

MIGRANT AND SEASONAL FARMWORKER  
ENUMERATION PROFILES STUDY

IDAHO

FINAL

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# DOCUMENT DESCRIPTION

## IDAHO MSFW ENUMERATION PROFILES STUDY

### A. BACKGROUND

There is a constant need for accurate and current estimates of the migrant and seasonal farmworker (MSFW) population in Idaho. Many organizations and government agencies who work with this target group use such information in provision of services, planning, policy setting, health care support, regulatory assistance, identification of unserved areas, agricultural production, determining if resources are appropriate to the need and many other areas.

Estimating MSFWs is extremely difficult and no current source provides reliable information, particularly for population figures at the county level. The last such effort which included Idaho, *An Atlas of State Profiles Which Estimate Number of Migrant and Seasonal Farmworkers and Members of Their Families*, was developed by the Migrant Health Program of the Bureau of Primary Health Care, U.S. Department of Health and Human Services in 1990. There is a strong sense that conditions in Idaho have changed in the past fifteen years.

The Migrant Health Program completed a limited update of their earlier work in September, 2000 covering only ten states. The *Migrant and Seasonal Farmworker Enumeration Profiles Study* has been widely circulated, reviewed and gained general acceptance as a reasonable approach to estimating this population. In 2002, a coalition of organizations in Oregon funded a similar study for that state.

In 2004, the Idaho Primary Care Association engaged Larson Assistance Services, Alice C. Larson, Ph.D., author of the 2000 *Enumeration Profiles Study* and the Oregon report, to conduct a similar effort in their state. The Idaho study is designed to be comparable to the other eleven *Enumeration Profiles Study* reports. An informal Advisory Group composed of service and regulatory agencies in Idaho has been involved in the study and has assisted in data gathering.

### B. STUDY PURPOSE

The *Idaho MSFW Enumeration Profiles Study* (ID-MSFW EPS) offers state-

based information at the county level for the following three population sub-groups:

- Migrant farmworkers and seasonal farmworkers.
- Non-farmworkers present in the same household as migrant farmworkers and seasonal farmworkers (defined by the term “accompanied”).
- Number of people (“children and youth”) under age 20 in six age groups.

Included in the scope of study are individuals engaged in field and orchard agriculture; packing and sorting procedures in food processing; horticultural specialties (including nursery operations, greenhouse activities and crops grown under cover); and reforestation (tree planting). Excluded from study are those working with livestock, poultry, dairy, fisheries, ranching activities, operating equipment associated with farming or driving trucks transporting agricultural products.

## **C. DEFINITIONS**

### **1. Migrant and Seasonal Farmworkers (MSFWs)**

The MSFW definition used for this study is that of the Migrant Health Program. It describes a seasonal farmworker as:

“An individual whose principal employment [51% of time] is in agriculture on a seasonal basis, who has been so employed within the last twenty-four months.”

A migrant farmworker meets the same definition but “establishes for the purposes of such employment a temporary abode.” (*U.S. Code*, Public Health Services Act, “Migrant Health”)

### **2. Industries Included in the Estimates**

Each of three major industry groups for which estimates were developed was defined by a specific North American Industrial Classification System (NAICS) Code (a system for identifying every industry and sub-industry). Such categorization was often found to be useful in the ID-MSFW EPS for extracting information from established databases.

### **a. Field Agriculture**

Field agriculture is included in NAICS identification 111, “crop production,” under the general category “agriculture” (code 11). Additionally, several smaller NAICS subcategories are considered field agriculture, including: 115112 “soil preparation, planting and cultivating,” and 115114 “other post harvest crop activities.”

### **b. Nursery/Greenhouse**

The NAICS code 1114 defines “greenhouse and nursery production.” This falls within the broader “crop production” classification mentioned above.

### **c. Food Processing**

Food processing is defined broadly in NAICS 3114, “fruit and vegetable preserving and specialty.”

### **d. Reforestation**

Reforestation falls within NAICS 1153, “support activities for forestry.”

## **3. Demand for Labor Method**

One of the primary techniques used looked at the jobs that employ MSFWs. These “job” figures were then converted into employed “individuals.” This methodology is labeled “demand-for-labor” (DFL) and is more fully described in Section F “Enumeration Methodology.”

