field School process**

**Section 1: Details of respondent's background**

1.1) how long have you been growing organic produce for sale? (Years)

1.2) Have you had any formal training in that time? (Yes/No)

Yes ☐ No ☐

1.3) If so did you gain a qualification (Yes /No)

Yes ☐ No ☐

1.4) What was the qualification?.

1.5) Have you availed of any grant aid since you started up?

Yes ☐ No ☐

(If yes please state the name of the scheme and what it was for)

1.6) What was the area (including poly tunnels) of crop production for this year 2009 on your holding?

☐ acres

**Section 2: Attitude to current sources of advice and training**

1.7) How satisfactory do you feel that the level of advice and training opportunities for organic growers in Ireland is? Tick one box in each column.

| | **Advice** | | **Training** |
|---|---|---|---|
| Good | | Good | |
| Adequate | | Adequate | |
| Poor | | Poor | |
| Inadequate | | Inadequate | |

1.8) How would you like to see advice made available to organic growers on a nationwide basis? (Rank all responses 1 to 5 in order of importance1 being the most important)

| | |
|---|---|
| Advisor/Development Officer | |
| Freelance Advisor | |
| Workshops | |
| Farm Walks | |
| Internet forums | |

| Other (Please state) |
|---|
| |

1.9) When you first started growing commercially what was the most important source of information and advice? Rank all responses 1-8 in order of importance 1 being the most important down to 8 the least.

| | |
|---|---|
| Books/magazines and journals | |
| Internet | |
| Government adviser | |
| Organic certification bodies | |
| Commercial consultant | |
| Workshops | |

| | |
|---|---|
| Farm walks | |
| Other farmers and growers | |

| Other (Please state) |
|---|
| |

1.10).Do you believe that there should be free advice for organic growers starting up?

Yes ☐ No ☐

1.11) If free advice were available to you on one particular aspect of your business what area would you be most interested in?

| |
|---|
| |

**Section 3: Level of technical ability of respondents**

1.12).How would you rate your level of ability in the following areas of your business? (Good, Average, Poor, Non existent)

| | |
|---|---|
| Business management, accounts, sales projections, profit ,etc. | |
| Marketing and sales element of your business | |
| Technical areas such as machinery, polytunnels etc | |
| Agronomy/soil management and crop production | |
| Planning/crop planning, forward planning etc | |
| Standards/ interpretation implementation and meaning | |

1.13).Do you have any other areas in your business that you feel that you could improve upon? Please state.

| |
|---|
| |
| |

1.14) Is there an area of your business that you feel would particularly benefit from being discussed in a group situation? Please state.

1.15) Are you confident about the future of your business as a grower?

Yes ☐ No ☐

1.16) What do you think will be the issues that will most impact on your business over the next 10 years?

**Section 4: Attitude to the potentials for FFS /discussion groups.**

1.17) Having been introduced to the concept do you feel comfortable with Farmer Field Schools?

Yes ☐ No ☐

Please score yourself as to your willingness and ability to work with other growers. (Where 1 is very comfortable and 5 is very uncomfortable)

☐

1.18) What barriers do you imagine might hinder the field schools work?

1.19) Have you ever been involved in a producer /discussion group before?

Yes ☐ No ☐

1.20) If so how beneficial do you think the process was?

| | |
|---|---|
| Very beneficial | |
| Quite beneficial | |
| No change | |
| No benefit at all | |

1.21) Do you feel that as an organic grower there is a lack of community within the sector?

