

Tuber soft rot potential and bruising from storage to box



Real-world examples of shatter and blackspot bruises during handling operations

Materials and Methods

To answer these questions, tubers were sampled at various locations along the path from storage, transport to a fresh pack facility, and at various locations in the fresh pack facility.

To assess soft rot potential, tubers were placed in web-bottomed trays and placed in a mist chamber at 55F that maintained moisture on the tuber surface. Tubers were evaluated every 2-3 days for the presence of any soft rot. Tubers were removed once symptoms of soft rot developed.

Additionally, tubers were evaluated for the number and types of bruising (skinning, shatter, pressure, and blackspot).

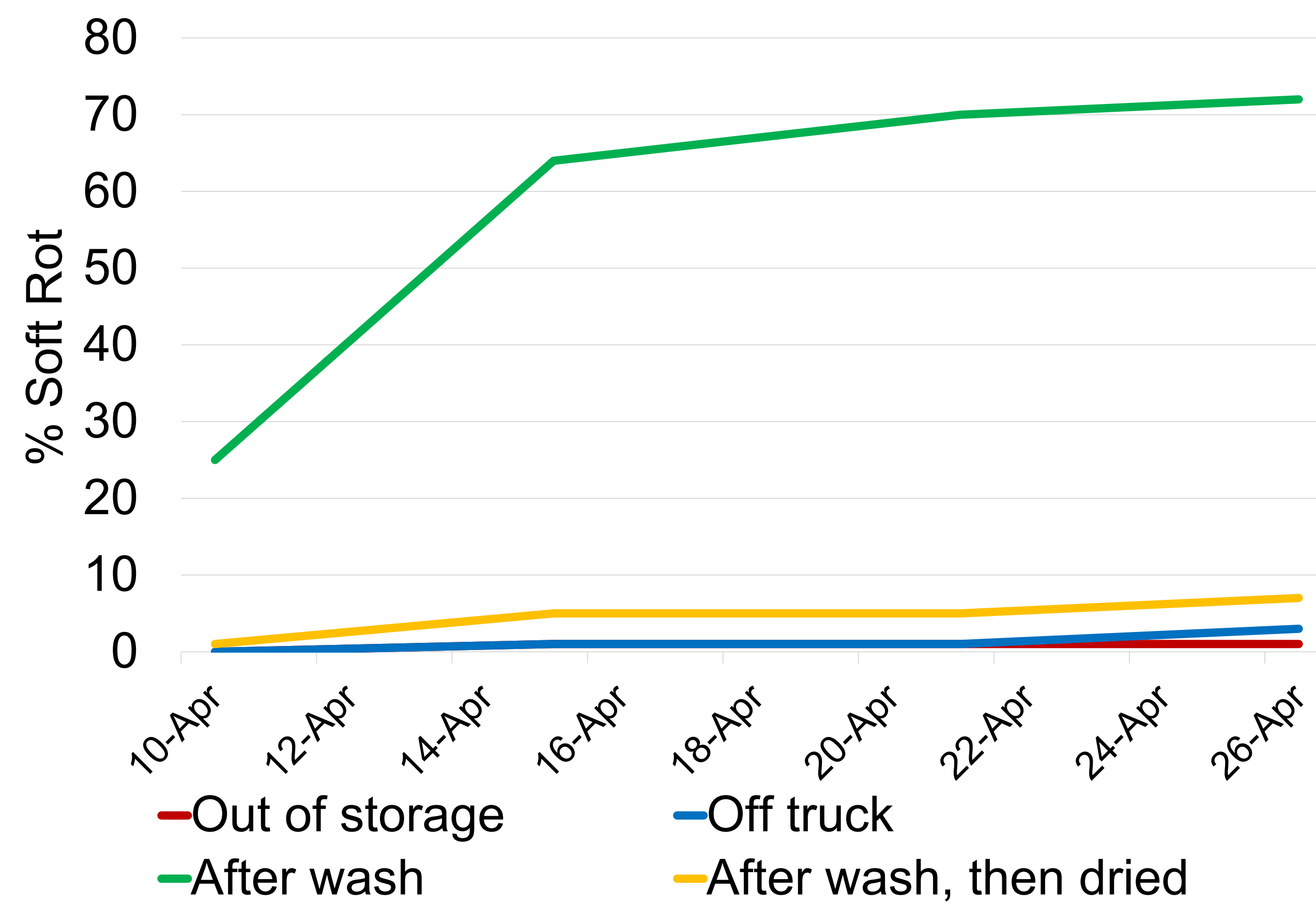
Research Questions

Does soft rot potential and bruise increase in transport from storage to wash plant?