## **D. LIMITATIONS**

This study is limited in scope in that only secondary source material, including existing database information, and knowledgeable individuals, have been utilized to generate information. This has meant taking reports and databases prepared for other purposes and adjusting them, as possible, for the ID-MSFW EPS. Limited resources and time have prohibited primary research directly with farmworkers.

In addition, by employing only secondary source information, the definition of who is included as a migrant or seasonal farmworker is often tied to the

limitations of the generating source. Wherever possible, screens were used to exclude those not covered by the study definition.

## **E. GENERAL PROCESS**

### **1. Basic Investigation Techniques**

This study involves six major steps:

- (1) Mass mailing seeking relevant information and sources.
- (2) Basic data gathering and clarification of information.
- (3) Preparation of Draft (estimates, methodology, tables, maps).
- (4) Review of Draft by local knowledgeable individuals
- (5) Revision of Draft as necessary including conducting additional research.
- (6) Issuance of the Final ID-MSFW EPS report.

### **2. National Databases**

Information in one national database was analyzed specifically for this study. It represents the largest continuous direct surveys of MSFWs in the country.

The National Agricultural Workers Survey (NAWS) of the U.S. Department of Labor (coordinated by Aguirre International) is a survey conducted three times annually gathering similar information through random selection of targeted counties, employers and subjects. Data gathered includes basic demographics, family characteristics, and work history. This survey has been conducted continuously since 1989.

Data for the latest available five-year period (1996-2000) were used in the ID-MSFW EPS, as found in the NAWS Public Access Database. This included over 13,000 respondents with data weighted for sampling disparities. Both national and Northwest Region information were examined. This Region includes the states of Idaho, Colorado, Montana, Nevada, Oregon, Utah, Washington, and Wyoming.

Although coverage is extensive, this source has its limitations with results appearing weaker the further the information is pared down; i.e., less reliable at the regional than the national level.

Two other national data bases were examined and utilized where possible to provide additional information.

The Census of Agriculture (COA) from the U.S. Department of Agriculture (past COAs were developed by the Bureau of the Census) is a direct survey of agricultural producers conducted every five years. It asks a variety of information about the components of production including crops grown and acreage involved. The results are offered down to a county level. Primarily, information from the 2002 COA was used in the ID-MSFW EPS, although 1997 data were also examined to assess agricultural production trends.

ES 202 (information for “covered employment”) is a database kept by the U.S. Department of Labor from employment and wage information submitted through each state for workers covered by the state Unemployment Insurance system. These data, classed in industries and sub-industries by NAICS, are available as monthly summaries at the county level.

Unfortunately, it was found that much of the ES 202 information needed for the ID-MSFW EPS was not publicly reported at the county monthly level. This occurs as a protection for respondents when three or fewer producers make up the only reporting units within a geographic area. Additionally, many MSFWs estimated through the ID-MSFW EPS would not be covered under Idaho’s Unemployment Insurance system and therefore are not included in this database. In fact, the Idaho Department of Commerce and Labor estimates that only 45-55% of all agricultural employers are included in this source as the others do not meet the quarterly requirements for hiring at least ten workers or distributing at least \$20,000 in payroll (Campbell, 2005). Generally, ES 202 data were utilized only when there were no other alternatives.

### **3. Specific Steps in Development of Estimates**

Work began with a mass mailing to 82 identified service organizations assisting MSFWs, government agencies involved with agriculture, farm employer and crop commodity groups, members of a special interagency MSFW committee and others. These included: migrant health centers, the primary care association, the migrant education program, the migrant head start program, legal services, the MSFW job training program, housing assistance centers, grower associations, the extension service of the state land grant university and other agents. State government offices involved with agriculture, education, employment, health, labor and welfare were contacted. Additionally, information was distributed to 32 members of the Idaho Hispanic Profile Project Advisory Group of the Idaho.

Each participant was sent an introductory letter and questionnaire listing study factors for which information was sought. They were asked to provide anything they might have directly or list other resource documents or personnel.