Yes ☐ No ☐

**Thank-you for your participation.**

*Please rate the following statements tick one box for each statement*

**2.1)I keep a regular contact with a grower/growers over the course of a season**

☐ 1= strongly agree ☐ 2= Agree ☐ 3=Undecided ☐ 4=Disagree ☐ 5=Strongly Disagree

**2.2)I find this to be beneficial for some aspects of my business**

☐ 1= strongly agree ☐ 2= Agree ☐ 3=Undecided ☐ 4=Disagree ☐ 5=Strongly Disagree

**2.3) I like to ask other growers for advice**

☐ 1= strongly agree ☐ 2= Agree ☐ 3=Undecided ☐ 4=Disagree ☐ 5=Strongly Disagree

**2.4)I would like to make use of a mentoring service.**

☐ 1= strongly agree ☐ 2= Agree ☐ 3=Undecided ☐ 4=Disagree ☐ 5=Strongly Disagree

**2.5)Do you ever experience feelings of isolation as grower?**

☐ Yes ☐ No ☐ Undecided

**2.6)Does this affect your ability to improve your business?**

☐ Yes ☐ No ☐ Undecided

**2.7)What methods of communication do you use? Tick all that apply**

☐ Landline phone ☐ Mobile phone ☐ Text ☐ E MAIL ☐ Letter ☐ In person

Others please state……

**How do you think advice is best dispensed?**

**2.8) through workshops**

☐ 1= strongly agree ☐ 2= Agree ☐ 3=Undecided ☐ Disagree ☐ Strongly Disagree

**2.9) through farm walks**

☐ 1= strongly agree ☐ 2= Agree ☐ 3=Undecided ☐ Disagree ☐ Strongly Disagree

**2.10)through classroom sessions**

☐ 1= strongly agree ☐ 2= Agree ☐ 3=Undecided ☐ Disagree ☐ Strongly Disagree

**2.11)through conferences**

☐ 1= strongly agree ☐ 2= Agree ☐ 3=Undecided ☐ Disagree ☐ Strongly Disagree

**2.12)by a visit to your holding by a professional adviser**

☐ 1= strongly agree ☐ 2= Agree ☐ 3=Undecided ☐ Disagree ☐ Strongly Disagree

**2.13)My business management skills hinder the development of my business**

☐ 1= strongly agree ☐ 2= Agree ☐ 3=Undecided ☐ Disagree ☐ Strongly Disagree

**2.14)I would like be more proficient in the marketing and sales element of my business**

☐ 1= strongly agree ☐ 2= Agree ☐ 3=Undecided ☐ Disagree ☐ Strongly Disagree

**2.15)I am comfortable with the technical side of my business (machinery, protected cropping etc.)**

☐ 1= strongly agree ☐ 2= Agree ☐ 3=Undecided ☐ Disagree ☐ Strongly Disagree

**2.16)I am aware that soil management and agronomy are integral to the long term prospects of my business.**

☐ 1= strongly agree ☐ 2= Agree ☐ 3=Undecided ☐ 4=Disagree ☐ 5=Strongly Disagree

**2.17)Planning is also an important part of my growing operation**

☐ 1= strongly agree ☐ 2= Agree ☐ 3=Undecided ☐ 4=Disagree ☐ 5=Strongly Disagree

**2.18)I like working in a group with other growers**

☐ 1= strongly agree ☐ 2= Agree ☐ 3=Undecided ☐ 4=Disagree ☐ 5=Strongly Disagree

3.1)How would you rate your level of ability in the following areas of your business? (Please enter Good, Average, Poor, or Non existent against each category)

| | |
|---|---|
| Business management (accounts,saleprojections,profit) | |
| Marketing and sales | |
| Technical areas such as machinery, polytunnels etc | |
| Agronomy/soil management and crop production | |
| Planning/crop planning, forward planning etc | |
| Standards/ interpretation implementation and meaning | |

3.2) Has your level of knowledge changed in the following areas of your business since participating in the field schools?

a) Business management, accounts, sales projections, profit;

Improved significantly ☐ Improved ☐ Stayed the same ☐ Diminished ☐ Diminished significantly ☐

b) Marketing and sales element of your business;

Improved significantly ☐ Improved ☐ Stayed the same ☐ Diminished ☐ Diminished significantly ☐

c) Technical areas such machinery poly tunnels etc;

Improved significantly ☐ Improved ☐ Stayed the same ☐ Diminished ☐ Diminished significantly ☐

d) Agronomy soil management and crop production;

Improved significantly ☐ Improved ☐ Stayed the same ☐ Diminished ☐ Diminished significantly ☐

e) Standards interpretation, implementation and meaning;

Improved significantly ☐ Improved ☐ Stayed the same ☐ Diminished ☐ Diminished significantly ☐

3.3)What other areas of your business do you feel the field school process contributed to?

……
……
……
……

3.4)Do you feel that the farmer field school increased your confidence in your business

Yes ☐ No ☐

3.5) Farmer field schools can have an impact on the delivery of advice in the Irish Organic Horticultural sector ☐

1= strongly agree ☐ 2= Agree ☐ 3=Undecided 4=Disagree ☐ 5=Strongly Disagree ☐

5a) If you disagree or strongly disagree, please give a reason

……
……
……..

3.6) I enjoyed being part of the group

1= strongly agree ☐ 2= Agree ☐ 3=Undecided ☐ 4=Disagree ☐ 5=Strongly Disagree ☐

6b) If you disagree or strongly disagree, please give a reason

……
……
……

……
……

3.7) I would like to see the field school continue

1= strongly agree ☐ 2= Agree ☐ 3=Undecided ☐ 4=Disagree ☐ 5=Strongly Disagree ☐

3.8) It would be good to keep in touch with the members of my school now the process is finished

1= strongly agree ☐ 2= Agree ☐ 3=Undecided ☐ 4=Disagree ☐ 5=Strongly Disagree ☐

3.9) I felt that working with other farmers has given me the confidence to effect positive change in my enterprise

1= strongly agree ☐ 2= Agree ☐ 3=Undecided ☐ 4=Disagree ☐ 5=Strongly Disagree ☐

3.10) How effective do you think the process was in addressing the problems that were discussed on your own holding?

……
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…….

3.11) I intend to implement some of the ideas that the group came up with when I was the host of the school.

1= strongly agree ☐ 2= Agree ☐ 3=Undecided ☐ 4=Disagree ☐ 5=Strongly Disagree ☐

11b) If you disagree or strongly disagree, please give a reason

……
……
……
……

3.12) If the opportunity to participate in another field school arose I would be interested in taking part

1= strongly agree ☐ 2= Agree ☐ 3=Undecided ☐ 4=Disagree ☐ 5=StronglyDisagree

3.13) How beneficial overall do you think the FFS process was?

| | |
|---|---|
| Very beneficial | |
| Quite beneficial | |
| No change | |
| No benefit at all | |

3.14) Has taking part in this process changed your impression of working in groups for the better or worse (please tick yes or no)?

| | |
|---|---|
| Yes | |
| No | |

3.15) What barriers do you think hindered the field schools work?

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……

3.16) What do you think could improve the field school process for future groups?

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……

3.17) Was the trust necessary for the process to work evident during the schools (please tick yes or no).

| |
|---|
| Yes |
| No |

3.17b) If your answer is no, what could the facilitator have done to improve that trust?

……
……
……
……
……
……
……

3.18) Please rank the following methods of dispensing advice from 1 to 6 where 1 is the most and 6 the least effective (use each number only once)

☐ Workshops

☐ Farm walks

☐ Classroom sessions

☐ Conferences

☐ Visit from adviser

☐ Field schools

3.19) Do you feel that the field school concept could take the place of one to one mentoring?

