**Code Reproduction for JDS1146, “Evaluating a Method for Georeferencing Agricultural Fields”**

Robbie Emmet

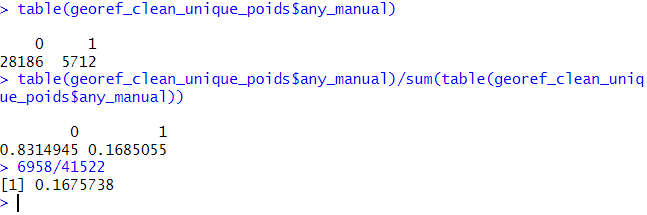
Note: NASS’ list frame is constantly being updated, with records being deduplicated and, in some cases, removed due to age of records and repeated nonresponse. The analysis used for this paper draws on live list frame data; as such, some of the results may appear slightly different than they do in the paper, and paper results cannot be recreated exactly, as some records which had been recorded as nonresponses in the survey used in the paper have since been deleted from the list frame. This primarily would affect the number of records being shown as receiving and/or not responding to the survey; the number of respondents, and the number of in-scope criteria records (the primary number of interest for the analysis), are not as greatly affected, but are slightly affected.

Due to the confidentiality of much of the underlying data (e.g., names, addresses, farm-level production information, and individual landowner information), most of the intermediate output from code cannot be displayed. However, code is provided to demonstrate the full analysis, and screenshots of several analyses are shown to demonstrate that the analysis can be reproduced.

**Table 1**

While Table 1 cannot be reproduced fully, as many records which did not respond to the survey or were not included in it may have been deleted, note that many of the relative proportions of records associated with hand-digitized fields, linked to the list frame, etc., remain similar.

*Records associated with hand-digitized agricultural fields*



Note that the proportions of records associated with hand-digitized agricultural fields remain almost identical, regardless of list frame maintenance resulting in deletion of some records.

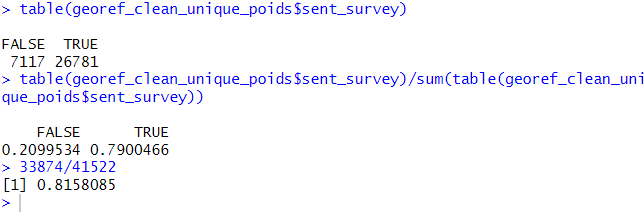
*Records linked to the list frame*

Graphical user interface, text, application

Description automatically generated

While the proportions of records linked to the list frame (the FALSE column in the second command) are not as close as the proportion associated with hand-digitized agricultural fields, they are still relatively close, with similar magnitudes (6,951 vs. 7,836 in Table 1). Some records linked to the list frame may have been later deleted if they were linked to records scheduled to be purged due to, e.g., record age or nonresponse.

*Records included in the NACS survey*



Once again, the proportion of records included in the NACS survey is relatively close to what it was in Table 1 of the paper, in spite of list frame maintenance and record deletion procedures.

**Table 2**

A picture containing text

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The number of nonrespondents vs. respondents can be seen in the second row. Note that the number of nonrespondents is markedly lower due to NASS record deletion procedures for repeated nonrespondents, but the number of respondents (21,104) is very similar to the number of respondents listed in the paper (21,291), demonstrating the robustness of our results to record deduplication and deletion.

**Table 3**

Text

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The number of out-of-scope vs. in-scope records can be seen in the second row of the first table output. Note that the proportions and numbers of in-scope and out-of-scope records are almost identical to the ones listed in Table 3 in the paper.

**Results reproduction for records on the list frame (Results section, top of page 11)**

Some control data, such as the value of sales codes used to determine sales categories, may be derived from NACS surveys and maintained differently, so exact reproduction of these sales numbers may not be possible. Additionally, control data on the list frame is updated frequently using surveys, so numbers may appear more different using live control data for records linked to the list frame than for criteria records (records not linked to the list frame) that responded to NACS.

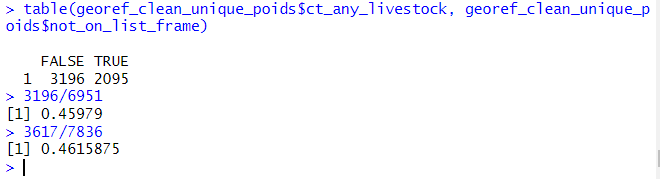
*Median acres owned and operated for records linked to the list frame*

Text

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The relevant numbers are in the FALSE columns, and are only slightly larger than the medians of 50 and 53, respectively, from the Results section of the paper.

*Records linked to the list frame with any livestock*



The relevant number is in the FALSE column. Note that the proportions of records linked to the list frame with any livestock are very similar in the live list frame data (second command) and in the paper (third command).

*Records linked to the list frame with any chickens*

Text

Description automatically generated with medium confidence

The relevant number is in the FALSE column. Note that the proportions of records linked to the list frame with any chickens are very similar in the live list frame data (second command) and in the paper (third command).

**Results reproduction for in-scope criteria records (Results section, starting line 11, page 11)**

*Results for total in-scope criteria records, total with no sales, and total with sales under $10,000*

Text

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Note the similarity of these numbers (not identical due to some deduplication and other maintenance) to the numbers on page 11, lines 11-14.

*Results for median acres owned, median acres operated, records with livestock, and records with chickens for in-scope criteria records*

Text

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Note the similarity of these results to those listed on page 11, lines 14-16.

*Results for in-scope criteria records in metropolitan areas and counties with Amish communities*

Text

Description automatically generated

Text

Description automatically generated with medium confidence

The relevant numbers for the proportion of records outside of metropolitan areas that fall in counties with Amish communities are in the first row, with the second column having the number of records in counties with Amish communities.

*Results for operation sizes of in-scope criteria records associated with Crop Sequence Boundaries (CSBs) and hand-digitized polygons*

Text

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**Reproduction of some of the content of Figure 7**

Due to low sample sizes in some states, the calculation of all state proportions is not shown. However, the calculation of state proportions is shown for a few states with larger sample sizes (e.g., MN, OH, and WI). Note that the proportions listed in under the “1” column in the second command are roughly those shown in Figure 7.