What effect do drying and disinfectants have on reducing tuber soft rot potential?



Assessment of soft rot potential



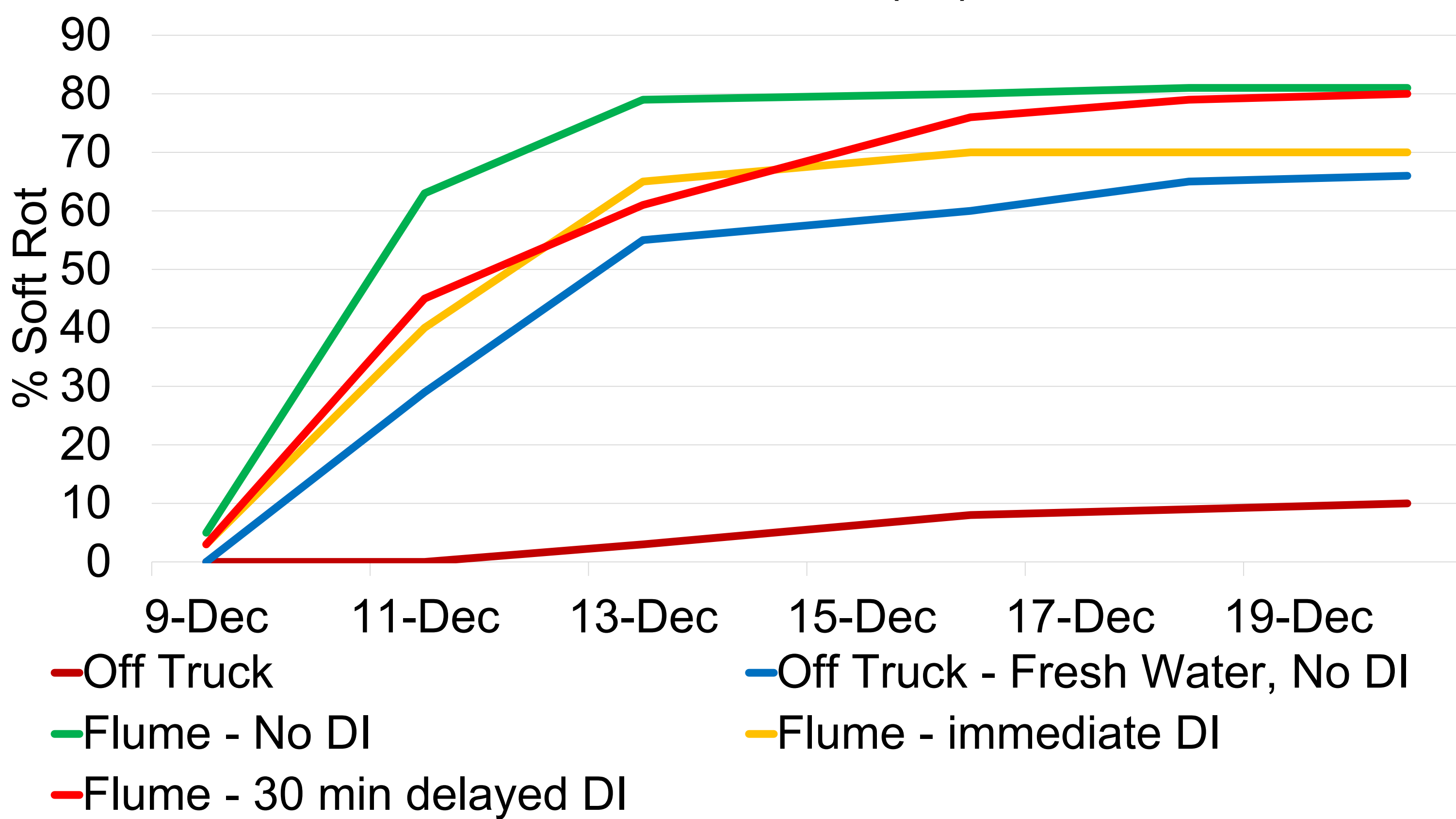
Results and Discussion

- Soft rot potential is relatively low prior to tubers being washed in the fresh pack operation.
- The most effective way to reduce soft rot potential is to completely dry tubers after washing.
- Drying was more effective than the use of a disinfectant for reducing soft rot.
- Early in the storage season (October), handling increases shatter and blackspot bruise in addition to increasing soft rot potential.
- Later in the storage season (March), bruising was similar across all sampling locations. Soft rot potential was related more to washing than to bruising.
- If soft rot is an issue, increased drying of tubers after the washing process would be the most effective management effort.