Contacts were made with individuals mentioned by survey respondents as well as with many others known to the researchers. This involved a variety of programs and agencies who were asked for specific information such as client-related demographics, enrollment data, crop production figures and acreage statistics. Additional individuals were reached to help clarify issues of agricultural production or further assess a source of information. Although many different individuals, agencies, organizations and businesses were contacted, the list is in no way exhaustive of all of those involved with agriculture and MSFWs in Idaho. It is expected most of the key knowledgeable individuals were reached, many of whom were identified by questionnaire respondents.

A thorough search of related internet sites was undertaken including those specific to the Idaho Department of Agriculture, Idaho Department of Commerce and Labor, Idaho Agricultural Statistics Service, and the University of Idaho. Other data were sought from various sites including those of specific organizations or concerning agricultural commodities.

Once all state specific information was received, factor information was extracted to estimate sub-groups (migrant farmworkers, seasonal farmworkers, children and youth). Sources were compared and analyzed to account for any differences. Results were contrasted against national database information and conclusions drawn regarding the best factor, data range or average to use.

Draft estimates were completed, tables prepared and maps developed for review by knowledgeable individuals.

#### **4. Local Review of ID-MSFW EPS Draft**

Copies of the Draft ID-MSFW EPS were sent to a variety of individuals for review including all of the Idaho federally-funded health centers serving MSFWs; the Idaho Migrant Council and their network of programs serving MSFWs including housing, employment training, and migrant head start; personnel at the Idaho Department of Commerce and Labor; and others. The review period extended for ten months as additional data were sought to answer the issues raised with Draft figures.

The two primary areas of concern centered around counties that appeared to reviewers to offer worker estimates that were too low, and with enrollment figures from county-specific Migrant Education Programs that suggested the presence of more MSFWs than were accounted for in the Draft. A great deal of discussion occurred around the first issue, coming to the conclusion that there most probably were additional workers involved in potato sorting and packing operations who were not included in Draft food processing estimates. Gaining the assistance of a county extension potato expert, listings were located that offered new information for potato processors/packing sheds. Where



employment numbers could be found related to newly identified potato operations, these were used; however such information could not be obtained for a number of such operations that were identified.

It was felt that this same issue, underestimation of potato processing workers, also probably accounted for differences between Migrant Education figures and Draft MSFW EPS estimates. Migrant Education data were subsequently used to increase ID-MSFW EPS estimates.

Counties in which these two issues resulted in changes to MSFW worker estimates from the Draft to Final MSFW EPS report included: Bingham, Bonneville, Canyon, Cassia, Clark, Elmore, Franklin, Fremont, Gooding, Jefferson, Madison, Minidoka, Owyhee, Payette, Twin Falls, and Valley. Concerns were also raised about Washington County, however no additional information could be found to support changes to draft worker estimates.

Adjustments were also made to some of the factors used in the Draft report. Additional information was obtained from two Idaho Migrant Council programs concerning their clients: Farmworker Job Training (WIA 167) and Migrant Head Start. These data were used to revise the percent of accompanied seasonal farmworkers, household size for seasonal farmworkers, the average number of non-farmworkers in seasonal farmworker households, and children per seasonal farmworker household. These changes caused estimates of non-farmworkers in seasonal farmworker households to increase for most counties.

## **5. Comparative Sources**

To help look at the reasonableness of the results of the ID-MSFW EPS estimates, figures were compared to other sources offering MSFW numbers at a county level in Idaho. These included patients served at Idaho Migrant Health Centers, WIC program enrollment, and data gathered for needs assessments conducted in Boundary and Bonner Counties. MSFW EPS estimates were found to be in line with these estimates given their program definitions and expectations of reaching all individuals within their target populations.

Two other databases exist which offered more challenges: Migrant Education Program enrollment and eligibles, and Farm Labor Estimates prepared by the Idaho Department of Commerce and Labor. Comparison with the first source and adjustments made in accordance with differences is discussed under the "Local Review" section above.

