The data presented here represent estimates of the phosphorus content of crop production, phosphorus use efficiency (PUE) and agricultural phosphorus inputs associated with it across the contiguous United States. Net Anthropogenic Phosphorus Input (NAPI) estimates and related data are also provided. Data are presented at county, sub-regional and regional scales. Here, sub-regions refer to multi-county areas delineated with the goal of obtaining more uniform reporting areas than individual counties. Regions refer to the USDA Farm Resource Regions. The data are reported for 6 agricultural census years, 1987, 1992, 1997, 2002, 2007 and 2012. Estimates of the variables were derived originally from USDA agricultural census data, US population census data, and other sources, using version 3.1 of the NANI/NAPI calculator toolbox (Hong et al.,2011). © 2019 The Author(s). Published by Elsevier Inc. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).
1. Data

A full list of the variables provided at county, subregional scales, together with a short description of the variables and their units are provided in Tables 1–3. Details on the characteristics of the regions and subregions considered are provided in Table 1 of [5], together with maps of regions (Figure 1) and subregions (Fig. S1) in the same paper.

2. Experimental design, materials, and methods

Briefly, the data contained in the spreadsheets represent components of Net Anthropogenic Phosphorus Input (NAPI) and ancillary data obtained and postprocessed from these data using simple spreadsheet calculations to estimate variables used in phosphorus use efficiency estimates at county, subregional and regional scales across the continental US. They are based on agricultural production and ancillary data from the US Census of agriculture, population data from the US census, and other sources. Full details on methodology and original sources can be found in the references below[1–5].
Table 1
Description of variables provided at the county-scale.

| Variable Name | Units/Format | Description |
|---------------|--------------|-------------|
| FIPScode      | number       | Federal Information Processing Standard county code |
| Region Code   | Text         | Region Code |
| Region Name   | Text         | Region Name |
| State         | Text         | State Name  |
| State Code    | Text         | State Code  |
| County Name   | Text         | County Name |
| Subregion Code| Text         | Subregion Code |
| County area   | km²          | County area |
| NAPI 1987     | kg P km⁻² yr⁻¹ | Net anthropogenic phosphorus inputs to counties, 1987 |
| NAPI 1992     | kg P km⁻² yr⁻¹ | Net anthropogenic phosphorus inputs to counties, 1992 |
| NAPI 1997     | kg P km⁻² yr⁻¹ | Net anthropogenic phosphorus inputs to counties, 1997 |
| NAPI 2002     | kg P km⁻² yr⁻¹ | Net anthropogenic phosphorus inputs to counties, 2002 |
| NAPI 2007     | kg P km⁻² yr⁻¹ | Net anthropogenic phosphorus inputs to counties, 2007 |
| NAPI 2012     | kg P km⁻² yr⁻¹ | Net anthropogenic phosphorus inputs to counties, 2012 |
| NFF 1987      | kg P km⁻² yr⁻¹ | Net food/feed phosphorus inputs to counties, 1987 |
| NFF 1992      | kg P km⁻² yr⁻¹ | Net food/feed phosphorus inputs to counties, 1992 |
| NFF 1997      | kg P km⁻² yr⁻¹ | Net food/feed phosphorus inputs to counties, 1997 |
| NFF 2002      | kg P km⁻² yr⁻¹ | Net food/feed phosphorus inputs to counties, 2002 |
| NFF 2007      | kg P km⁻² yr⁻¹ | Net food/feed phosphorus inputs to counties, 2007 |
| NFF 2012      | kg P km⁻² yr⁻¹ | Net food/feed phosphorus inputs to counties, 2012 |
| NonFEXP 1987  | kg P km⁻² yr⁻¹ | Nonfood P export from counties, 1987 |
| NonFEXP 1992  | kg P km⁻² yr⁻¹ | Nonfood P export from counties, 1992 |
| NonFEXP 1997  | kg P km⁻² yr⁻¹ | Nonfood P export from counties, 1997 |
| NonFEXP 2002  | kg P km⁻² yr⁻¹ | Nonfood P export from counties, 2002 |
| NonFEXP 2007  | kg P km⁻² yr⁻¹ | Nonfood P export from counties, 2007 |
| NonFEXP 2012  | kg P km⁻² yr⁻¹ | Nonfood P export from counties, 2012 |
| PFERT 1987    | kg P km⁻² yr⁻¹ | Total fertilizer phosphorus inputs to counties, 1987 |
| PFERT 1992    | kg P km⁻² yr⁻¹ | Total fertilizer phosphorus inputs to counties, 1992 |
| PFERT 1997    | kg P km⁻² yr⁻¹ | Total fertilizer phosphorus inputs to counties, 1997 |
| PFERT 2002    | kg P km⁻² yr⁻¹ | Total fertilizer phosphorus inputs to counties, 2002 |
| PFERT 2007    | kg P km⁻² yr⁻¹ | Total fertilizer phosphorus inputs to counties, 2007 |
| PFERT 2012    | kg P km⁻² yr⁻¹ | Total fertilizer phosphorus inputs to counties, 2012 |
| AG PFERT 1987 | kg P km⁻² yr⁻¹ | Agricultural fertilizer phosphorus inputs to counties, 1987 |
| AG PFERT 1992 | kg P km⁻² yr⁻¹ | Agricultural fertilizer phosphorus inputs to counties, 1992 |