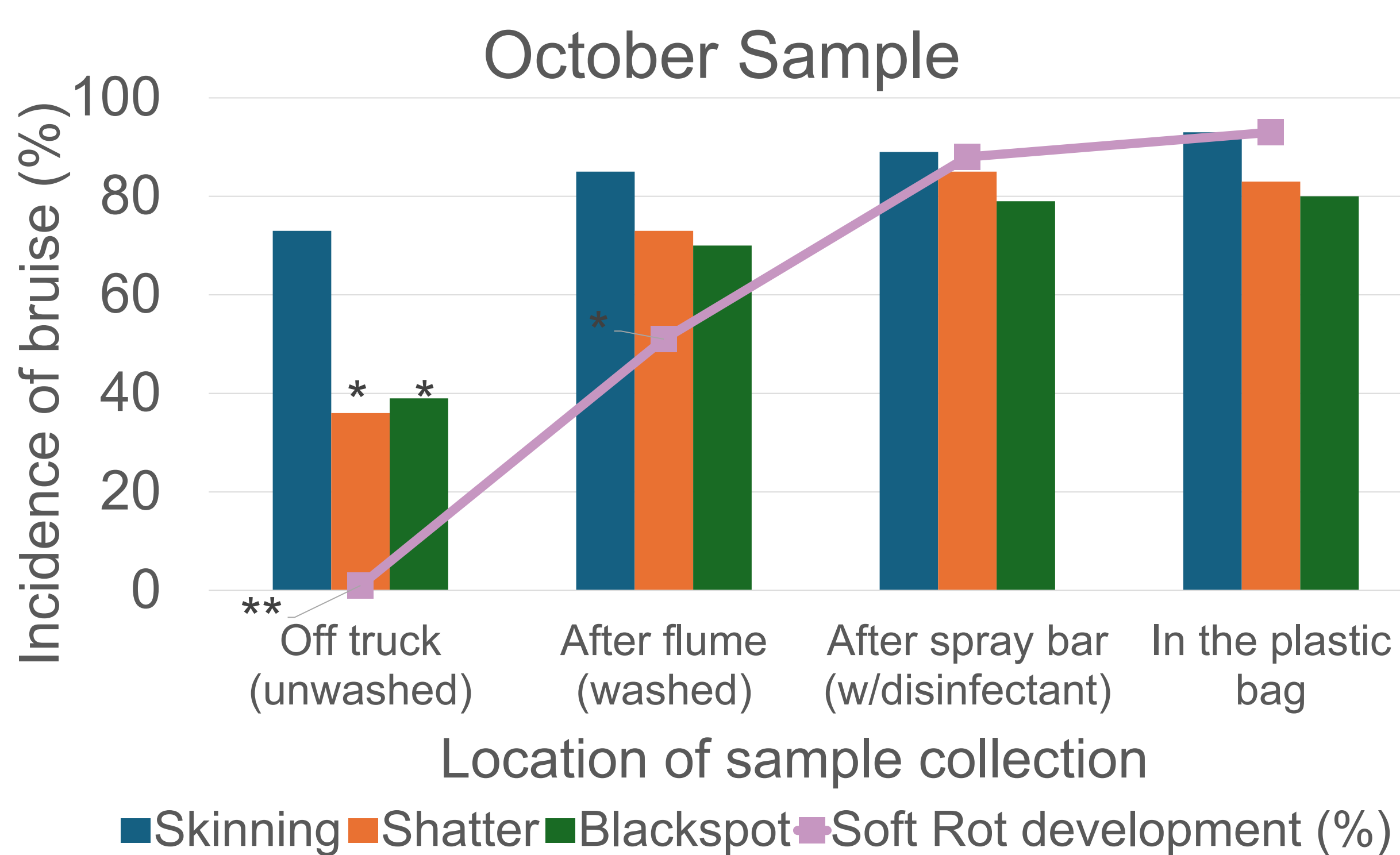
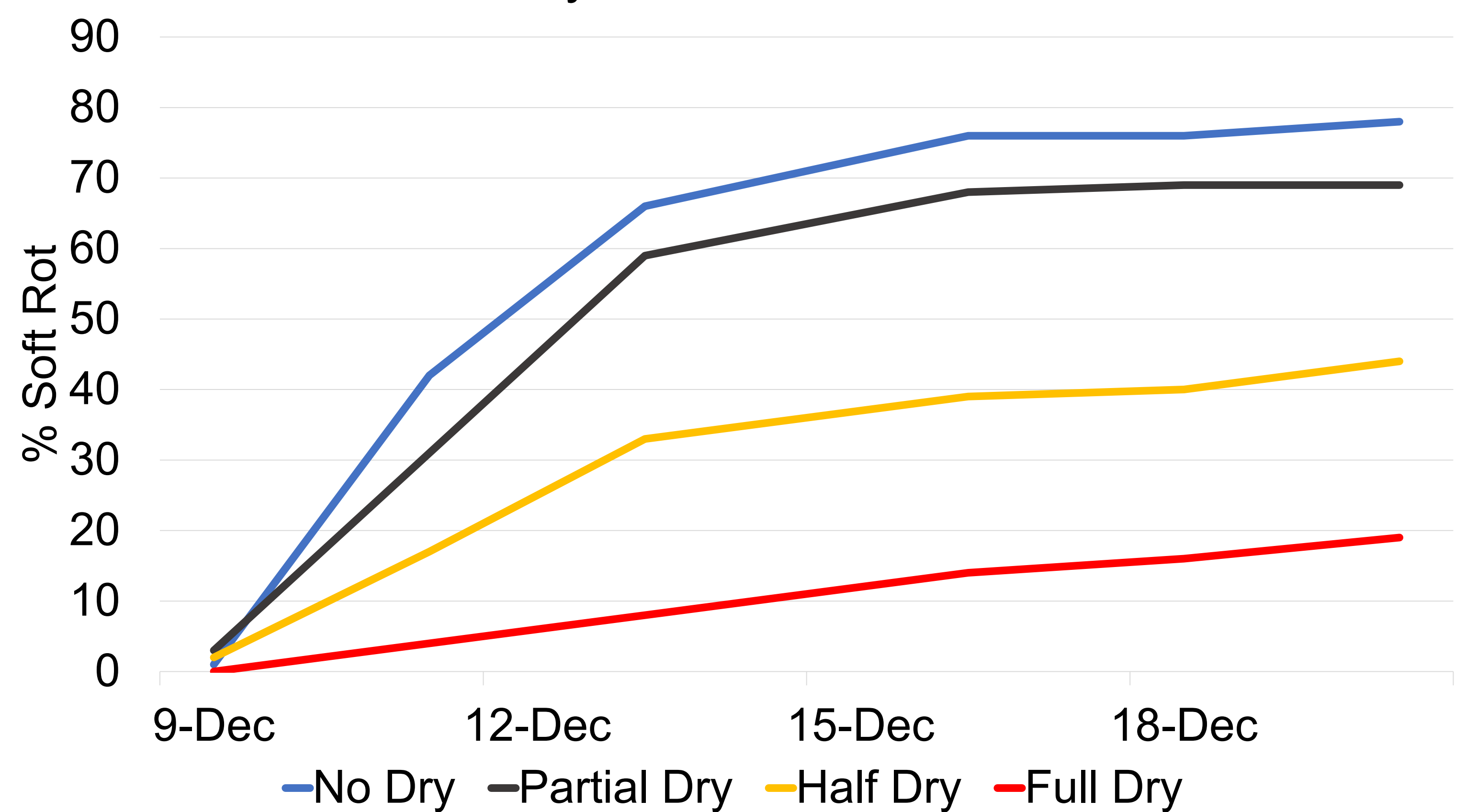


Handling potatoes... can lead to injuries... which can lead to soft rot.

