

Organic Potatoes

Consumer interest in organic food has expanded rapidly in recent years. While production of food to organic standards has also expanded, output is still not sufficient to meet demand. Consumers have to put up with intermittent supply and imported produce. Home grown organic fruit and vegetables are always in scarce supply. One of the basics of an Irish diet is potatoes and growing potatoes organically as part of a rotation on an organic unit would produce a very saleable commodity.

Potatoes cannot be grown organically in isolation but may be one crop in a rotation of crops on an organic farm. A crop cannot be labelled as organic until the land has gone through a conversion phase and been managed to organic standards for two years.

As a crop potatoes have their advantages and some disadvantages, but in this respect they are no different from any other farm enterprise.

- Potatoes have the advantage over many other vegetable crops in that production can be almost entirely mechanised. This can be very important in the absence or scarcity of hand labour.
- The potato crop does not have to be sold immediately but can be stored for several months. This gives the grower time to market the crop and perhaps add value by e.g. pre-packing or washing.
- Weed control in potatoes need not be a problem as it can largely be mechanised using harrows, ridging-up, other mechanical implements and possibly flame weeding.
- Pests, particularly wireworm and nematodes can be a problem. Wireworms can be troublesome after breaking a ley and nematode problems can be avoided by not using infected land and leaving suitably long intervals between potato crops.
- Potato blight poses the most serious risk in growing potatoes by organic methods. At present it is permissible to use Burgundy mixture to control blight but doubts about the practice of repeated applications of copper to soils may limit or ban its use in the future. A maximum of 6kg Cu/ha/year may be used, with prior approval from the certification body. The use of varieties of potatoes that are resistant to potato blight is to be highly recommended.
- Yields of potatoes grown organically are generally 30% or more lower than their conventionally grown counterparts.
- As with all maincrop potatoes storage facilities are required. The longer the projected storage period the more specialised and costly the equipment.
- Not all soils are suited to potato growing.



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This is one of a series of fact sheets on potential income generating activities.

All fact sheets are available in the Advisory Section of the Teagasc Website
www.teagasc.ie

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Teagasc Fact Sheets present a brief overview of a topic. Further detailed advice should always be sought from relevant sources.

Organic potatoes must be part of an overall rotation. This will involve building up soil fertility and then exploiting that fertility with a nutrient demanding crop such as potatoes. Rotations may be as short as one in four to five years but are often longer where grass leys are the dominant part of the farming system. Clover or other legumes must be included in the rotation to provide nitrogen. Without adequate nitrogen being available the potato crop will yield very poorly.

Potash and phosphorous will need to be provided in the form of composted farmyard manure. If this is not available from an organic source then it can be brought in and composted on the farm for a period of three months prior to use. Depending on the natural fertility of the soil manure is generally spread at a rate of 30 – 35 t/ha. Many organic potato growers will plant in shallow drills. Weed are then controlled by harrowing coupled with re-ridging, once or twice before crop emergence. Modern inter-row cultivators and flame weeders make weed control much easier in a potato crop.

Burgundy mixture is at present the only substance permitted for blight control. This is made from 8.5kgs copper sulphate and 11kgs washing soda dissolved in 180 litres of water. This is sufficient for one application on one hectare. If blight becomes established then the crop should be defoliated mechanically and lifted as soon as possible. In the future varieties will be selected on the basis of blight resistance but for the present we must contend with the Irish palate and the selection available. Records are still the preferred variety by organic consumers and growers but the higher yielding variety Setanta looks very promising and should be considered. Expected yields should be approx. 25t/ha with Setanta having a potential of 35t/ha.

Costings

YIELD: 29 tonnes per hectare less 15% REDUCTION FOR PREPACKS		
PRICE: €400 /TONNE		
	€	€
GROSS OUTPUT – PREPACKED		
25 tonnes @ €400		€10,000
MATERIAL COSTS		
Seed (2.5 tonne)	1,000	
F.Y.M. (75 tonne)	190	
Copper Sulphate	66	
Washing Soda	48	
Bags and Ties	254	
Total Material Costs		€1,558
MARGIN OVER MATERIAL COSTS		€8,442
LABOUR AND MACHINERY		
Spreading F.Y.M.	152	
Field Preparation, incl. destoning	500	
Sowing	100	
Steerage Hoe x 2	58	
Spraying	255	
Haulm Destruction	40	
Harvesting	400	
Storage at €25 per tonne	650	
Packing and grading	1000	
Transport and marketing	750	
Total Labour and Machinery Costs		€3,905
NET MARGIN PER HECTARE		€4,537

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