An average of Idaho Department of Commerce and Labor, Farm Labor estimates for a five year period, 2000-2005 were generally found to be greater when compared to MSFW EPS worker numbers. Kelly Campbell, Senior Research Analyst for the Department was contacted to determine the methodology and

definition used for preparing Farm Labor estimates (telephone conversation, June 2, 2005). She confirmed that these estimates included animal production and support activities for animal production (NAICS codes 112 and 1152), which would be excluded from the MSFW EPS estimates. Looking at Idaho ES202 data for a three year average (2001-2003), it was found that of all of the employment reported under “agriculture” (NAICS code 11), only 68% relates to the definition used in the MSFW EPS. Applying this percentage to the Idaho Farm Labor estimates accounts for the differences between these figures and the MSFW EPS.

## **6. Presentation of Estimate Results**

The MSFW EPS summarizes MSFW estimates and presents data used within three summary Tables.

- Idaho MSFW Enumeration Profiles Estimates – by county for:
  - MSFW workers,
  - migrant farmworkers,
  - seasonal farmworkers,
  - non-farmworkers in migrant households,
  - non-farmworkers in seasonal households, and
  - all MSFW workers and non-farmworkers in their households.
- Idaho Demand for Labor Factors
- Idaho Percent Migrant Farmworkers, Percent Seasonal Farmworkers, and Percent Non-Farmworkers Per Accompanied Households

Two maps have also been prepared to offer a graphic display of the results:

- Idaho Estimates for MSFW Workers Only by County
- Idaho Estimates for MSFW Workers and Non-Workers by County

## **F. ENUMERATION METHODOLOGY**

The four separate industry classifications within the study MSFW definition (field agriculture, nursery/greenhouse -- crops grown under cover, food processing and reforestation) were each addressed differently. Adjustments were made to worker estimates to account for duplicate counts within and across counties. Finally, population sub-groups and the number of children and youth in specific age categories were calculated.

## 1. Field Agriculture

The field agriculture estimate used a “demand for labor” (DFL) process that examines the number of workers needed to perform temporary agricultural tasks, primarily harvesting although other activities are also estimated including planting, pruning, weeding and thinning operations where extensive hand labor is involved.

The results estimate the number of full-time equivalency (FTE) hand labor “jobs” available during the period of peak labor demand for crop production. These calculations, prepared for each crop in each county, are derived through a formula using four elements:

$$DFL = \frac{A \times H}{W \times S}$$

Where:

A = crop acreage.

H = hours needed to perform a specific task (e.g., harvest) on one acre of the crop.

W = work hours per farmworker per day during maximum activity.

S = season length for peak work activity.

## 2. Nursery/Greenhouse and Crops Grown Under Cover

Nursery/greenhouse workers and those employed in crops grown under cover involves many different categories. These include: bedding plants, cut flowers, florist greens, floriculture, flower seed crops, foliage plants, greenhouse vegetables, mushroom production, potted flowering plants, sod and vegetable seed crops. Some products are grown in covered structures while others are raised in open acreage. Tasks differ with product type and production needs.

Sufficient data were not available to directly estimate nursery/greenhouse workers in Idaho establishments. It was necessary to utilize a list of licensed nurseries and develop a ratio of workers to employers to estimate the total number of nursery workers. Two methods were then developed using data from MSFW EPS studies in the other Northwest states of Oregon and Washington to apply a second ratio for permanent workers to temporary workers. The two data results were averaged for county-level nursery/greenhouse MSFW estimates for the ID-MSFW EPS.

### 3. Food Processing

Two sources were used to identify food processors and estimate the temporary workers they employ. Each listed specific producers and gave an employee figure for individual establishments. The percent of all employees who are temporary was calculated based on past *MSFW Enumeration Profiles* Study reports. Information from the two Idaho sources was then combined. Where the sources both specified food processing employment in a single county, the largest of the reported figures was used, assuming each source might have reason to miss food processing operations.

The local review process used for this study pointed to a category which appeared to be underestimated in the Draft ID-MSFW EPS report, potato processing/potato sheds. Contact was made with Bill Bohl, Potato Expert, Bingham County Extension around this issue (telephone conversation, February 17, 2006) which led to discovering an additional list of potato processors/packing sheds (Idaho Grower Shippers Association, 2006). Re-review of another source (Idaho Commerce and Labor, Community Profiles) uncovered other such operations.