……
……
……
……
……

……
……

3.20) Would you recommend the Farmer Field School process to a fellow grower?

Yes ☐

No ☐

3.21) Do you think that the farmer field school concept has a future as a tool for delivering change to organic farmers in Ireland?

Yes ☐

No ☐

Thank-you for taking part in this study I hope that you have enjoyed it and gained something from it. Please post your reply as soon as you have completed it and once again, thanks.

Jason Horner

# Appendix 2

**Minutes of the meeting of the 1st Clare/Galway Field School**

**Monday the 14th of December2009**

**Hosts: Peter and Matteo**

**In attendance; Dominic, Pat, Kenneth, Kieran**

- Growers introduced themselves briefly and went on a tour of the site facilitated by Peter
- Items discussed while outside included “shinkinu” onions grown in a tunnel for seed, seed saving, the evolution of the different gardens, cross pollination problems.
- Potatoes and the following issues relating to them, blight, blight resistant strains and horsetail treatments for same, chitting, orientation of rows, sowing dates, bluestone and how to make a horsetail spray that would stick.
- Other subject areas included garlic, phacelia, seaweed dust and meal, cereal rye, early potatoes, onion white rot and how it arrived, how they diagnosed it, symptoms of white rot.
- We looked at a crop of winter wheat under sown with clover.
- Inside having finished the farm walk Jason made an introduction into the principle functions of the field school.

- All the growers introduced themselves formally to each other while at the same time trying to arrive at a common goal for the group.
- The common goal decided on by the group was to try and focus on “food security” in relation to all the holdings
- Participants filled out  Questionnaire 1
- Discussion ranged over various areas as they came up in the introductions these included, the balance between selling and growing, fair group buying and whether it would work here, getting commercial growers to grow for seed, growing cereals on a small scale, lack of research, lack of interest from Teagasc and building fertility with green manures.
- Introductions and the farm walk took a lot more time than they should have done and Peter pointed out that the group would have to be more rigid and adhere to timings or it wouldn’t get through the agenda fully.
- Nobody had any solution to the problem of the white rot except to look at the possibility of some kind of stimulant that would cause the rot to activate without there being a host for it which would cause it to die off, also talk of breeding resistance to the white rot.
- On the potato issues there were various ideas that may help;
- Grow in tunnels
- Skip main crop and grow early and late
- Get seed cleaned if there was a virus
- Use tunnels to grow crops before the main blight season
- Sow as early as possible out side
- Boil rather than soak the horsetail to increase the adhesive capacity of the spray
- A short bit of feedback and the meeting was wound up

- Date for the next meeting was set for 2.30pm Monday the 18th of January venue Kieran's.

# Appendix 2

**Minutes of the 2nd meeting of the Clare/Galway Field School,**

**Tuesday 18th of January 2010,**

**Host Kieran.**

**In attendance; Peter, Matteo, Pat**

**Apologies; Dominic**

- Kieran gave a background to the centre with a bit of it's history, how long he had been there the courses that run there and his role in the garden and with regards to teaching.
- Kieran gave us a guided tour of the gardens and a wide ranging discussion followed touching on all the following
- Soil fertility, green manures and their benefits, FYM and the difficulties of obtaining a good supply, rotations, composting, the layout of the cropping areas and the shade of the surrounding trees.
- Drainage and soil type's depth and structure. We looked at crops sown in the tunnels, discussed marketing, club root and varieties of Brassica's that are resistant to it.
- We moved into the orchard and looked at varieties of fruit trees, pruning, management of the trees and pest and disease issues, grafting new varieties on to mature trees to introduce dessert varieties and hormones in liquid seaweed in relation to fruit crops.

- We looked at the gooseberries, blackcurrants and raspberries and the management issues they presented, the need to thin out the existing planting and probably to move them to a new location
- Kieran showed us his composting system using grass cuttings and turning on a regular basis to make good compost with no weed seeds in it
- The goal for the centre was “To show, display and demonstrate how people can grow their own food” and Kieran felt that it had been fairly successful in this regard thus far. It had impacted on the surrounding area in a positive way and all agreed that this was good.
- We discussed education, the Grow It Yourself idea, and the educational needs of commercial growers.
- The success of the centre could in education and training could be seen by the number of people that had been through its doors and used its facilities.
- As far as crops were concerned tomatoes were seen as the best and we looked at varietal choice, liquid feeding, ground preparation, where to get seeds.
- Problem areas were seen as the Orchard and a maintenance plan for that and pest and disease issues and then also the shade of the surrounding trees, drainage and to a lesser extent soil fertility.
- Discussion then ranged on appropriate green manures for building fertility (field beans and rye?). Peter talked about possibly incorporating the poultry into the system for fertility and from a pest and disease point of view; also there was the possibility that they could incorporate the green manure. He also suggested staggering the pruning over say 3-4 years to reduce the workload in any one year.

- Pat asked whether it was possible to incorporate more land in the rotation and leave the existing garden to fallow a while. Also there was the suggestion that the areas of grass could be used for the garden or the hens.
- Matteo suggested drawing up a map of what varieties were where in the orchard so that a plan for pruning etc could be drawn up and suggested that grafting on to the existing trees might be an option.
- Kieran was happy with all of the suggestions and would be happy to implement some he said with the caveat that the implementation of decisions were not necessarily in his hands.
- Questionnaire Two was filled in and we finished the meeting talking about suitable pepper varieties for the Irish climate and seed saving of the same.