(continued on next page)
| Variable Name               | Units/Format | Description                                                                 |
|-----------------------------|--------------|-----------------------------------------------------------------------------|
| AG PFERT 1997               | kg P km\(^{-2}\) yr\(^{-1}\) | Agricultural fertilizer phosphorus inputs to counties, 1997                  |
| AG PFERT 2002               | kg P km\(^{-2}\) yr\(^{-1}\) | Agricultural fertilizer phosphorus inputs to counties, 2002                  |
| AG PFERT 2007               | kg P km\(^{-2}\) yr\(^{-1}\) | Agricultural fertilizer phosphorus inputs to counties, 2007                  |
| AG PFERT 2012               | kg P km\(^{-2}\) yr\(^{-1}\) | Agricultural fertilizer phosphorus inputs to counties, 2012                  |
| TOTAL CROPLAND AREA 1987    | km\(^2\)     | Total cropland area, 1987                                                   |
| TOTAL CROPLAND AREA 1992    | km\(^2\)     | Total cropland area, 1992                                                   |
| TOTAL CROPLAND AREA 1997    | km\(^2\)     | Total cropland area, 1997                                                   |
| TOTAL CROPLAND AREA 2002    | km\(^2\)     | Total cropland area, 2002                                                   |
| TOTAL CROPLAND AREA 2007    | km\(^2\)     | Total cropland area, 2007                                                   |
| TOTAL CROPLAND AREA 2012    | km\(^2\)     | Total cropland area, 2012                                                   |
| Y\(y\), CROP P/TOT AREA 1987| kg P km\(^{-2}\) yr\(^{-1}\) | P content of crops per area of county, 1987                                  |
| Y\(y\), CROP P/TOT AREA 1992| kg P km\(^{-2}\) yr\(^{-1}\) | P content of crops per area of county, 1992                                  |
| Y\(y\), CROP P/TOT AREA 1997| kg P km\(^{-2}\) yr\(^{-1}\) | P content of crops per area of county, 1997                                  |
| Y\(y\), CROP P/TOT AREA 2002| kg P km\(^{-2}\) yr\(^{-1}\) | P content of crops per area of county, 2002                                  |
| Y\(y\), CROP P/TOT AREA 2007| kg P km\(^{-2}\) yr\(^{-1}\) | P content of crops per area of county, 2007                                  |
| Y\(y\), CROP P/TOT AREA 2012| kg P km\(^{-2}\) yr\(^{-1}\) | P content of crops per area of county, 2012                                  |
| Y\(y\), CROP P/CROPLAND AREA 1987| kg P km\(^{-2}\) yr\(^{-1}\) | P content of crops per total cropland area, 1987                            |
| Y\(y\), CROP P/CROPLAND AREA 1992| kg P km\(^{-2}\) yr\(^{-1}\) | P content of crops per total cropland area, 1992                            |
| Y\(y\), CROP P/CROPLAND AREA 1997| kg P km\(^{-2}\) yr\(^{-1}\) | P content of crops per total cropland area, 1997                            |
| Y\(y\), CROP P/CROPLAND AREA 2002| kg P km\(^{-2}\) yr\(^{-1}\) | P content of crops per total cropland area, 2002                            |
| Y\(y\), CROP P/CROPLAND AREA 2007| kg P km\(^{-2}\) yr\(^{-1}\) | P content of crops per total cropland area, 2007                            |
| Y\(y\), CROP P/CROPLAND AREA 2012| kg P km\(^{-2}\) yr\(^{-1}\) | P content of crops per total cropland area, 2012                            |
| AG PFERT/CROPLAND AREA 1987 | kg P km\(^{-2}\) yr\(^{-1}\) | Agricultural fertilizer phosphorus inputs to counties per area of total cropland, 1987 |
| AG PFERT/CROPLAND AREA 1992 | kg P km\(^{-2}\) yr\(^{-1}\) | Agricultural fertilizer phosphorus inputs to counties per area of total cropland, 1992 |
| AG PFERT/CROPLAND AREA 1997 | kg P km\(^{-2}\) yr\(^{-1}\) | Agricultural fertilizer phosphorus inputs to counties per area of total cropland, 1997 |
| AG PFERT/CROPLAND AREA 2002 | kg P km\(^{-2}\) yr\(^{-1}\) | Agricultural fertilizer phosphorus inputs to counties per area of total cropland, 2002 |
| AG PFERT/CROPLAND AREA 2007 | kg P km\(^{-2}\) yr\(^{-1}\) | Agricultural fertilizer phosphorus inputs to counties per area of total cropland, 2007 |
| AG PFERT/CROPLAND AREA 2012 | kg P km\(^{-2}\) yr\(^{-1}\) | Agricultural fertilizer phosphorus inputs to counties per area of total cropland, 2012 |
| Pop, 1987                   | individuals  | County population, 1987                                                   |
| Pop, 1992                   | individuals  | County population, 1992                                                   |
| Pop, 1997                   | individuals  | County population, 1997                                                   |
| Pop, 2002                   | individuals  | County population, 2002                                                   |
| Pop, 2007                   | individuals  | County population, 2007                                                   |
| Pop, 2012                   | individuals  | County population, 2012                                                   |
| PEXCR/TOT AREA 1987         |              | Livestock P excretion per total county area, 1987                          |
| Variable Name                       | Units/Format | Description                                           |
|------------------------------------|--------------|-------------------------------------------------------|
| PEXCR/TOT AREA 1992                | kg P km⁻² yr⁻¹ | Livestock P excretion per total county area, 1992     |
| PEXCR/TOT AREA 1997                | kg P km⁻² yr⁻¹ | Livestock P excretion per total county area, 1997     |
| PEXCR/TOT AREA 2002                | kg P km⁻² yr⁻¹ | Livestock P excretion per total county area, 2002     |
| PEXCR/TOT AREA 2007                | kg P km⁻² yr⁻¹ | Livestock P excretion per total county area, 2007     |
| PEXCR/TOT AREA 2012                | kg P km⁻² yr⁻¹ | Livestock P excretion per total county area, 2012     |
| PEXCR/CROPLAND AREA 1987           | kg P km⁻² yr⁻¹* | Livestock P excretion per total cropland area, 1987   |
| PEXCR/CROPLAND AREA 1992           | kg P km⁻² yr⁻¹* | Livestock P excretion per total cropland area, 1992   |
| PEXCR/CROPLAND AREA 1997           | kg P km⁻² yr⁻¹* | Livestock P excretion per total cropland area, 1997   |
| PEXCR/CROPLAND AREA 2002           | kg P km⁻² yr⁻¹* | Livestock P excretion per total cropland area, 2002   |
| PEXCR/CROPLAND AREA 2007           | kg P km⁻² yr⁻¹* | Livestock P excretion per total cropland area, 2007   |
| PEXCR/CROPLAND AREA 2012           | kg P km⁻² yr⁻¹* | Livestock P excretion per total cropland area, 2012   |
| IP, 1987                           | kg P km⁻² yr⁻¹ | Total ag P inputs per cropland area, 1987             |
| IP, 1992                           | kg P km⁻² yr⁻¹ | Total ag P inputs per cropland area, 1992             |
| IP, 1997                           | kg P km⁻² yr⁻¹ | Total ag P inputs per cropland area, 1997             |
| IP, 2002                           | kg P km⁻² yr⁻¹ | Total ag P inputs per cropland area, 2002             |
| IP, 2007                           | kg P km⁻² yr⁻¹ | Total ag P inputs per cropland area, 2007             |
| IP, 2012                           | kg P km⁻² yr⁻¹ | Total ag P inputs per cropland area, 2012             |
| IP’, 1987                          | kg P km⁻² yr⁻¹ | Total ag P inputs per county area, 1987               |
| IP’, 1992                          | kg P km⁻² yr⁻¹ | Total ag P inputs per county area, 1992               |
| IP’, 1997                          | kg P km⁻² yr⁻¹ | Total ag P inputs per county area, 1997               |
| IP’, 2002                          | kg P km⁻² yr⁻¹ | Total ag P inputs per county area, 2002               |
| IP’, 2007                          | kg P km⁻² yr⁻¹ | Total ag P inputs per county area, 2007               |
| IP’, 2012                          | kg P km⁻² yr⁻¹ | Total ag P inputs per county area, 2012               |
| PUE, 1987                          | dimensionless | Phosphorus Use Efficiency, Y/I, 1987                 |
| PUE, 1992                          | dimensionless | Phosphorus Use Efficiency, Y/I, 1992                 |
| PUE, 1997                          | dimensionless | Phosphorus Use Efficiency, Y/I, 1997                 |
| PUE, 2002                          | dimensionless | Phosphorus Use Efficiency, Y/I, 2002                 |
| PUE, 2007                          | dimensionless | Phosphorus Use Efficiency, Y/I, 2007                 |
| PUE, 2012                          | dimensionless | Phosphorus Use Efficiency, Y/I, 2012                 |
| PFERT%, 1987                       | %            | Ag P fertilizer as % of total county P input, 1987    |
| PFERT%, 1992                       | %            | Ag P fertilizer as % of total county P input, 1992    |
| PFERT%, 1997                       | %            | Ag P fertilizer as % of total county P input, 1997    |
| PFERT%, 2002                       | %            | Ag P fertilizer as % of total county P input, 2002    |
| PFERT%, 2007                       | %            | Ag P fertilizer as % of total county P input, 2007    |
| PFERT%, 2012                       | %            | Ag P fertilizer as % of total county P input, 2012    |
| PEXCR%, 1987                       | %            | Livestock P excretion % of total county P input, 1987 |