Duplicates among the lists were discarded and employment numbers noted, where available, as well as whether operations were year-around or seasonal. When operations were year-around, a percentage of temporary workers (derived from ES202 data) was applied. If operations were seasonal, it was assumed all workers were temporary.

Unfortunately, not all of these listings provided employment numbers. Differences between MSFW EPS estimates and Migrant Education Program figures for students enrolled or identified as eligible which could not otherwise be accounted for were felt likely to be attributable to MSFWs involved in potato-related processing.

The Migrant Education Program does not incorporate the exact definition of migrant and seasonal farmworker as is utilized in this study; therefore, it was necessary to screen out individuals identified by Migrant Education who would not be included. Contact was made with the State Migrant Education Office which provided information on the percent of individuals within the Migrant Education database who were ages 20-22 (qualified for Migrant Education services but older than the MSFW EPS category “children and youth”), and the percent of individuals who would be identified as “migrants” or “seasonals” within the definition of the EPS study. (Romero, April 21, 2006)

Further contact was made with Migrant Education Regional Coordinators or School District personnel to obtain information on the percent of students enrolled or identified as eligible for Migrant Education services but not enrolled who qualified because their parents were involved in non-crop agriculture

(working with animals or farm equipment). (Butters, April 28, 2006; Gomez, May 8, 2006; Holguin, May 9 and 11, 2006; Robertson, May 2, 2006; Valero, April 28, 2006) Those enrolled in non-crop agriculture would also be excluded from MSFW EPS estimates.

The resulting Migrant Education figures per county were compared to MSFW EPS estimates and counties noted where Migrant Education showed a greater number of children. MSFW EPS estimates were increased to account for these differences. Most of these locations coincided with the finding of potato processors/potato shed operations for which no employment figures were available.

#### **4. Reforestation**

Reforestation activity is different from work in the other industry classifications as stands of trees are left to grow from five to forty-five years or longer. This means only a proportion of timberland in a state is engaged by tree planters each year. As the exact location of this labor differs annually, a worker estimate can only be provided on a statewide basis.

There are no sources known that provide the number of tree planters or reforestation workers in Idaho. As a result, two separate methods were used to estimate the number of workers in this industry category.

The first was a DFL approach using acreage estimates and other DFL factors (hours required to plant one acre of land, hours worked per day and length of season) found to be relevant to the types of trees grown in Idaho.

The second method incorporated a “rule of thumb” suggested by Monte Bell of the U.S. Forest Service in Oregon. Mr. Bell indicated his federal agency generally feels it takes one worker one day to replant one acre of land. Other sources provided information on the days per year worked by reforestation workers and the number of acres of trees replanted in Idaho.

An average from the results of each of these two methods was used as the final estimate of statewide reforestation workers.

#### **5. Duplication Rate**

The DFL method used for field agriculture, as described above, estimates “FTE jobs” not workers. The assumption is one “job” equals one worker; however, this may not be the case. An adjustment was made to account for those employed in more than one agriculture “FTE job” calculated through the DFL process. This “duplication rate” refers to the concept that one worker can be employed in more

than one “job.” For example, a single individual might work in both potato and onion operations. If the estimates for workers employed in each of these crops were simply added, the results would overestimate the number of individuals within any one county or statewide.

The average number of jobs per MSFW was found from a database of national farmworker survey information. This became the “duplication rate” for the ID-MSFW EPS. The factor was used on estimates of workers in field agriculture as well as those in food processing. This rate was not applied to nursery/greenhouse workers or to those in reforestation.

## **6. Sub-Group Estimates**

Sub-groups estimated for the study were migrant farmworkers, seasonal farmworkers, non-farmworker family members accompanying farmworkers and children and youth in specified age groups. Migrant farmworkers included individuals who met the definition of a migrant but only traveled within the state of Idaho (intrastate migrants) and others who came from outside the state to work in Idaho (interstate migrants).

Both “non-farmworkers” and “children and youth” were estimated. The first group included anyone of any age in the household who was not employed in farm work. The latter group covered anyone in the household from ages less than one through nineteen. Although the category “children and youth” involves those of a young age who are non-farmworkers, it also includes “youths” who may be farmworkers. This is why the estimates for “non-farmworkers” and for “children and youth” are different.