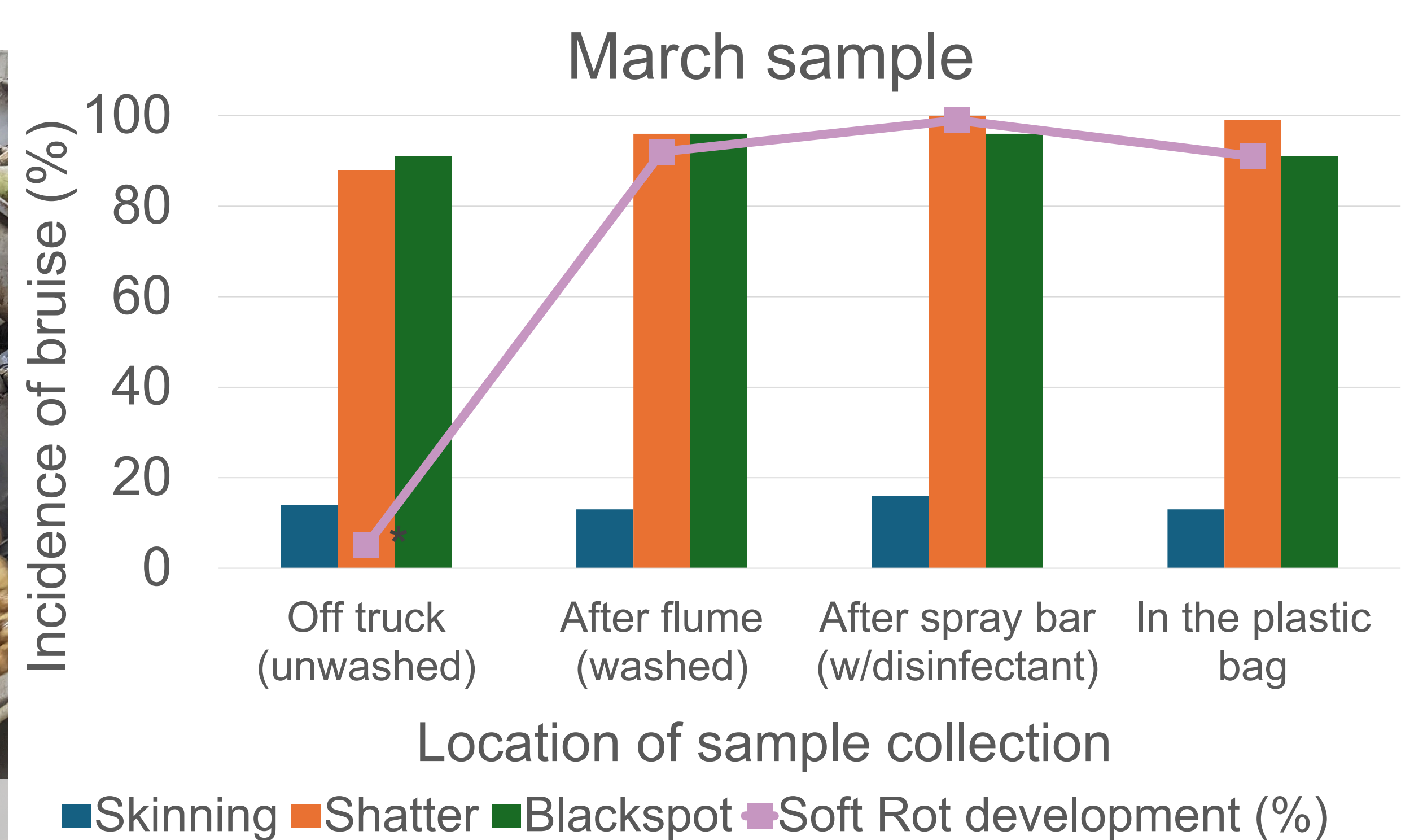
Effect of Water/Disinfectant (DI) on Soft Rot



Effect of Dry Time on Tuber Soft Rot



Mike Thornton (left) and Jeff Miller (right) collecting samples after potatoes leave a flume



Real-world examples of soft rot observed from distribution centers



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For additional information, please contact Jeff Miller at jeff@millerresearch.com

If soft rot is an issue, **increased drying of tubers after the washing process** would be the most effective management effort.



Partially dried potatoes