(continued on next page)
Table 1 (continued)

| Variable Name | Units/Format | Description |
|---------------|--------------|-------------|
| PEXCR%, 1992  | %            | Livestock P excr. % of total county P input, 1992 |
| PEXCR%, 1997  | %            | Livestock P excr. % of total county P input, 1997 |
| PEXCR%, 2002  | %            | Livestock P excr. % of total county P input, 2002 |
| PEXCR%, 2007  | %            | Livestock P excr. % of total county P input, 2007 |
| PEXCR%, 2012  | %            | Livestock P excr. % of total county P input, 2012 |
| LP 1987**     | kg P km⁻² yr⁻¹ | Production (P) of livestock products in counties, 1987 |
| LP 1992**     | kg P km⁻² yr⁻¹ | Production (P) of livestock products in counties, 1992 |
| LP 1997**     | kg P km⁻² yr⁻¹ | Production (P) of livestock products in counties, 1997 |
| LP 2002**     | kg P km⁻² yr⁻¹ | Production (P) of livestock products in counties, 2002 |
| LP 2007**     | kg P km⁻² yr⁻¹ | Production (P) of livestock products in counties, 2007 |
| LP 2012**     | kg P km⁻² yr⁻¹ | Production (P) of livestock products in counties, 2012 |
| NONCROPAND PAST AREA 1987 | km² | County level noncropland pasture area, 1987 |
| NONCROPAND PAST AREA 1992 | km² | County level noncropland pasture area, 1992 |
| NONCROPAND PAST AREA 1997 | km² | County level noncropland pasture area, 1997 |
| NONCROPAND PAST AREA 2002 | km² | County level noncropland pasture area, 2002 |
| NONCROPAND PAST AREA 2007 | km² | County level noncropland pasture area, 2007 |
| NONCROPAND PAST AREA 2012 | km² | County level noncropland pasture area, 2012 |
| fg 1987       | fraction     | County level fraction of manure P from grazers, 1987 |
| fg 1992       | fraction     | County level fraction of manure P from grazers, 1992 |
| fg 1997       | fraction     | County level fraction of manure P from grazers, 1997 |
| fg 2002       | fraction     | County level fraction of manure P from grazers, 2002 |
| fg 2007       | fraction     | County level fraction of manure P from grazers, 2007 |
| fg 2012       | fraction     | County level fraction of manure P from grazers, 2012 |
| fp 1987       | fraction     | County level fraction of noncropland pasture area relative to total cropland + noncropland pasture, 1987 |
| fp 1992       | fraction     | County level fraction of noncropland pasture area relative to total cropland + noncropland pasture, 1992 |
| fp 1997       | fraction     | County level fraction of noncropland pasture area relative to total cropland + noncropland pasture, 1997 |
| fp 2002       | fraction     | County level fraction of noncropland pasture area relative to total cropland + noncropland pasture, 2002 |
| fp 2007       | fraction     | County level fraction of noncropland pasture area relative to total cropland + noncropland pasture, 2007 |
| fp 2012       | fraction     | County level fraction of noncropland pasture area relative to total cropland + noncropland pasture, 2012 |
| 1-fp *fg 1987 | fraction     | Estimated county level proportion of manure P available to cropland after noncropland pasture losses, 1987 |
| 1-fp *fg 1992 | fraction     | Estimated county level proportion of manure P available to cropland after noncropland pasture losses, 1992 |
| 1-fp *fg 1997 | fraction     | Estimated county level proportion of manure P available to cropland after noncropland pasture losses, 1997 |
| 1-fp *fg 2002 | fraction     | Estimated county level proportion of manure P available to cropland after noncropland pasture losses, 2002 |
| 1-fp *fg 2007 | fraction     | Estimated county level proportion of manure P available to cropland after noncropland pasture losses, 2007 |
| 1-fp *fg 2012 | fraction     | Estimated county level proportion of manure P available to cropland after noncropland pasture losses, 2012 |

*Indicates cropland area basis instead of total area basis.
**Beef & veal, pork, poultry, lamb, eggs, milk.
### Table 2
Description of variables provided at the subregional scale.