Sub-group calculations were made, at a county level, as follows:

- Apply percent identified as migrant workers and percent identified as seasonal workers to estimates for all workers (identified as “MSFW Farmworkers”).
- Determine the percent of each sub-group (migrant workers and seasonal workers) who are “accompanied” by non-farmworkers. This is as opposed to workers who represent single person households; for example, six unrelated men living in one household would represent six single person households.
- Divide the group of accompanied workers by the average number of farmworkers per household to determine the number of accompanied households.
- Multiply the number of accompanied households by the average of other members per household to derive the number of “non-farmworkers.”

The following age groupings were determined to be the most useful descriptors

(given the needs of funding sources and health care programs) for the population considered “children and youth”: under 1 year, 1 – 4 years, 5 - 12, 13 - 14, 15 - 18, and 19 years. Factors were found for the number of individuals in each accompanied household who were less than 20 years old. These were multiplied by the estimate of accompanied migrant and seasonal households to find total number of migrant and seasonal children and youth. A variety of sources were then examined to derive percent of the population in each age group.

## G. RESOURCES UTILIZED FOR IDAHO ESTIMATES

Factor information was gathered from the primary sources listed below. Where available, local information was utilized as a check or as a replacement for broader national or regional data.

### 1. Field Agriculture

**Crops Requiring Temporary Hand Laborers:** NAWS direct survey information on respondent work history was examined for the Northwest Region, which includes Idaho, to determine the crops and tasks worked. The results were compared to crops for which MSFW estimates were developed in the *Oregon MSFW Enumeration Profiles Study* and the *Washington MSFW Enumeration Profiles Study* as agricultural production in these states border Idaho, sharing similar agricultural patterns.

**Acreage:** The *2002 Census of Agriculture (COA)* was the primary source for acreage numbers in identified hand labor crops by county in Idaho. This included cut Christmas trees.

Previous work (Larson, *MSFW Enumeration Profile Study* reports and *Migrant Enumeration Project*) found, through discussion with agricultural experts, that crops of less than ten acre are more likely to have harvest tasks performed by family members than hired workers. Accordingly, any crop within a specific county noting such small acreage was dropped. Work on the *MSFW Enumeration Profiles Study* for the neighboring state of Oregon included consultation with Diane Coffman of Oregon State University, North Willamette Research and Extension Center who indicated this ten acre rule was less likely to apply in berry crops. Accordingly, production of five or more berry acres was included in estimates.

Approximately two-thirds of the crop by county acreage data for the target crops was not reported in the COA data although the number of farms in the county producing the crop was indicated. This suppression occurs for information “withheld to avoid disclosing data for individual farms.” (*2002 Census of*

*Agriculture*) For several of these crops; e.g., beets, carrots, the total number of acreage statewide was under ten. It was, therefore, assumed that each county producing the crop but not reporting acreage would similarly report less than ten acres.

For other crops; e.g., bell peppers, apricots, it was necessary to calculate the expected acreage based on the information available for the same crop in other counties across the state.

The following steps were followed to derive these calculations for a specific crop:

- Add the number of crop acres accounted for in counties where such information was available.
- Subtract the result from the state total number of acres to derive the number of acres unaccounted for within the state.
- Add the number of farms in the counties where acreage was unaccounted.
- Divide the number of unaccounted acres by the number of unaccounted farms to derive an average number of acres per farm.
- Multiply the average number of acres by the number of production farms in each county.

Often, the remaining unaccounted crop acres, once those reported were subtracted from the statewide total, were less than ten. The conclusion could then be drawn that each unaccounted county also produced less than ten acres.

Once these calculations were made, only 23% of the counties with suppressed COA acreage were found to have data relevant for the study; e.g., produced greater than nine acres of the crop in question or four acres of a berry crop.

In addition, where COA 2002 county data reported crop acres were used for process as opposed to fresh produce, and the seasonal labor activity involved harvesting, the process acres were subtracted from the total acreage for that crop. This assumed such acreage was harvested by machine. These crops included: asparagus, green peas, snap beans and sweet corn in some counties.