Next meeting was arranged to take place at Pat's at 2.30pm on Monday the 22nd of February

# Appendix 2

**Minutes of the meeting of the 3rd Clare/Galway Field School**

**At Pat's farm, on Monday the 22nd of February**

**In attendance; Dominic, Peter, Kieran, Matteo**

- Pat showed us the garden and his poly tunnel
- Matteo gave us an account of the Biodynamic seed saving workshop that he attended in England with Peter
- Pat took us on a tour of his holding 170 acres of which 40 were either already in or being planted with forestry at the moment
- One of his main concerns was the increase in the number of rushes in the last few years; this led the discussion to possible causes and remedies.
- Compaction from silage machinery, extremely wet weather, type of stock (cows) and remedies lime, sub soiling, drainage, different stock,(sheep) and rotation and reseeding as part of a mixed farm system were all looked at.
- We looked at the new land that will be planted with broadleaf trees.
- Moving to the livestock shed we saw how the animals were bedded, segregated etc

- We also looked at Pats new shed complete with 1965 combine harvester, grain store and tractor powered rolling machine for grain.
- This led to discussion on varieties of oats (barra), how they were dried, sown, weed control in the crop, why there was no straw and what was done with it ( baled and fed to cattle weeds, grass and all). There was also talk of whole crop silage, sowing and harvesting dates for the oats grown last year.
- We continued on the tour to the 4 acre field which had had oats in last year. This field looked in much better heart than the one on the other side of the hedge and there were fewer rushes. Pat explained that he will grow oats again in the same field this year.
- There followed a discussion about the merits and otherwise of growing potatoes.
- For breaking in ground, as part of a arable grass rotation, the kind of kit required and the market for organic potatoes. Also suitable varieties, how to avoid blight and the possibility of getting someone to grow veg on a field scale on Pats land
- Pat said that it was his hope that he will move towards a more mixed farm over the coming years with a greater diversity of stock and arable and vegetable and green manure crops to break up the rotation.
- From there we moved into Pats house and out of the freezing cold day.
- Pat highlighted his goals saying that after 15 years farming there, another 15 years might be enough to get things how he wanted them. He wants everything to work better together with more diversity.
- There was a brief discussion about the provision of advice available to the likes of Pat which he described as pretty much non existent, but that there were more answers now than there were 5-10 years ago.

- Time and labour were seen as barriers to the development of the farm, that and getting the balance of the various enterprises.
- Soil fertility was a problem area
- Dominic recommended more use of green manures and lime
- Kieran recommended looking at other similar enterprises that Pat could use as a model, also soil analysis and tunnels rather than field scale crops
- Matteo spoke of Laverstoke Park soil analysis, rotations for dealing with the rushes, legumes for fertility building and an analysis of how change in land use will affect the amount of stock the farm can carry.
- Peter spoke of the huge potential that the farm had, to start small and observe the changes. Also doing a course in organic horticulture may lead to more confidence in growing crops. Also the potential of fodder crops.

# Appendix 2

**Minutes of the meeting of the 4th Clare/Galway field school**

**on the 22nd of march 2010 at Dominics**

**In attendance: Pat, Kieran, Peter**

**Apologies: Matteo**

- Started with a discussion about carrot root fly and at what height it occurs above sea level, Dominic is at 800ft above sea level and still has a problem with it.
- Dominic introduced us to how the holding was laid out in two parcels either side of a quiet country road.
- The group looked at a piece of land that Dominic had reclaimed on one side of the road.
- Looked at two different green manures landsberger mix ( Perennial ryegrass clover and vetch) and cereal rye, talked about incorporating it with geese, using farm yard manure to get them going in the autumn and then liming at the time of incorporation in the spring.
- We looked at apples trained as espaliers for saving space, Peter recommended keeping on top of the pruning.
- There was surprise at some cabbage that had survived the severe weather and 2 foot of snow and was nearly ready to harvest

- Talked about selling the cabbage at this time of year
- Dominic talked us through his rotation for this piece of land
- Discussion followed on the lapse in standards that did not require manure to be GM free, and then we discussed seed saving and Genetic Modification and discussed how the whole organic system was based on trust.
- Dominic talked of the advantages/disadvantages of a south facing slope.
- We moved back across the road to the poly tunnels starting with the propagation tunnel.
- Dominic showed us the hot beds germinating, onions, cabbage, peppers and a special one at a lower temperature for germinating lettuce.
- Discussion covered optimum size of transplants, pricking out, germination rates, varieties, and health of plants, multi sowing, storing seeds and harvesting salad straight out of trays. Also tomatoes and varieties, watering regimes and whether they should still be on heat or not(third week in March).
- We moved on to the second tunnel and there was a brief discussion on the cost of certification.
- Then we looked at cost of tunnels and grants and the logistics of putting up second hand tunnels.
- On the crops everyone was impressed with the quality and earliness of a lot of the produce, peas, carrots, beetroot, lettuce, onions, leeks and salad leaves.
- Sowing dates of the above were discussed as well as pest issues such as carrot root fly, leatherjackets and disease issues and rotations, notably, club root.
- Dominic demonstrated his lay flat hose watering system which was very impressive and good value.