| Variable Name | Units/Format | Description |
|---------------|--------------|-------------|
| Subregion Code | Text | Subregion Code |
| Region Name | Text | Region Name |
| Region Code | Text | Region Code |
| Number of counties | Integer | Number of counties in subregion |
| Subregion area | km² | Area of subregion |
| NAPI 1987 | kg P km⁻² yr⁻¹ | Net anthropogenic phosphorus inputs to subregions, 1987 |
| NAPI 1992 | kg P km⁻² yr⁻¹ | Net anthropogenic phosphorus inputs to subregions, 1992 |
| NAPI 1997 | kg P km⁻² yr⁻¹ | Net anthropogenic phosphorus inputs to subregions, 1997 |
| NAPI 2002 | kg P km⁻² yr⁻¹ | Net anthropogenic phosphorus inputs to subregions, 2002 |
| NAPI 2007 | kg P km⁻² yr⁻¹ | Net anthropogenic phosphorus inputs to subregions, 2007 |
| NAPI 2012 | kg P km⁻² yr⁻¹ | Net anthropogenic phosphorus inputs to subregions, 2012 |
| NFF 1987 | kg P km⁻² yr⁻¹ | Net food/feed phosphorus inputs to subregions, 1987 |
| NFF 1992 | kg P km⁻² yr⁻¹ | Net food/feed phosphorus inputs to subregions, 1992 |
| NFF 1997 | kg P km⁻² yr⁻¹ | Net food/feed phosphorus inputs to subregions, 1997 |
| NFF 2002 | kg P km⁻² yr⁻¹ | Net food/feed phosphorus inputs to subregions, 2002 |
| NFF 2007 | kg P km⁻² yr⁻¹ | Net food/feed phosphorus inputs to subregions, 2007 |
| NFF 2012 | kg P km⁻² yr⁻¹ | Net food/feed phosphorus inputs to subregions, 2012 |
| NonFEXP 1987 | kg P km⁻² yr⁻¹ | Nonfood P export from subregions, 1987 |
| NonFEXP 1992 | kg P km⁻² yr⁻¹ | Nonfood P export from subregions, 1992 |
| NonFEXP 1997 | kg P km⁻² yr⁻¹ | Nonfood P export from subregions, 1997 |
| NonFEXP 2002 | kg P km⁻² yr⁻¹ | Nonfood P export from subregions, 2002 |
| NonFEXP 2007 | kg P km⁻² yr⁻¹ | Nonfood P export from subregions, 2007 |
| NonFEXP 2012 | kg P km⁻² yr⁻¹ | Nonfood P export from subregions, 2012 |
| PFERT 1987 | kg P km⁻² yr⁻¹ | Total fertilizer phosphorus inputs to subregions, 1987 |
| PFERT 1992 | kg P km⁻² yr⁻¹ | Total fertilizer phosphorus inputs to subregions, 1992 |
| PFERT 1997 | kg P km⁻² yr⁻¹ | Total fertilizer phosphorus inputs to subregions, 1997 |
| PFERT 2002 | kg P km⁻² yr⁻¹ | Total fertilizer phosphorus inputs to subregions, 2002 |
| PFERT 2007 | kg P km⁻² yr⁻¹ | Total fertilizer phosphorus inputs to subregions, 2007 |
| PFERT 2012 | kg P km⁻² yr⁻¹ | Total fertilizer phosphorus inputs to subregions, 2012 |
| AG PFERT 1987 | kg P km⁻² yr⁻¹ | Agricultural fertilizer phosphorus inputs to subregions, 1987 |
| AG PFERT 1992 | kg P km⁻² yr⁻¹ | Agricultural fertilizer phosphorus inputs to subregions, 1992 |
| AG PFERT 1997 | kg P km⁻² yr⁻¹ | Agricultural fertilizer phosphorus inputs to subregions, 1997 |

(continued on next page)
| Variable Name | Units/Format | Description |
|---------------|--------------|-------------|
| AG PFERT 2002 | kg P km\(^{-2}\) yr\(^{-1}\) | Agricultural fertilizer phosphorus inputs to subregions, 2002 |
| AG PFERT 2007 | kg P km\(^{-2}\) yr\(^{-1}\) | Agricultural fertilizer phosphorus inputs to subregions, 2007 |
| AG PFERT 2012 | kg P km\(^{-2}\) yr\(^{-1}\) | Agricultural fertilizer phosphorus inputs to subregions, 2012 |
| Subregion area | km\(^2\) | Subregion area |
| TOTAL CROPLAND AREA 1987 | km\(^2\) | Total subregional cropland area, 1987 |
| TOTAL CROPLAND AREA 1992 | km\(^2\) | Total subregional cropland area, 1992 |
| TOTAL CROPLAND AREA 1997 | km\(^2\) | Total subregional cropland area, 1997 |
| TOTAL CROPLAND AREA 2002 | km\(^2\) | Total subregional cropland area, 2002 |
| TOTAL CROPLAND AREA 2007 | km\(^2\) | Total subregional cropland area, 2007 |
| TOTAL CROPLAND AREA 2012 | km\(^2\) | Total subregional cropland area, 2012 |
| Y\(\text{P}\), CROP P/TOTAL AREA 1987 | kg P km\(^{-2}\) yr\(^{-1}\) | P content of crops per area of subregion, 1987 |
| Y\(\text{P}\), CROP P/TOTAL AREA 1992 | kg P km\(^{-2}\) yr\(^{-1}\) | P content of crops per area of subregion, 1992 |
| Y\(\text{P}\), CROP P/TOTAL AREA 1997 | kg P km\(^{-2}\) yr\(^{-1}\) | P content of crops per area of subregion, 1997 |
| Y\(\text{P}\), CROP P/TOTAL AREA 2002 | kg P km\(^{-2}\) yr\(^{-1}\) | P content of crops per area of subregion, 2002 |
| Y\(\text{P}\), CROP P/TOTAL AREA 2007 | kg P km\(^{-2}\) yr\(^{-1}\) | P content of crops per area of subregion, 2007 |
| Y\(\text{P}\), CROP P/TOTAL AREA 2012 | kg P km\(^{-2}\) yr\(^{-1}\) | P content of crops per area of subregion, 2012 |
| Y\(\text{P}\), CROP P/CROPLAND AREA 1987 | kg P km\(^{-2}\) yr\(^{-1}\) | P content of crops per subregional cropland area, 1987 |
| Y\(\text{P}\), CROP P/CROPLAND AREA 1992 | kg P km\(^{-2}\) yr\(^{-1}\) | P content of crops per subregional cropland area, 1992 |
| Y\(\text{P}\), CROP P/CROPLAND AREA 1997 | kg P km\(^{-2}\) yr\(^{-1}\) | P content of crops per subregional cropland area, 1997 |
| Y\(\text{P}\), CROP P/CROPLAND AREA 2002 | kg P km\(^{-2}\) yr\(^{-1}\) | P content of crops per subregional cropland area, 2002 |
| Y\(\text{P}\), CROP P/CROPLAND AREA 2007 | kg P km\(^{-2}\) yr\(^{-1}\) | P content of crops per subregional cropland area, 2007 |
| Y\(\text{P}\), CROP P/CROPLAND AREA 2012 | kg P km\(^{-2}\) yr\(^{-1}\) | P content of crops per subregional cropland area, 2012 |
| AG PFERT/CROPLAND AREA 1987 | kg P km\(^{-2}\) yr\(^{-1}\) | Agricultural fertilizer phosphorus inputs to subregions per area of subregional cropland, 1987 |
| AG PFERT/CROPLAND AREA 1992 | kg P km\(^{-2}\) yr\(^{-1}\) | Agricultural fertilizer phosphorus inputs to subregions per area of subregional cropland, 1992 |
| AG PFERT/CROPLAND AREA 1997 | kg P km\(^{-2}\) yr\(^{-1}\) | Agricultural fertilizer phosphorus inputs to subregions per area of subregional cropland, 1997 |
| AG PFERT/CROPLAND AREA 2002 | kg P km\(^{-2}\) yr\(^{-1}\) | Agricultural fertilizer phosphorus inputs to subregions per area of subregional cropland, 2002 |
| AG PFERT/CROPLAND AREA 2007 | kg P km\(^{-2}\) yr\(^{-1}\) | Agricultural fertilizer phosphorus inputs to subregions per area of subregional cropland, 2007 |
| AG PFERT/CROPLAND AREA 2012 | kg P km\(^{-2}\) yr\(^{-1}\) | Agricultural fertilizer phosphorus inputs to subregions per area of subregional cropland, 2012 |
| Pop, 1987 | individuals | Subregional population, 1987 |
| Pop, 1992 | individuals | Subregional population, 1992 |
| Pop, 1997 | individuals | Subregional population, 1997 |
| Pop, 2002 | individuals | Subregional population, 2002 |
| Pop, 2007 | individuals | Subregional population, 2007 |
| Pop, 2012 | individuals | Subregional population, 2012 |
Table 2 (continued)

