AN INTERESTING SEED COMBINATION

EARLY in 1935, the junior writer obtained a commercial sample of oats in which many of the primary grains appeared to have a seed of another plant growing within them. On careful examination it was found that seeds of the Napa thistle (Centauréa meliténis L.) were lodged on the palea behind the folds of the lemma, thus giving the interesting double seed combination shown in Fig. 1. The thistle seeds probably were deposited at an early stage in the development of the oat lemmas and caryopses. In fact, the thistle seed appeared to have caused depressions in the oat kernels at the points of contact. It is not believed that they could have been deposited so well at later stages in the development of the grain or in the harvesting and threshing operations.

These oats had been grown in western Oregon where the Napa thistle is a noxious weed. This variety of thistle matures quite early and may have been shedding its seeds at about the time these oats were flowering. The large pappus of the thistle seeds greatly favor their dissemination by wind. It is said that at time of ripening if the wind happens to be blowing the atmosphere becomes filled with these seeds and that they are carried long distances. In the case of these oats it is possible that a strong wind blew for a few days just at the opportune time, or otherwise the thistle seeds would not have been deposited so precisely within the oat lemmas.

A seed combination of this kind is new to the writers, who have observed and worked with oats from various regions of the United States for many years. Quack and similar seeds, however, are frequently found embedded in grains of commercial oats.

It is not advisable to use for seed any oats that have Napa thistle, quack, or other noxious weed seeds embedded in the grains, as the weed seeds lodged behind the folds of the oat lemma cannot be removed by mechanical means and would, therefore, be planted with