- We saw carrots just germinating
- There was talk about wind breaks for tunnels and the most suitable plants to use and the logistics of using a second hand tunnel

- Then we moved back inside to Dominic's mobile and talked about the following
- Soil analysis, soil biology, tissue analysis
- Dominic's goal for the holding was stated as having " produce all the year round to sell"
- The group talked about when he could have produce and when it was difficult to have it. Dominic stated that with more land outside for staples he could have produce for longer.
- His success story evolved around his outdoor patch and how that had gone from the start and also the benefit of green manures farmyard manure and liming on this land.
- There was discussion on the pH of the soil
- The problem areas were seen as continuity and also the problem of knowing what he will have when and then what will sell. Also whether it was worth while buying in produce or not?
- Kieran suggested that with all the tunnel area that he would be better off just producing the higher value crops and that Dominic could invest in storage for vegetables such as a cold room.
- Peter suggested the incorporation of animals onto the holding.
- We talked about marketing, Pat suggested expanding Dominic's box sales, also labour and how to avail of that( woofers, students etc) Kieran asked was there courses that Dominic could do to help him in areas that he wanted more knowledge in and Pat suggested that Dominic would be well placed to give courses on his holding.

- Everyone was well impressed with Dominic's set up bearing in mind that this would be his second season selling and he already had a lot of produce to sell
- The meeting wound up with a few comments on the process and Questionnaire Three for the participants to fill in at their leisure.
- There was an interest in re convening in September to re visit the holdings and see what impact the field schools had made on each of them.

# Appendix 2

**Minutes of the meeting of the 1st Cork Field School**

**9.30am on 30th of November 2009**

**Host ; Kitty**

**In attendance; Tom, Colum, Eileen and Francis**

- A brief background to the working of the field school was given
- Members introduced themselves while at the same time trying to tease out what would be a common goal for the group
- The theme that seemed to figure most and was accepted by consensus was "financial efficiency" of each growers holding.
- Participants filled in a Questionnaire 1
- Kitty introduced us to the centre and the philosophy behind it.
- A field walk was conducted by Kitty and a wide ranging conversation ensued covering the following items, stocking levels, allotments, CSAs', seeders, mypex(groundcover),weeding, thinning, carrot fly, sowing dates, drills or beds,

compaction, green manures, docks, rotations, celeriac, bare root transplants, sprouts, salad bags, purple sprouting, slugs, caterpillars, winter onion varieties, seeds, celery.

- Kitty elaborated on the success story for the centre, bare root transplants, leeks and purple sprouting.
- Problem areas were discussed, weeds, thinning of crops and ground preparation (avoidance of compaction).
- Suggestions from the group included on weeds, stale seed beds, flame weeding, rotations, use of ground cover for certain crops.
- On thinning, precision seeders, graded seed.
- On ground preparation, growing on drills, sub soiling.
- A short bit of feedback and the meeting was wound up
- Next meeting to be held at Colum's on Tuesday the 26th of January at 9.30 am (bring coats and wooly hats it will be very cold!)

# Appendix 2

**Minutes of the meeting of the 2nd Cork field school**

**at Colum's**

**on Monday the 26th 0f January 2010**

- We started by looking at a recent soil analysis of Colum's holding and he explained to the group what the problems were that the analysis has shown up.
- There was a brief discussion about the interpretation of standards by inspectors and the communication of changes in standards by certification bodies.
- Debate on the Genetically Modified content or otherwise of farmyard manure and whether rogue genes could pass through animals systems, be composted and incorporated into the soil and still remain intact.
- We moved outside into a field that had had a rye crop growing in it last year.
- Conversation ranged from what Colum would plant in this field, how he would prepare it, the use of plastic on beds, the problem of couch grass and how to deal with it.
- The discussion then went into marketing, Colum had researched what Supervalu (supermarket chain) were buying ( Broccoli and Carrots),he talked of crops he could grow (lettuce under contract). Also the vagaries of the changing market at the moment,

losing 2 restaurants, the ups and downs of the local Farmers' market, the problem of new competition, the problem of trying to fit a second market into the week and the possibility that Supervalu may take local produce.

- Colum reaffirmed his scepticism that growing produce can provide an income (he has a second operation selling organic broilers that keeps his veg operation going).
- Discussion moved on to rotations, and how it may fit for Colum's brother to grow grain on Colum's land as he farms the neighbouring farm as organic arable.
- We looked at an area of land that is not being used (below the hen shed) and gave suggestions as to what Colum could use it for. These ranged from bio mass willows to fruit trees and nut bushes.
- Colum showed us a tunnel that had been recently badly damaged by wind and explained how he hoped to cover it again in a different way (using one rather than multiple sheets of plastic).
- The talk then moved over a number of diverse areas, covering compost, rhubarb beds, cape gooseberries, tomato varieties, courgette successions, peas, mange tout, French beans and different types of sowing compost.
- We looked at a seed sowing machine, discussed module sizes, talked about financial efficiency and how if you were scaling up production the seed sowing machine would be very useful
- Moving outside we looked at some wheat that the frost had killed, the effects of sub soiling, green manures and talked about the benefits of growing on ridges when soil depth is lacking, and the crops that Colum could grow on ridges.

- Tom asked about anyone's experiences with "easy leaf lettuces" and the group discussed salad bags, prices of same and margins on cut leaf lettuce.
- We moved inside again and Colum re iterated his goal for the holding which was composting and a better understanding of the soil both of which he seemed to be well on the way to engaging with.
- His successes were outlined as good tomatoes and good lettuce, however he admitted that his Brassica's were not so good. The good tomatoes were attributed to regular use of liquid seaweed.
- Two problems that Colum was confronting was what machinery he required to grow crops on ridges and what crops were suitable for this method of cultivation.
- The other problem was the difficulty of growing spinach and leaf beet and the issue of leaf spot on these crops. It was suggested that he used seaweed meal to address deficiencies in trace elements particularly boron. Another problem was flea beetle and Colum intended to try using fine meshed fleece to keep this at bay.
- The participants filled in the Questionnaire number two and the meeting was brought to a close.

