Has the time come for barley to go naked?

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Background:
Is it time for barley to leave the hull behind and go naked (be narley)? There is certainly precedent: historical culinary traditions in Asia, North Africa, and the Andean region. More recently, remarkable successes have been achieved by public breeding programs in the Canadian Prairie Provinces. Re-invigorated efforts are underway in Europe and North America.

Brewing: The adhering lemma and palea are signature features of barley grain that have persisted for the past 10,000 years due to their filtration function in brewing. Advances in brewing technology have provided other filtration options, rendering the hull obsolete. No hull means higher malt extract, so what’s not to like about naked malts?

Food: If not for beer, then for what the hull? Composed primarily of insoluble fiber, the hull has no value in human foods. In fact, removal of the hull through pearling compromises the whole-grain status of the resulting foods.

Feed: The hull has little or no feed value for non-ruminant animals and it can easily be replaced in ruminant diets.

The healthy, versatile early maturing grain with novel end-uses:
The hull accounts for ~ 12% of total barley grain yield per unit area meaning that the yield data for barley with hulls are inflated, or at least disingenuous. Why not be honest and let barley compete with wheat on an even playing field?
The advantages are many – ranging from fiber to flavor and from input-use efficiency to end-use versatility.

Moving forward:
Prior to taking the naked plunge, several factors need be taken into consideration, including pleiotropic effects of the nud gene, linkage drag, and the catch-up that will be needed to realize the agronomic potential of naked barley germplasm.

These challenges can all be addressed with germplasm exchange and the current breeding and genetics toolkit.

“Just say no to hulls and pearling”

Food
- Whole grain
- Nutrition
- Flavor

Brewing and distilling
- Malt extract
- Efficiency
- Flavors

Feed
- Nutrition
- Palatability

Malting quality of selected naked barley doubled haploid germplasm. 2015 crop. Corvallis, OR. Analyses courtesy CCRU.