

Regional Field Sanitation Risk in the U.S. Agricultural Sector¹

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- Representative data suggests that risk associated with lack of field sanitation is relatively low on U.S. farms
- Data for the agricultural region that includes Colorado suggests that this region was a first mover in terms of the availability of toilets for farmworkers, but more closely followed national trends of increased access to hand wash and drinking water over time
- Basic field sanitation definitions in available data are limited, however, and may not reflect the true extent of risk

Unideal sanitation access may represent a health risk exposure category of interest on the farm. There is a perception in public health circles that many U.S. agricultural workers still do not have access to basic sanitation. Nationally representative data however suggest that basic access has increased substantially over time and is approaching 100%, though there have been regional differences in some rates of change. Despite the suggestion of low risk overall, the definitions of what constitutes sanitation from both a regulatory standards perspective and from available data are limited and provide insight as to very basic access only, as opposed to usage and quality. This points to a continued need to examine sanitation practice in the U.S. agricultural sector as a way to protect workers and consumers of the food economy both nationally and regionally.

The U.S. Department of Labor, Employment and Training Administration's National Agricultural Workers Survey (NAWS) provides nationally and regionally representative detailed information of U.S. farmworkers and their demographic and work-related characteristics. Colorado is not a standalone region in the NAWS dataset but instead is included in a representative sub-sample based on the "northwest" agricultural region which also includes Idaho, Montana, Wyoming, Nevada, Utah, Oregon, and Washington.

Using the NAWS data, panels (a) and (b) of Figure 1 illustrate the proportion of farmworkers over time who report access to water to wash hands and access to toilets respectively. The survey questions are "Does your employer provide water to wash hands?" and "Does your employer provide a toilet?" We code responses as "don't know" to be missing values instead of trying to impute whether these are yes or no responses. The sanitation questions have been asked over the lifetime of the NAWS survey since its start in fiscal year 1989, thus allowing for a substantial time series. We use data through 2014, which is the end date of the currently available public-use set.

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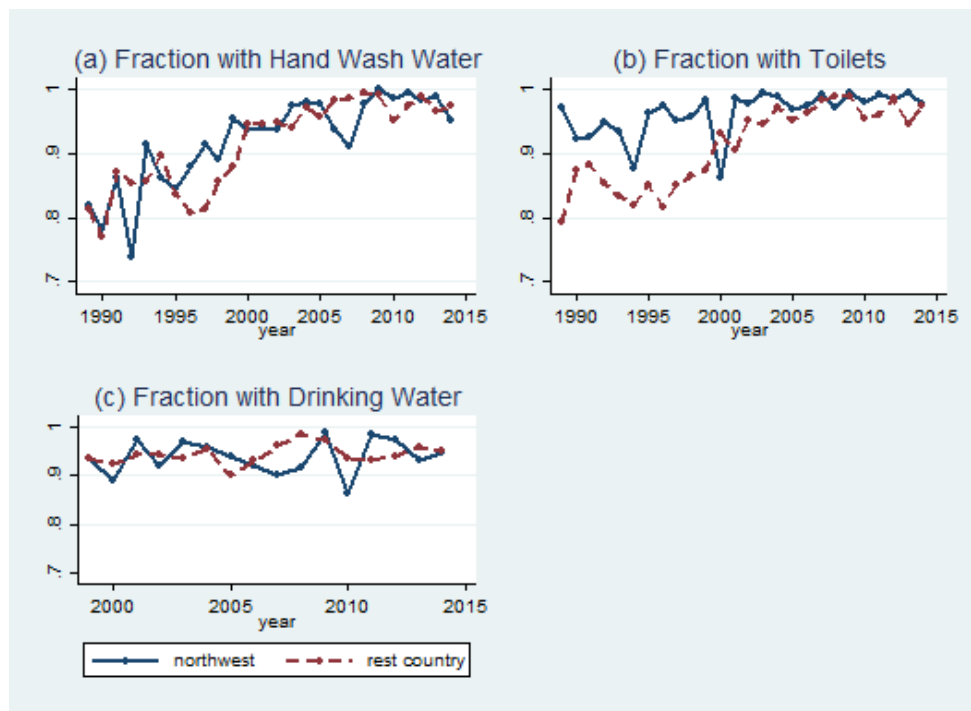


Figure 1: Farmworkers with Access to Field Sanitation over Time
Source: NAWS and authors' calculations

While there is some variation in the early years of the survey, the proportion of workers with access to basic sanitation approaches one by the end of the years that are available. Access to hand wash water is similar for the northwest region and the rest of the country series in Figure 1, though the northwest regional sample is more variable given its smaller sample size. Access to toilets over time in Figure 2 shows that the fraction in the northwest region with access by this definition exceeded that for the rest of the country in early years of the survey, which is consistent with this area being a first mover in this public health practice. A third sanitation question “Does your employer provide (EVERY DAY) clean drinking water and disposable drinking cups?” is only available from 1999 onward. High average access is evident for both the northwest and the rest of the country (panel (c)). Though again, information about quantity and quality is not available which is notable given that federal regulations instruct the provision of drinking water with single-use cups or by fountains, and a toilet and hand washing facility.

Although time trends indicate high provision of basic sanitation, this does not guarantee that safety of food is uncompromised. The types of sanitation described by the survey questions (and by federal standards) are notably limited. The NAWS questions, for example, do not indicate the extent of compliance (e.g., are toilets available within the required distance of the field site?) nor common practice (e.g., do workers routinely use the provided resources?) Although these data provide insight into relationships underlying agricultural health and safety risk as it relates to vulnerable workers in the U.S., examination of these data identifies several future research and public policy needs. Furthermore, the aggregate statistics presented here do little to describe specific personal and work-related characteristics that may be systematically related to the continued lack of access for some workers. This is a topic of our continued work.