| Variable Name                  | Units/Format | Description                                                                 |
|--------------------------------|--------------|----------------------------------------------------------------------------|
| PEXCR/TOT AREA 1987            | kg P km⁻² yr⁻¹ | Livestock P excretion per total subregion area, 1987                        |
| PEXCR/TOT AREA 1992            | kg P km⁻² yr⁻¹ | Livestock P excretion per total subregion area, 1992                        |
| PEXCR/TOT AREA 1997            | kg P km⁻² yr⁻¹ | Livestock P excretion per total subregion area, 1997                        |
| PEXCR/TOT AREA 2002            | kg P km⁻² yr⁻¹ | Livestock P excretion per total subregion area, 2002                        |
| PEXCR/TOT AREA 2007            | kg P km⁻² yr⁻¹ | Livestock P excretion per total subregion area, 2007                        |
| PEXCR/TOT AREA 2012            | kg P km⁻² yr⁻¹ | Livestock P excretion per total subregion area, 2012                        |
| PEXCR/CROPLAND AREA 1987       | kg P km⁻² yr⁻¹ | Livestock P excretion per subregional cropland area, 1987                   |
| PEXCR/CROPLAND AREA 1992       | kg P km⁻² yr⁻¹ | Livestock P excretion per subregional cropland area, 1992                   |
| PEXCR/CROPLAND AREA 1997       | kg P km⁻² yr⁻¹ | Livestock P excretion per subregional cropland area, 1997                   |
| PEXCR/CROPLAND AREA 2002       | kg P km⁻² yr⁻¹ | Livestock P excretion per subregional cropland area, 2002                   |
| PEXCR/CROPLAND AREA 2007       | kg P km⁻² yr⁻¹ | Livestock P excretion per subregional cropland area, 2007                   |
| PEXCR/CROPLAND AREA 2012       | kg P km⁻² yr⁻¹ | Livestock P excretion per subregional cropland area, 2012                   |
| IP, 1987                       | kg P km⁻² yr⁻¹ | Total ag P inputs per cropland area, 1987                                  |
| IP, 1992                       | kg P km⁻² yr⁻¹ | Total ag P inputs per cropland area, 1992                                  |
| IP, 1997                       | kg P km⁻² yr⁻¹ | Total ag P inputs per cropland area, 1997                                  |
| IP, 2002                       | kg P km⁻² yr⁻¹ | Total ag P inputs per cropland area, 2002                                  |
| IP, 2007                       | kg P km⁻² yr⁻¹ | Total ag P inputs per cropland area, 2007                                  |
| IP, 2012                       | kg P km⁻² yr⁻¹ | Total ag P inputs per cropland area, 2012                                  |
| IP’, 1987                      | kg P km⁻² yr⁻¹ | Total ag P inputs per subregion area, 1987                                 |
| IP’, 1992                      | kg P km⁻² yr⁻¹ | Total ag P inputs per subregion area, 1992                                 |
| IP’, 1997                      | kg P km⁻² yr⁻¹ | Total ag P inputs per subregion area, 1997                                 |
| IP’, 2002                      | kg P km⁻² yr⁻¹ | Total ag P inputs per subregion area, 2002                                 |
| IP’, 2007                      | kg P km⁻² yr⁻¹ | Total ag P inputs per subregion area, 2007                                 |
| IP’, 2012                      | kg P km⁻² yr⁻¹ | Total ag P inputs per subregion area, 2012                                 |
| PUE, 1987                      | %             | Phosphorus Use Efficiency, Y/I, 1987                                       |
| PUE, 1992                      | %             | Phosphorus Use Efficiency, Y/I, 1992                                       |
| PUE, 1997                      | %             | Phosphorus Use Efficiency, Y/I, 1997                                       |
| PUE, 2002                      | %             | Phosphorus Use Efficiency, Y/I, 2002                                       |
| PUE, 2007                      | %             | Phosphorus Use Efficiency, Y/I, 2007                                       |
| PFERT%, 1987                   | %             | Ag P fertilizer as % of total subregional P input, 1987                     |
| PFERT%, 1992                   | %             | Ag P fertilizer as % of total subregional P input, 1992                     |
| PFERT%, 1997                   | %             | Ag P fertilizer as % of total subregional P input, 1997                     |
| PFERT%, 2002                   | %             | Ag P fertilizer as % of total subregional P input, 2002                     |
| PFERT%, 2007                   | %             | Ag P fertilizer as % of total subregional P input, 2007                     |
| PFERT%, 2012                   | %             | Ag P fertilizer as % of total subregional P input, 2012                     |

