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Presentation to the EPA Oral Hearing
Re the proposed landfill at Nevitt, County
(EPA licence application W0231-01)

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Sargent
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Trevor Sargent TD
Minister of State at the Department of Agriculture, Fisheries and Food
with responsibility for Food and Horticulture

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Dublin and Meath's role in the national horticultural industry

First, allow me to outline this region's importance for the national horticultural industry and, indeed, the general importance of the national horticultural industry. The following facts are based on figures published in recent years by my Department, by Bord Bia and by the Central Statistics Office.

The national output of edible horticultural produce in 2006 was valued at €327 million at farmgate level (DAFF), including:

- Field Vegetables €59.4m
- Outdoor Fruit & Honey €15.5m
- Mushrooms €99m
- Potatoes €106m
- Protected Crops €46.8m

The total National Production Area for edible horticulture (excluding mushrooms) is approx 17,578 Ha (Bord Bia/DAFF/CSO), including:

- Field Vegetables 4,351 ha
- Outdoor Fruit 803 ha
- Potatoes 12,100 ha
- Protected Crops 324 ha

Field vegetable sector

Dublin contains 40% (1,739ha) of the national field vegetable production area. Meath contains an additional 14% (618 ha). 28.5% (68) of the country's growers of field vegetables are located in Dublin, with an additional 9% (21) in Meath. Dublin produces 41.2% (€23.7m) of the national output value at farmgate for field vegetables. Meath produces an additional 15% (€8.6m).

In Dublin, 346 people are employed at field vegetable production level. This is 41% of the national total for the field vegetable sector. In Meath, an additional 87 are employed or 10% of the national total for the field vegetable sector. (Bord Bia and DAFF, 2005)

Potatoes

According to the last National Potato Census (2004), 12,600 hectares are planted with potatoes nationally. There are 732 growers.

16.5% (2083ha) of that production area is located in Dublin and 28.2% (3563ha) of that production area is located in Meath. 9% (67) of the country's potato growers are located in Dublin and 6% (45 are located in Meath.

Dublin has the second-highest area (1,069ha) cultivated with Roosters, the highest area (381ha) cultivated with British Queens and the second-highest area (282ha) cultivated with processing varieties. Meath has the highest area (1,396ha) cultivated with Roosters and the highest area (1,264ha) cultivated with processing varieties.
(Bord Bia and DAFF, 2004a)

Protected Crops (edible) and Soft Fruit

Soft fruit and protected vegetable crops are worth €46.8m nationally, covering 496ha and involving 217 growers.

Total production area for protected vegetable crops nationally is 192 ha with 95 growers of protected vegetable crops. Dublin has 123 ha or 64% of the national production area for protected vegetable crops. Meath has 29 ha or 15% of the national area for protected vegetable crops.

Dublin has the second-highest area of protected strawberries (29ha). Meath has the third-highest (23ha). Meath also has the second-highest area (10ha) for outdoor strawberry production.

In the national protected vegetable crops sector, 693 people are employed full time, 582 part time (281 full time equivalent) and 585 as pickers. In Dublin, 245 people (30% of the national full time total of employees for this sector) are employed full time, with an additional 43 (6%) in Meath.

225 people (39% of the national part time total of employees for this sector) are employed part time in Dublin in the protected vegetable crops sector, while 39 (7%) are employed in Meath. This equates to 101 full time equivalent jobs in Dublin and 40 full time equivalent jobs in Meath.

There are 108 pickers employed in Dublin and Meath in the protected vegetable crops sector.
(Bord Bia and DAFF, 2004b)

Apples

One third of the national apple production area is in Dublin, with 3% in Meath. In particular, culinary apple production is concentrated in Dublin, Louth and Meath.

Packing companies

The figures outlined above do not give a full picture of the economic value of the horticulture industry. In addition to direct employment and wealth-creation, the industry has many additional positive effects. For instance, packing companies have developed alongside the horticulture industry, including:

- Donnelly's, St Margaret's, Co. Dublin;

- C McGee & Sons, Rush, Co. Dublin;
- Country Crest Ltd, Lusk, Co. Dublin;
- Dublin Meath Growers, Kilshane Cross, Co. Dublin;
- Fyffe's, Swords, Co. Dublin;
- Groome's, Rush, Co. Dublin;
- K&K Packs, The Ward, Co. Dublin;
- Keeling's, St Margaret's, Co. Dublin;
- Paul Sweeney & Co Ltd, Newcastle, Co. Dublin;
- Peter Keogh and Sons Ltd, Oldtown, Co. Dublin;
- Sam Dennigan & Company Ltd, Oldtown, Co. Dublin;
- Superdawn, Lusk, Co. Dublin.

These companies require a steady supply of clean, fresh produce if they are to continue developing.

Geographical concentration of the horticultural industry

Commercial horticulture has traditionally been concentrated near large population centres and particularly in the coastal sandy soils of north Dublin. The figures that I have outlined give you an idea of its geographical concentration. Despite north Dublin's relatively small size, it contains a very large proportion of the national industry.

Together with its neighbouring counties of Meath, Kildare and Louth, county Dublin constitutes the most important area for production of potatoes and vegetables on the island of Ireland. The glasshouse industry also originated in north Dublin and in recent years substantial investments have been made in modern glasshouses for the production of pepper, tomato and strawberry crops. My own Department has directed several million euro in grant-aid to the national horticultural industry, with a significant proportion of this being invested in the region.

With the advent of the modern food supplies system based on Central Distribution Centres, growers in north county Dublin are ideally located to supply the nearby large population centres on the east coast. On-going consolidation in this industry will result in higher concentrations of production units in areas close to these Central Distribution Centres (Doyle, 2008), which are themselves clustered around Dublin.

