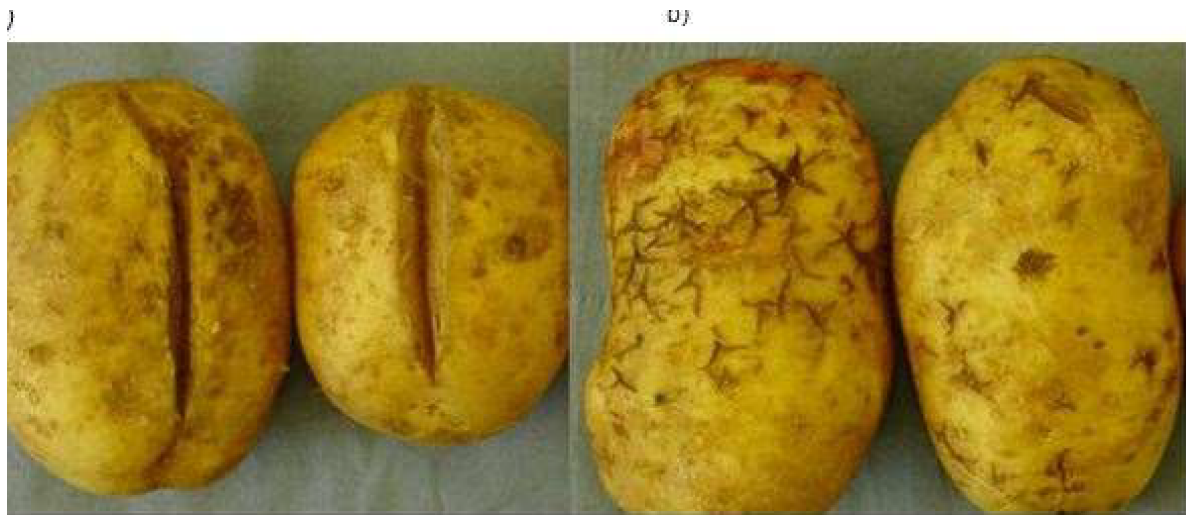


Growth Cracking in Potatoes

Growth cracking is an external, physiological disorder where the tuber splits while growing. The split normally heals but leaves a crack in the tuber. Growth cracks generally start at the apical end of the tuber and can extend lengthwise but can also start from other foci of weakness, e.g. lenticels.

Cracking varies in severity from “netting” of the periderm through to star cracks (Figure 1b) and to splits through almost the entire length of the tuber, depending on the stage of growth during which the initial cracking occurred (Figure 1a). Even though growth cracking does not usually predispose the tuber to rotting, growth cracks can negatively impact tuber quality. Growth cracks make fresh-market tubers unattractive, whilst severe growth cracks can impact the quality of chipping and crisping potatoes and affect processing, e.g. through peeling losses to remove the cracks completely or through wastage of slices from optical sorting.

Figure 1. Examples of tuber cracking. (a) Maris Piper: deep, linear cracking; (b) Vales Sovereign: superficial cracking centred on lenticels



Cracking occurs in response to fluctuating water stress and that it is the result of rapid changes in tuber growth rate. I.e. Potatoes that have been growing in drought conditions and then through rainfall or heavy watering are now in water logged soils. Avoid over-watering in drought conditions to avoid this problem.