



**Base Ireland Presentation to Discuss Conservation Agriculture to the Select Committee
on Agriculture, Food and the Marine- Tuesday May 15th 2018**

Chairman, Deputies and Senators on behalf on Base Ireland I wish to express our thanks for the invitation to speak to you today about conservation agriculture.

Base Ireland is a group of progressive farmers and agronomists with the aim of adopting, developing and the implementation of conservation agriculture under Irish conditions. Base Ireland members are currently farming close to 9500 hectares across the island of Ireland. The average age is 37 years old across our current 60 members.

Conservation agriculture is based on 3 key principles

- 1) Minimum soil disturbance
- 2) Permanent soil cover with residues and living plants
- 3) Diverse crop rotations and the use of cover crops

The arable sector in Ireland has been struggling for the last number of years with low margins and difficult weather. The nature of growing arable crops means the work is very seasonable and vulnerable to the weather and climate. Our climate in Ireland provides very favourable conditions for the growth of many crops. Our average yields are among the highest in the world, however this benefit also has large drawbacks including

- Soil moisture levels are often at sub-optimal levels during the main windows of planting and harvesting such as has been experienced last harvest and subsequent sowing periods in both autumn and spring.
- Our temperate climate allows pests and diseases to survive over the winter in the absence of prolonged cold periods.
- Our high yield system is dependent on large levels of imported artificial fertilizers to push crop yields.



The Food and Agricultural Organization (FAO) have described conservation agriculture as the best bet for a sustainable and productive agricultural system. It is practiced on over 100 million hectares worldwide and this figure is growing every year. Where conservation agriculture has been adopted it has proven its benefits to farmers, consumers and the wider environment.

As a group we feel there are two main barriers to more widespread adoption of CA.

Firstly, the concepts and principles of conservation agriculture are counterintuitive to many farmers and contradict much of what has been accepted as best practice over the years. While intensive cultivation and high chemical input farming delivered in the short term, farmers are now finding that system is beginning to struggle. A change of mind set is needed steer farming towards a more sustainable model which puts a greater emphasis soil health and regeneration.

Secondly there is a distinct lack of knowledge about CA, its benefits and ways to successfully practice this system. The lack of support from research organizations across the globe has created a farmer driven approach to solving their own problems. BASE Ireland are on a small scale to improve this situation but a national coordinated effort to research and implement effective CA would deliver massive benefits to the both the farming economy and the wider environment.

We were invited to speak to you today about CA and its potential benefits and the opportunities it offers. We believe it offers a shining light to the arable and livestock sectors at a time when margins are falling and the number of family farms is reducing.

CA offers a large number of benefits to the farmer, the environment and the wider community. These benefits include

- 1) Cease and reverse the decline in soil health
- 2) Reduced soil erosion, soil maintains structural integrity 365 days a year
- 3) Reduced nutrient & soil loss into watercourses (soil becomes a natural water filter)
- 4) Increase in soil life from earth worms, beetles and other beneficial creatures

- 5) Carbon sequestration through increased soil organic matter
- 6) CA farms provide improved habitats for all forms of wildlife
- 7) Reduced dependence on insecticides, nature's predators are allowed to prosper
- 8) Reduced use of Diesel, wearing metal, artificial fertiliser – Lower carbon footprint
- 9) CA model maintains productivity but delivers more from less
- 10) Increased family farm viability

As the main objective of agriculture is the production of food, changes in pest and weed management become necessary with CA. Burning plant residues and ploughing the soil is mainly considered necessary to control pests, diseases and weeds. In a reduced tillage system based on mulch cover crops and biological tillage, alternatives have to be developed to control pests and weeds. Integrated Pest Management becomes mandatory. An important element to achieve this is crop rotation, interrupting the infection chain between subsequent crops and making full use of the physical and chemical interactions between different plant species. Synthetic chemical pesticides, particularly herbicides are, in the first years, inevitable but have to be used with great care to reduce the negative impacts on soil life. To the extent that a new balance between the organisms of the farm-ecosystem, pests and beneficial organisms, crops and weeds, becomes established and the farmer learns to manage the cropping system, the use of synthetic pesticides and mineral fertilizer tends to decline to a level below that of the original "conventional" farming system.

State Supports

The Department of Agriculture offering the protein payment scheme is to be commended. It has helped our members to grow more diverse crop rotations with crops such as faba beans and peas, which have a reduced demand for synthetic fertilizers and help contribute towards the ecological focus areas required as part of the greening element of the last CAP reform.

The TAM's scheme has allowed many of our members to purchase reduced tillage equipment along with precision farming equipment such as GPS controlled application equipment. This is a welcome support and should continue.



Similarly the GLAS scheme has rewarded our members and encouraged the adoption of measures such as cover cropping and min-till options along with wildflower field margins and wild bird cover. In some cases our members did not have to change anything they were already doing on farm to avail of the full payment. Our members are going above and beyond the requirements of the GLAS scheme currently as part of the CA system.

The opportunities in the scientific and technological sectors in ensuring sustainability in and supporting Agriculture

We believe that CA offers a excellent opportunity to help ensure the viability of the Irish family farm and to help further our advantages we have from our excellent climatic conditions that enable us to produce food with one of the lowest carbon footprint's worldwide. The research sector in Ireland needs to offer increased support to enable this system to rise to its full potential and help Ireland to achieve both viable family farm's and meet its greenhouse gas emission targets.

Young Farmer's

As I previously mentioned the average age of our members is 37 years old, which compared to the national average of 57 years places a large proportion of our members into the young farmer category.

Measures need to be put in place to encourage the adaptation of CA from an early age. State funded independent information and education at a young age as to what is possible through CA. We believe GLAS to be a good measure, but a sum of €5000 per annum to sign up to which over 2/3 is lost in cost involved in the scheme is never to going to encourage young farmers to set out in their farming career. If we are truly serious about climate change and about changing the way we as a country farm, young farmers need a serious encouragement to adapt CA.

The opportunity to practice CA across fragmented farming systems in a profitable manner will help to encourage the uptake of the system.

Other Issues we feel are relevant

- With some conversion support CA can deliver equal or greater benefits on a far greater scale with a far greater environmental impact than organic farming without requiring premium farm gate prices or a drop off in production levels
- GLAS scheme or similar should have bigger scope to encourage sustainable practices on whole farms
- We are a small but productive country in terms of crop production. Implementation of CA on national basis is very achievable and would offer marketing opportunities to increase the value of output the agri-food sectors