A date was arranged for the next school which was to be at Eileen's on 1st of March.

## Appendix 2 Minutes of the 3rd Cork Field School

**at Eileen's**

**on Wednesday the 24th of March 2010**

- Conversation centred on the IOFGA certification body and what is happening there. As Kitty is on the board of Directors there were some direct questions as to what was going on.
- There followed a discussion about the difference in implementation of the standards by the two Irish certification bodies
- There was a bit of chat about the taste quality of a certain large growers produce and various differing opinions of same. Eileen and Tom buy produce in from the same grower and have no problems with it
- Eileen introduced her holding giving us the size and the time that she has been growing here and also her background and the focus of her business which is growing vegetable and herb transplants for sale on her market stall
- Various questions ensued revolving around the size of the market, the price Eileen charges for plants, how many plants are sold in a deal, different markets, packaging and displaying of plants. Also about labels, whether to advertise the produce as organic (Eileen is in conversion) and with all the different ideas that she has, which should she focus on.

- Eileen mentioned that her sister who is studying organic growing at the moment will also be involved in the business and they will divide market days between them in future
- Tom and Colum mentioned other things Eileen could be selling strawberries in hanging baskets, courgettes tomatoes and cucumbers came up, as did later on sweet corn, wheat grass, peas, sprouted seeds, cut flowers, nettles, wild garlic and artichokes.
- There was a question whether Eileen would be selling in bulk to commercial growers but for the moment she was happy just to sell to people growing their own vegetables.
- We moved outside to look at the garden and Colm looked at a sick hen that had a case of red mite on her. He showed this to the group which was useful as three other members including myself all keep poultry.
- We looked at the frame for a new tunnel, hot beds, all the different seedlings and talked about various pests, mice slugs and how best to keep them at bay.
- Discussion moved to presentation of plants, packaging, how to sow stuff so that it presents well and the economics of producing quantity.
- Eileen expressed a desire to move away from the use of plastic and to this end had purchased a blocker and there was also a mention of recycling cardboard for use in packaging and then maybe lettuce bags to hold plants in.
- Ideas were given as to the best types of shelving to keep plants off the ground and make maximum use of space.
- There was a bit of a debate about how to increase sales on a market stall by offering a good service and advice on cooking planting times etc.
- There was agreement that there is more to it than just turning up with someone mentioning that you have to be a bit of a “showman”.

- Colm gave a beginners guide to growing wheat grass.
- There was a chat about changing standards on manure and the increased availability that this will create.
- Eileen felt that the success of her business lay with the transplant business
- Problem areas centred around the physical nature of the work and the orientation and altitude of the holding the second of which was unchangeable.
- Eileen did mention the idea of moving to Co. Clare where she would join forces with a friend from college.
- Responses from the group to the problems centred on trying to arrange the layout of the enterprise to make it as efficient as possible, using wheelbarrows roadways and getting the van as close as possible to the plants.
- Francis suggested drawing up a plan as to where everything should go
- There was a suggestion to use a mobile electric fence for the hen run
- Colm recommended writing down everything you do in a week to see what time is put into different tasks and to try and make efficiencies from there.
- Francis mentioned the solitary nature of the work
- The participants discussed the downturn in certain farmers markets where others were still doing OK; definitely some markets are getting saturated.
- Colm mentioned the initiative that he was working on with Supervalu supermarkets and what he is going to supply this year. He went through the prices that he was going to be supplying at. The buyers were also looking for plants and herbs
- Tom talked about the commercial reality of growing produce and how every thing has to look the part despite the producer's ethics, "there is no excuse for poor product."

- The meeting was wound up and the date set fro the next meeting to be held at Toms on the 12th of April at 3.30pm

# Appendix 2

**Minutes of the 4th Cork Field School held at Tom's**

**on Monday the 12th of April 2010**

- Tea was the first item on the agenda followed by a discussion about how busy people were especially as the weather was so good.
- There followed a discussion about what people had managed to plant so far this season, potatoes, strawberries and onions.
- Tom gave a quick beginners guide to planting/managing cold stored strawberry runners
- We then moved on to Farmers' markets and how they are performing in the area. What people are buying and how Tom is surviving the recession (by doing an extra two markets a week). There was also talk about the consumer psychology at the moment, various problems with markets, how the recession is affecting markets in general and which stalls are doing badly ( the cake bakers).Also talk of what type of customers had disappeared.
- There was an enquiry from Tom as to where he might get piglets?
- Tom queried the school as to how big growers should get (where do you stop, expanding) especially as his business is going well.
- Tom said that despite the downturn growers should stand firm on prices and not start to cut them
- There was talk about the price of eggs and the price of hen feed
- " I have absolutely no problem selling anything, it's the growing that is the problem" Tom

- He outlined his main problem as being " not enough time and not enough stuff (produce)"
- Scale is a problem, doing too many markets, trying to keep costs down and he thinks that automation is the key to efficiency
- His success story is his ability to sell his produce, and he believes his technique for selling is a big asset to his business this backed up by Kitty.
- For that reason he would not entrust the selling of his produce to anyone else and believes that it is a very specialist thing to be able to do.
- There followed a discussion on WWOOF ers ( willing workers on organic farms)
- The group then discussed the merits of employing workers and the fact that you need to be turning over a large amount of extra revenue to afford to pay for help.
- Eileen mentioned a farm she knows where they get agricultural students to work ( for a basic pay ) every summer
- Tom would like to expand his area under plastic and is considering a triple span tunnel
- He gave us the low down on the enterprises in which he is involved, veg, livestock (pigs and broilers and laying hens) processing jams chutney etc and as a side line making market stalls.
- From here the tea finished we moved outside and had a walk around the holding.
- Tom showed us his propagation tunnel, herbs in pots , different ways of propagating and we talked about different varieties
- We saw a new batch of day old broilers and Eileen recounted how much happier her hens were since she hosted the field school and dealt with the red mite.