(continued on next page)
| Variable Name | Units/Format | Description |
|---------------|--------------|-------------|
| PEXCR%, 1987  | % Livestock P excr. % of total subregional P input, 1987 |
| PEXCR%, 1992  | % Livestock P excr. % of total subregional P input, 1992 |
| PEXCR%, 1997  | % Livestock P excr. % of total subregional P input, 1997 |
| PEXCR%, 2002  | % Livestock P excr. % of total subregional P input, 2002 |
| PEXCR%, 2007  | % Livestock P excr. % of total subregional P input, 2007 |
| PEXCR%, 2012  | % Livestock P excr. % of total subregional P input, 2012 |
| LP 1987**    | kg P km⁻² yr⁻¹ Production (P) of livestock products in subregions, 1987 |
| LP 1992**    | kg P km⁻² yr⁻¹ Production (P) of livestock products in subregions, 1992 |
| LP 1997**    | kg P km⁻² yr⁻¹ Production (P) of livestock products in subregions, 1997 |
| LP 2002**    | kg P km⁻² yr⁻¹ Production (P) of livestock products in subregions, 2002 |
| LP 2007**    | kg P km⁻² yr⁻¹ Production (P) of livestock products in subregions, 2007 |
| LP 2012**    | kg P km⁻² yr⁻¹ Production (P) of livestock products in subregions, 2012 |
| NONCROPAND PAST AREA | km² Subregional noncropland pasture area, 1987 |
| NONCROPAND PAST AREA | km² Subregional noncropland pasture area, 1992 |
| NONCROPAND PAST AREA | km² Subregional noncropland pasture area, 1997 |
| NONCROPAND PAST AREA | km² Subregional noncropland pasture area, 2002 |
| NONCROPAND PAST AREA | km² Subregional noncropland pasture area, 2007 |
| NONCROPAND PAST AREA | km² Subregional noncropland pasture area, 2012 |
| fg 1987      | fraction Subregional fraction of manure P from grazers, 1987 |
| fg 1992      | fraction Subregional fraction of manure P from grazers, 1992 |
| fg 1997      | fraction Subregional fraction of manure P from grazers, 1997 |
| fg 2002      | fraction Subregional fraction of manure P from grazers, 2002 |
| fg 2007      | fraction Subregional fraction of manure P from grazers, 2007 |
| fg 2012      | fraction Subregional fraction of manure P from grazers, 2012 |
| fp 1987      | fraction Subregional fraction of noncropland pasture area relative to total cropland + noncropland pasture, 1987 |
| fp 1992      | fraction Subregional fraction of noncropland pasture area relative to total cropland + noncropland pasture, 1992 |
| fp 1997      | fraction Subregional fraction of noncropland pasture area relative to total cropland + noncropland pasture, 1997 |
| fp 2002      | fraction Subregional fraction of noncropland pasture area relative to total cropland + noncropland pasture, 2002 |
| fp 2007      | fraction Subregional fraction of noncropland pasture area relative to total cropland + noncropland pasture, 2007 |
| fp 2012      | fraction Subregional fraction of noncropland pasture area relative to total cropland + noncropland pasture, 2012 |
| 1-fp *fg 1987 | fraction Estimated subregional proportion of manure P available to cropland after noncropland pasture losses, 1987 |
| 1-fp *fg 1992 | fraction Estimated subregional proportion of manure P available to cropland after noncropland pasture losses, 1992 |
| 1-fp *fg 1997 | fraction Estimated subregional proportion of manure P available to cropland after noncropland pasture losses, 1997 |
| 1-fp *fg 2002 | fraction Estimated subregional proportion of manure P available to cropland after noncropland pasture losses, 2002 |
| 1-fp *fg 2007 | fraction Estimated subregional proportion of manure P available to cropland after noncropland pasture losses, 2007 |
| 1-fp*fg 2012 | fraction Estimated subregional proportion of manure P available to cropland after noncropland pasture losses, 2012 |

*Indicates cropland area basis instead of total area basis.
**Beef & veal, pork, poultry, lamb, eggs, milk.
| Variable Name              | Units/Format | Description                                                                 |
|----------------------------|--------------|------------------------------------------------------------------------------|
| Region Name                | Text         | Region Name                                                                  |
| Region Code                | Text         | Region Code                                                                  |
| Region Area                | km²          | Area of region                                                                |
| NAPI 1987                  | kg P km⁻² yr⁻¹ | Net anthropogenic phosphorus inputs to regions, 1987                          |
| NAPI 1992                  | kg P km⁻² yr⁻¹ | Net anthropogenic phosphorus inputs to regions, 1992                          |
| NAPI 1997                  | kg P km⁻² yr⁻¹ | Net anthropogenic phosphorus inputs to regions, 1997                          |
| NAPI 2002                  | kg P km⁻² yr⁻¹ | Net anthropogenic phosphorus inputs to regions, 2002                          |
| NAPI 2007                  | kg P km⁻² yr⁻¹ | Net anthropogenic phosphorus inputs to regions, 2007                          |
| NAPI 2012                  | kg P km⁻² yr⁻¹ | Net anthropogenic phosphorus inputs to regions, 2012                          |
| NFF 1987                   | kg P km⁻² yr⁻¹ | Net food/feed phosphorus inputs to regions, 1987                             |
| NFF 1992                   | kg P km⁻² yr⁻¹ | Net food/feed phosphorus inputs to regions, 1992                             |
| NFF 1997                   | kg P km⁻² yr⁻¹ | Net food/feed phosphorus inputs to regions, 1997                             |
| NFF 2002                   | kg P km⁻² yr⁻¹ | Net food/feed phosphorus inputs to regions, 2002                             |
| NFF 2007                   | kg P km⁻² yr⁻¹ | Net food/feed phosphorus inputs to regions, 2007                             |
| NFF 2012                   | kg P km⁻² yr⁻¹ | Net food/feed phosphorus inputs to regions, 2012                             |
| NonFEXP 1987               | kg P km⁻² yr⁻¹ | Nonfood P export from regions, 1987                                           |
| NonFEXP 1992               | kg P km⁻² yr⁻¹ | Nonfood P export from regions, 1992                                           |
| NonFEXP 1997               | kg P km⁻² yr⁻¹ | Nonfood P export from regions, 1997                                           |
| NonFEXP 2002               | kg P km⁻² yr⁻¹ | Nonfood P export from regions, 2002                                           |
| NonFEXP 2007               | kg P km⁻² yr⁻¹ | Nonfood P export from regions, 2007                                           |
| NonFEXP 2012               | kg P km⁻² yr⁻¹ | Nonfood P export from regions, 2012                                           |
| PFERT 1987                 | kg P km⁻² yr⁻¹ | Total fertilizer phosphorus inputs to regions, 1987                          |
| PFERT 1992                 | kg P km⁻² yr⁻¹ | Total fertilizer phosphorus inputs to regions, 1992                          |
| PFERT 1997                 | kg P km⁻² yr⁻¹ | Total fertilizer phosphorus inputs to regions, 1997                          |
| PFERT 2002                 | kg P km⁻² yr⁻¹ | Total fertilizer phosphorus inputs to regions, 2002                          |
| PFERT 2007                 | kg P km⁻² yr⁻¹ | Total fertilizer phosphorus inputs to regions, 2007                          |
| PFERT 2012                 | kg P km⁻² yr⁻¹ | Total fertilizer phosphorus inputs to regions, 2012                          |
| AG PFERT 1987              | kg P km⁻² yr⁻¹ | Agricultural fertilizer phosphorus inputs to regions, 1987                    |
| AG PFERT 1992              | kg P km⁻² yr⁻¹ | Agricultural fertilizer phosphorus inputs to regions, 1992                    |
| AG PFERT 1997              | kg P km⁻² yr⁻¹ | Agricultural fertilizer phosphorus inputs to regions, 1997                    |
| AG PFERT 2002              | kg P km⁻² yr⁻¹ | Agricultural fertilizer phosphorus inputs to regions, 2002                    |

