



Soil type

Soil type is a major factor in influencing tuber susceptibility to bruising (see table below).

The BPC funded BRUCE study (BRUising in a Commercial Environment), a three year research project aimed at identifying the agronomic factors that influence bruising susceptibility, highlighted this.

Historically, bruising has been associated with planting and harvest conditions, however, the BRUCE study has determined soil type has an agronomic influence over bruising susceptibility and this may differ between husbandry.

When assessing soil type consider

- How many operations it will take to prepare the soil for planting
- Variations in soil type, as this will affect planting depth and drill profile
- The moisture holding capacity of the soil

BRUCE Study - Effect of soil type on Marfona

Soil type	<60% bruised	>60% bruised	Total
Sand	2	14	16
Silt	5	4	9
Loam	13	7	20
Total	20	25	45

BRUCE study: Tubers were hand lifted and then subjected to a standard impact. Bruise susceptibility was correlated with crop history data. The point of separation (e.g. 60% bruised) was chosen to show the biggest difference between treatments. In this case, more crops bruised in sandy soil.

Effect of soil type may relate to nutrient availability, soil moisture or

BPC National Bruising Survey

56% of respondents recognised soil type as having either a major or very major influence on bruising susceptibility.

ACTION

Where possible consider avoiding sandy soils when planting highly susceptible varieties.

For further information on the BPC funded BRUCE project, BPC Ref. 807/227 visit www.potato.org.uk or ask for the project report 'Improving quality by minimising damage', by calling BPC

Potatoes are more likely to bruise.....

-where soil operations have caused compaction or smearing.
-where planting depth and drill profile vary, harvester operations cannot be consistent.
-when grown on land where potatoes may suffer stress, e.g. drought prone soils or wet soils.
-where soil cannot be kept on the harvester such as with light sands or that with a high gravel content.

Potatoes are less likely to bruise.....

-where there is no compaction or smearing.
-where regular planting depth and drill profile have been achieved.
-when they do not come under stress during the growing season.
-where there is sufficient soil on the webs to cushion tubers.