- We looked at the economics of strawberries from inside and out, watering systems for the tunnels, indoor potatoes, rotations for tunnels, and Tom’s push seeder.
- There was also a discussion on tunnels and their susceptibility to wind.
- We moved on to outdoor crops and the onions that Tom was in the process of planting, spacing weed management, variety, drying, storing.
- Carrot root fly, the composting area and the use of the biodynamic calendar
- Colm recommended getting seed trays off the ground
- Kitty talked about the possibility of box schemes and restaurants
- Tom wistfully talked about the possibility of taking some time off this summer
- The participants were given Questionnaire Three to fill in and post to the facilitator in their own time.
- The meeting was brought to a close.

# Appendix 3

## Sample agenda

1st meeting of the Cork Field School to be held at Kitty's

At 9.30am on Monday the 30th of November 2009.

AGENDA

1. Background to the Farmer Field School concept
2. How it works
3. Introductions
4. Consensus on a common goal that the entire group can sign up to
5. Questionnaire
6. Kitty's introduction to the Centre
7. Field walk
8. Coffee/ chat
9. The goal for this holding
10. The success story
11. Identification of 2 problem areas
12. Questions to clarify the problem area
13. Evaluation and suggestions from the group, treating each problem in turn
14. Summing up from the host farmer choosing what they think are the best options
15. Commitment to try best options in the coming season
16. Feedback on the day
17. Time, date and place for next meeting

# Appendix 4 Statistical analysis of the results using Chi squared from the participants rating of their level of ability at the start and the end of the process.

Statistical analysis using the Chi squared formula of the participants' rating of their level of ability in aspects of horticulture. The ratings were paired good/ average and poor/ non existent for the purpose of the analysis.

Agronomy/ soil management and crop production

| **Observed Results** | Good/Av | Poor/non Exist | Totals |
|---|---|---|---|
| Questionnaire 1 | 8 | 2 | 10 |
| Questionnaire 3 | 8 | 2 | 10 |
| | 16 | 4 | 20 |

| **Expected results** | Good/Av | Poor/Non Exist |
|---|---|---|
| Questionnaire 1 | 5 | 5 |
| Questionnaire 3 | 5 | 5 |

Chi Squared Calculation

| | Good/Av Q1 | Good/Av Q2 | Poor/NE Q1 | Poor/NE Q2 |
|---|---|---|---|---|
| Observed | 8 | 8 | 2 | 2 |
| Expected | 5 | 5 | 5 | 5 |
| O-E | 3 | 3 | -3 | -3 |
| $(O-E)^2$ | 9 | 9 | 9 | 9 |
| $(O-E)^{2/}E$ | 1.8 | 1.8 | 1.8 | 1.8 |
| Sum of $(O-E)^2/E$ | | 7.2 | | |

A Chi squared value of 3.84 or above is needed for a significant difference at probability of 0.05, so the difference between questionnaires for this question is significant.

# Appendix4

Planning
crop
planning and
forward
planning

| **Observed Results** | Good/Av | Poor/non Exist | Totals |
|---|---|---|---|
| Questionnaire 1 | 7 | 3 | 10 |
| Questionnaire 3 | 9 | 1 | 10 |
| | 16 | 4 | 20 |

| **Expected results** | Good/Av | Poor/Non Exist |
|---|---|---|
| Questionnaire 1 | 5 | 5 |
| Questionnaire 3 | 5 | 5 |

Chi Squared Calculation

| | Good/Av Q1 | Good/Av Q2 | Poor/NE Q1 | Poor/NE Q2 |
|---|---|---|---|---|
| Observed | 7 | 9 | 3 | 1 |
| Expected | 5 | 5 | 5 | 5 |
| O-E | 2 | 4 | -2 | -4 |
| $(O-E)^2$ | 4 | 16 | 4 | 16 |
| $(O-E)^{2/}E$ | 0.8 | 3.2 | 0.8 | 3.2 |
| Sum of $(O-E)^2/E$ | | 8 | | |

A Chi squared value of 3.84 or above is needed for a significant difference at probability of 0.05, so the difference between questionnaires for this question is significant.

18.

19.

# Appendix

Technical areas, machinery and poly tunnels

| **Observed Results** | Good/Av | Poor/non Exist | Totals |
|---|---|---|---|
| Questionnaire 1 | 8 | 2 | 10 |
| Questionnaire 3 | 8 | 2 | 10 |
| | 16 | 4 | 20 |

| **Expected results** | Good/Av | Poor/Non Exist |
|---|---|---|
| Questionnaire 1 | 5 | 5 |
| Questionnaire 3 | 5 | 5 |

Chi Squared Calculation

| | Good/Av Q1 | Good/Av Q2 | Poor/NE Q1 | Poor/NE Q2 |
|---|---|---|---|---|
| Observed | 8 | 8 | 2 | 2 |
| Expected | 5 | 5 | 5 | 5 |
| O-E | 3 | 3 | -3 | -3 |
| $(O-E)^2$ | 9 | 9 | 9 | 9 |
| $(O-E)^{2/}E$ | 1.8 | 1.8 | 1.8 | 1.8 |
| Sum of $(O-E)^2/E$ | | 7.2 | | |

A Chi squared value of 3.84 or above is needed for a significant difference at probability of 0.05, so the difference between questionnaires for this question is significant.