(continued on next page)
| Variable Name                       | Units/Format | Description                                                                 |
|-------------------------------------|--------------|-----------------------------------------------------------------------------|
| AG PFERT 2007                       | kg P km^{-2} yr^{-1} | Agricultural fertilizer phosphorus inputs to regions, 2007                  |
| AG PFERT 2012                       | kg P km^{-2} yr^{-1} | Agricultural fertilizer phosphorus inputs to regions, 2012                  |
| region area                         | km²           | region area                                                                 |
| TOTAL CROPLAND AREA 1987            | km²           | Total regional cropland area, 1987                                          |
| TOTAL CROPLAND AREA 1992            | km²           | Total regional cropland area, 1992                                          |
| TOTAL CROPLAND AREA 1997            | km²           | Total regional cropland area, 1997                                          |
| TOTAL CROPLAND AREA 2002            | km²           | Total regional cropland area, 2002                                          |
| TOTAL CROPLAND AREA 2007            | km²           | Total regional cropland area, 2007                                          |
| TOTAL CROPLAND AREA 2012            | km²           | Total regional cropland area, 2012                                          |
| Y_P, CROP P/TOT AREA 1987           | kg P km^{-2} yr^{-1} | P content of crops per area of region, 1987                                  |
| Y_P, CROP P/TOT AREA 1992           | kg P km^{-2} yr^{-1} | P content of crops per area of region, 1992                                  |
| Y_P, CROP P/TOT AREA 1997           | kg P km^{-2} yr^{-1} | P content of crops per area of region, 1997                                  |
| Y_P, CROP P/TOT AREA 2002           | kg P km^{-2} yr^{-1} | P content of crops per area of region, 2002                                  |
| Y_P, CROP P/TOT AREA 2007           | kg P km^{-2} yr^{-1} | P content of crops per area of region, 2007                                  |
| Y_P, CROP P/TOT AREA 2012           | kg P km^{-2} yr^{-1} | P content of crops per area of region, 2012                                  |
| Y_P, CROP P/CROPLAND AREA 1987      | kg P km^{-2} yr^{-1} | P content of crops per regional cropland area, 1987                         |
| Y_P, CROP P/CROPLAND AREA 1992      | kg P km^{-2} yr^{-1} | P content of crops per regional cropland area, 1992                         |
| Y_P, CROP P/CROPLAND AREA 1997      | kg P km^{-2} yr^{-1} | P content of crops per regional cropland area, 1997                         |
| Y_P, CROP P/CROPLAND AREA 2002      | kg P km^{-2} yr^{-1} | P content of crops per regional cropland area, 2002                         |
| Y_P, CROP P/CROPLAND AREA 2007      | kg P km^{-2} yr^{-1} | P content of crops per regional cropland area, 2007                         |
| Y_P, CROP P/CROPLAND AREA 2012      | kg P km^{-2} yr^{-1} | P content of crops per regional cropland area, 2012                         |
| AG PFERT/CROPLAND AREA, 1987        | kg P km^{-2} yr^{-1} | Agricultural fertilizer phosphorus inputs to regions per area of regional cropland, 1987 |
| AG PFERT/CROPLAND AREA, 1992        | kg P km^{-2} yr^{-1} | Agricultural fertilizer phosphorus inputs to regions per area of regional cropland, 1992 |
| AG PFERT/CROPLAND AREA, 1997        | kg P km^{-2} yr^{-1} | Agricultural fertilizer phosphorus inputs to regions per area of regional cropland, 1997 |
| AG PFERT/CROPLAND AREA, 2002        | kg P km^{-2} yr^{-1} | Agricultural fertilizer phosphorus inputs to regions per area of regional cropland, 2002 |
| AG PFERT/CROPLAND AREA, 2007        | kg P km^{-2} yr^{-1} | Agricultural fertilizer phosphorus inputs to regions per area of regional cropland, 2007 |
| AG PFERT/CROPLAND AREA, 2012        | kg P km^{-2} yr^{-1} | Agricultural fertilizer phosphorus inputs to regions per area of regional cropland, 2012 |
| Pop, 1987                           | individuals   | Regional population, 1987                                                  |
| Pop, 1992                           | individuals   | Regional population, 1992                                                  |
| Pop, 1997                           | individuals   | Regional population, 1997                                                  |
| Pop, 2002                           | individuals   | Regional population, 2002                                                  |
| Pop, 2007                           | individuals   | Regional population, 2007                                                  |
| Pop, 2012                           | individuals   | Regional population, 2012                                                  |
| PEXCR/TOT AREA 1987                 | kg P km^{-2} yr^{-1} | Livestock P excretion per total region area, 1987                         |
| Variable Name                  | Units/Format                      | Description                                           |
|-------------------------------|-----------------------------------|-------------------------------------------------------|
| PEXCR/TOT AREA 1992           | kg P km⁻² yr⁻¹                   | Livestock P excretion per total region area, 1992     |
| PEXCR/TOT AREA 1997           | kg P km⁻² yr⁻¹                   | Livestock P excretion per total region area, 1997     |
| PEXCR/TOT AREA 2002           | kg P km⁻² yr⁻¹                   | Livestock P excretion per total region area, 2002     |
| PEXCR/TOT AREA 2007           | kg P km⁻² yr⁻¹                   | Livestock P excretion per total region area, 2007     |
| PEXCR/TOT AREA 2012           | kg P km⁻² yr⁻¹                   | Livestock P excretion per total region area, 2012     |
| PEXCR/CROPLAND AREA 1987      | kg P km⁻² yr⁻¹                   | Livestock P excretion per regional cropland area, 1987|
| PEXCR/CROPLAND AREA 1992      | kg P km⁻² yr⁻¹                   | Livestock P excretion per regional cropland area, 1992|
| PEXCR/CROPLAND AREA 1997      | kg P km⁻² yr⁻¹                   | Livestock P excretion per regional cropland area, 1997|
| PEXCR/CROPLAND AREA 2002      | kg P km⁻² yr⁻¹                   | Livestock P excretion per regional cropland area, 2002|
| PEXCR/CROPLAND AREA 2007      | kg P km⁻² yr⁻¹                   | Livestock P excretion per regional cropland area, 2007|
| PEXCR/CROPLAND AREA 2012      | kg P km⁻² yr⁻¹                   | Livestock P excretion per regional cropland area, 2012|
| IP, 1987                      | kg P km⁻² yr⁻¹                   | Total ag P inputs per cropland area, 1987             |