Water quality and horticulture

The availability of safe, high-quality irrigation water is essential for horticulture crops in this region. Modern day supermarkets require 24/7/365 supply of fresh produce that is produced in a fully traceable system in which all inputs are certified as not posing a threat to human or environmental health (Global Gap 2007; Bord Bia). These national and international quality assurance systems require the routine testing of all water used in the production and post-harvest treatment of fresh produce. Such water must not pose a risk to human health. Water that is used for post-harvest end-of-cycle washing must

be potable and fit for human consumption with standards equal to drinking water quality.

A feature of some new investments in the glasshouse industry is that such crops are grown entirely in water or are fully dependent on irrigated water supplies for their production. In addition, recent developments have seen fruit crops, which traditionally were produced in outdoor less intensive field production systems, being produced in container systems within plastic covered tunnels. These crops are also completely dependent on irrigated water for their production. In addition, fruits and vegetables contain very large amounts of water, between 67% and 95% by weight (Singh et al., 2001; Dugo et al., 2005). It is self evident that such intensive production systems are reliant on a supply of safe fresh water and that every commercial horticulture grower requires a guaranteed supply of quality assured fresh produce to ensure access to his or her main market, the supermarkets.

In North County Dublin, 89% of large-scale commercial growers have irrigation equipment for their field crops. The quantity of irrigation water required varies with the type of crop grown, the stage of growth of the plants (i.e. establishment of young plants, main growth phase, harvest maturity), the soil type and moisture content, the amount of water lost through evaporation from soil and transpiration through the plants. Currently, most crops (for example, carrot, parsnip, leeks) are irrigated at the establishment stage, with some crops requiring at least a second irrigation (cabbage), and field grown salad crops requiring on-going irrigation throughout their cultivation. At least 50% of horticulture field crops in north County Dublin are irrigated in an average year. In addition, the protected food crops sector in this area is wholly dependent on daily-irrigated water for its production. Greenhouse crops use large amounts of water continuously, but the rate of use depends on plant species, size, temperature and atmospheric conditions. The enormous requirement for water, in greenhouse grown plants, is demonstrated by the fact that between 300 and 500 kg of water are necessary to produce one kilogram of dry organic matter (Principles of Irrigation Management).

Growers are conscious of the importance of water supply as an essential element to ensure a guaranteed and predictable timely harvest. As such, many growers in north county Dublin are now drilling boreholes and building reservoirs to supplement the traditional method of irrigation water extraction from streams and rivers.

In Ireland, alongside and in addition to the standards demanded by buyers, there are several voluntary schemes which act as benchmarks for safe, clean horticultural produce, including the Bord Bia Quality Scheme for producers and packers; the Bord Bia Quality Scheme for Vegetable Preparers and the Global Gap standard, which is an international scheme operating in many countries (Global Gap 2007). Each of these schemes are demanded by various market outlets.

Allow me to quote from some of these standards. Bord Bia's Quality Scheme for Producers and Packers:

- Section 7.7.1 "Water analysis record of water sources [to be made] available annually". This requirement is labelled "Critical".

- Also in Section 7.7.1, analysis for E. coli, Enterococci, pH, ammonia, nitrates and nitrites are all classed as "Category 1" requirements.

From Bord Bia's Quality Standard for the preparation of fresh cut vegetables:

- Section 3.17 a) "Participants must ensure that only water suitable for human consumption is used in the final washing of ready-to-eat fruit and vegetables." This requirement is labelled "Critical".
- Section 3.17 b) "Participants must ensure that only water suitable for human consumption is used in the washing of other fruit and vegetables". This is labelled as a "Category 1" requirement.
- Section 3.44 "All water, steam and ice used in production in contact with the final product must be of potable quality."
- Section 3.59 a) "The potable process water must be tested at a minimum annually from multiple sample points... by trained personnel and analysed for E.coli and Enterococci; the results must be retained; in the event that the source of the water is changed at any time, the water must be tested for E.coli and Enterococci before use".

It is important that where water is being applied to a crop ready to eat or at final washing stage that it is of a quality fit for human consumption. The standards in this area are stringent and neither producers nor packers can 'get by' without secure supplies of clean water.

Risk to water quality

The proposal to locate a major landfill, which will operate for decades in north County Dublin, poses a number of risks to the food sector of the Irish horticulture industry. The greatest potential threat to this industry is the loss of clean, safe water for crop irrigation and post-harvest processing of produce. The contamination of ground water and surface waters would have an immediate and significant impact on crop production and the supply of food.

The horticulture industry and the North Leinster Aquifer in the context of future challenges

Horticulture has been a major stable part of the economic and social fabric of society in this region. Its location close to the largest urban centre on this island has not been by chance. The climate and soils of this region are very suitable for horticulture crop production.

A regular supply of irrigation water in sufficient quantities and of safe quality will be essential to sustain production of these food crops within easy access to the major population centres on this island. Water from such supplies can be distributed to the fields and glasshouses for application to the growing crops. It is therefore essential that the existing groundwater sources in this area must be protected for future generations.

In summary, I am aware that there are serious local concerns about the possibility of the proposed landfill contaminating the water supply used by

horticultural producers in the area and their concerns have been the subject of detailed submissions to the Environmental Protection Agency. In my submission, I have highlighted the importance of horticultural production to the overall economy. It is of course vital that horticultural activity anywhere in the State, and particularly in this region of intensive cultivation close to this proposed landfill, should not be jeopardised in any way by environmental hazards. In the context of this licence application, the EPA must be satisfied that emissions from the landfill will not cause significant adverse environmental impacts.

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