20.

21.

# Appendix 4

## Business management accounts, sales projections and profit

| **Observed Results** | Good/Av | Poor/non Exist | Totals |
|---|---|---|---|
| Questionnaire 1 | 4 | 6 | 10 |
| Questionnaire 3 | 6 | 4 | 10 |
| | 10 | 10 | 20 |

| **Expected results** | Good/Av | Poor/Non Exist |
|---|---|---|
| Questionnaire 1 | 5 | 5 |
| Questionnaire 3 | 5 | 5 |

Chi Squared Calculation

| | Good/Av Q1 | Good/Av Q2 | Poor/NE Q1 | Poor/NE Q2 |
|---|---|---|---|---|
| Observed | 4 | 6 | 6 | 4 |
| Expected | 5 | 5 | 5 | 5 |
| O-E | -1 | 1 | 1 | -1 |
| $(O-E)^2$ | 1 | 1 | 1 | 1 |
| $(O-E)^{2/}E$ | 0.2 | 0.2 | 0.2 | 0.2 |
| Sum of $(O-E)^2/E$ | | 0.8 | | |

A Chi squared value of 3.84 or above is needed for a significant difference at probability of 0.05, so the difference between questionnaires for this question is not significant.

# Appendix4

## Marketing and sales element

| **Observed Results** | Good/Av | Poor/non Exist | Totals |
|---|---|---|---|
| Questionnaire 1 | 8 | 2 | 10 |
| Questionnaire 3 | 9 | 1 | 10 |
| | 17 | 3 | 20 |

| **Expected results** | Good/Av | Poor/Non Exist |
|---|---|---|
| Questionnaire 1 | 5 | 5 |
| Questionnaire 3 | 5 | 5 |

Chi Squared Calculation

| | Good/Av Q1 | Good/Av Q2 | Poor/NE Q1 | Poor/NE Q2 |
|---|---|---|---|---|
| Observed | 8 | 9 | 2 | 1 |
| Expected | 5 | 5 | 5 | 5 |
| O-E | 3 | 4 | -3 | -4 |
| $(O-E)^2$ | 9 | 16 | 9 | 16 |
| $(O-E)^{2/}E$ | 1.8 | 3.2 | 1.8 | 3.2 |
| Sum of $(O-E)^2/E$ | | 10 | | |

A Chi squared value of 3.84 or above is needed for a significant difference at probability of 0.05, so the difference between questionnaires for this question is significant.

# Appendix 4

Standards
interpretation
implementation
and meaning.

| **Observed Results** | Good/Av | Poor/non Exist | Totals |
|---|---|---|---|
| Questionnaire 1 | 7 | 3 | 10 |
| Questionnaire 3 | 8 | 2 | 10 |
| | 15 | 5 | 20 |

| **Expected results** | Good/Av | Poor/Non Exist |
|---|---|---|
| Questionnaire 1 | 5 | 5 |
| Questionnaire 3 | 5 | 5 |

Chi Squared Calculation

| | Good/Av Q1 | Good/Av Q2 | Poor/NE Q1 | Poor/NE Q2 |
|---|---|---|---|---|
| Observed | 7 | 8 | 3 | 2 |
| Expected | 5 | 5 | 5 | 5 |
| O-E | 2 | 3 | -2 | -3 |
| $(O-E)^2$ | 4 | 9 | 4 | 9 |
| $(O-E)^{2/}E$ | 0.8 | 1.8 | 0.8 | 1.8 |
| Sum of $(O-E)^2/E$ | | 5.2 | | |

A Chi squared value of 3.84 or above is needed for a significant difference at probability of 0.05, so the difference between questionnaires for this question is significant.

# Appendix 5 Sample letter sent by e-mail to prospective participants.

Leen
Rathclooney
Crusheen
Co. Clare
11th of November 2009

Dear Grower,

I am a third year student doing a Masters in Organic Farming by distance learning at the Scottish Agricultural College, Aberdeen. Most of you either know me or have met me in the past and will know me as a grower. For my Masters thesis I intend to set up a pilot project studying the benefits of discussion groups for Irish Organic Growers. I want to set up two groups both comprising 5 growers in two different parts of the country.

The idea behind the discussion group is that it will be run as a Farmer Field School and as such will take place on each of your holdings in turn over a period of months. I am looking for 5 growers to make up the group, hopefully within a 1-hour drive of each other. We will then hold a half-day session on each growers' holding where they will host the day and the focus will be on their operation, with input from the rest of the group. The host will set the agenda for their farm and so the focus can be on any thing that is going well or that they would like to work better, from marketing to transplants, compost to fertility.

From the outset the group will also try and set a common goal that the whole group can work towards and which will ultimately be of use in the development of their businesses. Participatory learning is a powerful tool and working together in a group like this can be very rewarding and effective at problem solving. A lot will depend on the energy that people put into it.

I am currently looking for funding for costs for this project but as you can imagine at the moment that is a big ask. If I don't secure funding and people are willing to contribute in the region of 50 euro each that would be enough to complete the project.

I will act as coordinator and facilitator of the discussions, organize the meetings and guide the group through the process. A questionnaire at the start and one at the end will be all the paperwork required. Each meeting will run for 3 and a half hours on a day that is suitable for all, and take place every 3-4 weeks for the duration until all 5 holdings have been have hosted a meeting. I would hope to start sometime later this month. Please let me know what you think and whether or not you would be interested in taking part.

Yours sincerely,

Jason Horner

Tel 0656827460
Mob 0876454120