| IP, 1992                      | kg P km⁻² yr⁻¹                   | Total ag P inputs per cropland area, 1992             |
| IP, 1997                      | kg P km⁻² yr⁻¹                   | Total ag P inputs per cropland area, 1997             |
| IP, 2002                      | kg P km⁻² yr⁻¹                   | Total ag P inputs per cropland area, 2002             |
| IP, 2007                      | kg P km⁻² yr⁻¹                   | Total ag P inputs per cropland area, 2007             |
| IP, 2012                      | kg P km⁻² yr⁻¹                   | Total ag P inputs per cropland area, 2012             |
| Ip, 1987                      | kg P km⁻² yr⁻¹                   | Total ag P inputs per regional area, 1987             |
| Ip, 1992                      | kg P km⁻² yr⁻¹                   | Total ag P inputs per regional area, 1992             |
| Ip, 1997                      | kg P km⁻² yr⁻¹                   | Total ag P inputs per regional area, 1997             |
| Ip, 2002                      | kg P km⁻² yr⁻¹                   | Total ag P inputs per regional area, 2002             |
| Ip, 2007                      | kg P km⁻² yr⁻¹                   | Total ag P inputs per regional area, 2007             |
| Ip, 2012                      | kg P km⁻² yr⁻¹                   | Total ag P inputs per regional area, 2012             |
| PUE, 1987                     | %                                | Phosphorus Use Efficiency, Y/I, 1987                  |
| PUE, 1992                     | %                                | Phosphorus Use Efficiency, Y/I, 1992                  |
| PUE, 1997                     | %                                | Phosphorus Use Efficiency, Y/I, 1997                  |
| PUE, 2002                     | %                                | Phosphorus Use Efficiency, Y/I, 2002                  |
| PUE, 2007                     | %                                | Phosphorus Use Efficiency, Y/I, 2007                  |
| PUE, 2012                     | %                                | Phosphorus Use Efficiency, Y/I, 2012                  |
| Sₚ, 1987                      | kg P km⁻² yr⁻¹                   | Cropland P surplus/deficit, 1987                      |
| Sₚ, 1992                      | kg P km⁻² yr⁻¹                   | Cropland P surplus/deficit, 1992                      |
| Sₚ, 1997                      | kg P km⁻² yr⁻¹                   | Cropland P surplus/deficit, 1997                      |
| Sₚ, 2002                      | kg P km⁻² yr⁻¹                   | Cropland P surplus/deficit, 2002                      |
| Variable Name | Units/Format | Description |
|---------------|--------------|-------------|
| SP, 2007      | kg P km\(^{-2}\) yr\(^{-1}\) | Cropland P surplus/deficit, 2007 |
| SP, 2012      | kg P km\(^{-2}\) yr\(^{-1}\) | Cropland P surplus/deficit, 2012 |
| PFERT%, 1987  | %            | Ag P fertilizer as % of total regional P input, 1987 |
| PFERT%, 1992  | %            | Ag P fertilizer as % of total regional P input, 1992 |
| PFERT%, 1997  | %            | Ag P fertilizer as % of total regional P input, 1997 |
| PFERT%, 2002  | %            | Ag P fertilizer as % of total regional P input, 2002 |
| PFERT%, 2007  | %            | Ag P fertilizer as % of total regional P input, 2007 |
| PFERT%, 2012  | %            | Ag P fertilizer as % of total regional P input, 2012 |
| PEXCR%, 1987  | %            | Livestock P excr. % of total regional P input, 1987 |
| PEXCR%, 1992  | %            | Livestock P excr. % of total regional P input, 1992 |
| PEXCR%, 1997  | %            | Livestock P excr. % of total regional P input, 1997 |
| PEXCR%, 2002  | %            | Livestock P excr. % of total regional P input, 2002 |
| PEXCR%, 2007  | %            | Livestock P excr. % of total regional P input, 2007 |
| PEXCR%, 2012  | %            | Livestock P excr. % of total regional P input, 2012 |
| LP 1987**     | kg P km\(^{-2}\) yr\(^{-1}\) | Production (P) of livestock products in regions, 1987 |
| LP 1992**     | kg P km\(^{-2}\) yr\(^{-1}\) | Production (P) of livestock products in regions, 1992 |
| LP 1997**     | kg P km\(^{-2}\) yr\(^{-1}\) | Production (P) of livestock products in regions, 1997 |
| LP 2002**     | kg P km\(^{-2}\) yr\(^{-1}\) | Production (P) of livestock products in regions, 2002 |
| LP 2007**     | kg P km\(^{-2}\) yr\(^{-1}\) | Production (P) of livestock products in regions, 2007 |
| LP 2012**     | kg P km\(^{-2}\) yr\(^{-1}\) | Production (P) of livestock products in regions, 2012 |
| NONCROPAND PAST AREA 1987 | km\(^2\) | Regional noncropland pasture area, 1987 |
| NONCROPAND PAST AREA 1992 | km\(^2\) | Regional noncropland pasture area, 1992 |
| NONCROPAND PAST AREA 1997 | km\(^2\) | Regional noncropland pasture area, 1997 |
| NONCROPAND PAST AREA 2002 | km\(^2\) | Regional noncropland pasture area, 2002 |
| NONCROPAND PAST AREA 2007 | km\(^2\) | Regional noncropland pasture area, 2007 |
| NONCROPAND PAST AREA 2012 | km\(^2\) | Regional noncropland pasture area, 2012 |
| fg 1987       | fraction     | Regional fraction of manure P from grazers, 1987 |
| fg 1992       | fraction     | Regional fraction of manure P from grazers, 1992 |
| fg 1997       | fraction     | Regional fraction of manure P from grazers, 1997 |
| fg 2002       | fraction     | Regional fraction of manure P from grazers, 2002 |
| fg 2007       | fraction     | Regional fraction of manure P from grazers, 2007 |
| fg 2012       | fraction     | Regional fraction of manure P from grazers, 2012 |
| fp 1987       | fraction     | Regional fraction of noncropland pasture area relative to total cropland + noncropland pasture, 1987 |
| fp 1992       | fraction     | Regional fraction of noncropland pasture area relative to total cropland + noncropland pasture, 1992 |
| fp 1997       | fraction     | Regional fraction of noncropland pasture area relative to total cropland + noncropland pasture, 1997 |
| fp 2002       | fraction     | Regional fraction of noncropland pasture area relative to total cropland + noncropland pasture, 2002 |
| fp 2007       | fraction     | Regional fraction of noncropland pasture area relative to total cropland + noncropland pasture, 2007 |
| fp 2012       | fraction     | Regional fraction of noncropland pasture area relative to total cropland + noncropland pasture, 2012 |
| 1-fp *fg 1987 | fraction     | Estimated regional proportion of manure P available to cropland after noncropland pasture losses, 1987 |
| 1-fp *fg 1992 | fraction     | Estimated regional proportion of manure P available to cropland after noncropland pasture losses, 1992 |
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Conflict of interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.dib.2019.104265.

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