The resulting acreage data, based on COA 2002 information, was updated, where possible, using figures from the Idaho Agricultural Statistics Service "Idaho County Estimates, 2003."

**Hours for Task:** "Crop budgets" and other special reports prepared by agricultural economists and extension specialists as a guide to crop



production were utilized to determine hours needed to perform major hand labor tasks on each crop. This included budgets prepared by the University of Idaho, Department of Agricultural Economics and Rural Sociology and published on their web site. In some instances, reported task hours differed for various regions in the state. Where such information was available, it was applied to the appropriate counties.

If Idaho specific information was not available for a particular crop, factors from the *Oregon Enumeration Profiles Study* and the *Washington MSFW Enumeration Profiles Study* were utilized. If these studies reported different hours per task, the two were averaged to derive a factor for use in the Idaho study.

**Work Hours:** Only one source was found to have information specific to the Northwest Region, of which Idaho is a part, for hours per week and days per week worked by MSFWs. NAWS survey data averaged from 1996-2000 showed MSFWs worked 42.7 hours in a 5.44 day week. Using these figures, it was determined that MSFWs are employed 7.8 hours per day, and this factor was used in calculations for all crop activities.

**Season Length:** Information for peak hand labor season dates specific to crops in Idaho was not found. Factor information for similar crops in Oregon and Washington was used, as noted in the *MSFW Enumeration Profiles Study* reports for each of these states. Original information reported calendar days which were converted to work days by dividing the total number by seven to determine number of weeks and then multiplying by five for number of average MSFW work days per week.

**Special Crop Methodologies:** Alternative methods were employed on two crops: apples and corn detassling. For apples, this offered a second means to estimate harvest workers.

The University of Idaho, Department of Agricultural Economics and Rural Sociology offered the following formula as a means to estimate workers needed for harvest activities: 2.54 workers per acre plus 40% of the total number of workers. The results of these calculations were averaged with figures from the DFL methodology to develop an estimate for workers involved in harvesting apples in each county where this crop is produced.

A formula was also found related to workers needed in corn detassling. This was used in the *Migrant Enumeration Project* (Larson for Legal Services Corporation, 1993) as reported for similar activities in Indiana. The formula notes 71.6 acres per worker to perform this activity. The factor was applied to reported acres of "sweet corn seed."

## **2. Nursery/Greenhouse and Crops Grown Under Cover**

Idaho ES 202 employment data were only available on an annual basis (employment by month was not given) in five counties for workers and employers qualifying under federal reporting requirements. A ratio of workers to employers was developed for each of these counties and then these were used to obtain a statewide average.

A report specific to Idaho was found that listed every nursery/greenhouse establishment in by county (*2004 Annual Report, Licensed Nurserymen and/or Florists*). These are coded to designate primary, secondary, tertiary, etc. type of work. Those noting nursery/greenhouse activity, but not retail nursery, as their primary activity were noted. The number of such establishments by county was calculated.

Using the ES 202 employment data for five specific counties and the statewide average, the resulting ratio of workers to employers was applied to the establishments listed in the *2004 Annual Report* to find the number of permanent workers in each operation and the resulting county total.

It was then necessary to calculate the percent of these total workers who were considered temporary (hired on a seasonal basis). Two methods were used. The first employed a ratio of temporary to permanent workers developed for the *Oregon MSFW Enumeration Profiles Study* as noted in the "1999 Oregon Nursery and Greenhouse Survey." This ratio of 1.3556 was multiplied against each Idaho county's calculated nursery/greenhouse permanent worker figure.

The second method employed a factor developed for the *Washington MSFW Enumeration Profiles Study* which utilized three reports from the Employment Security Department of Washington State for monthly ES202 statistics. The calculation involved noting the annual high employment month and subtracting the annual low employment month to determine the number of temporary workers (assuming the low month reports year-around workers). The ratio of temporary to permanent workers (low employment month for each region) was calculated, and the results, 2.0372, were multiplied by each Idaho county's number of permanent workers.

These factors were applied to the estimate of the total number of workers employed in nursery/greenhouse operations in Idaho for each county and the resulting two estimates of temporarily workers was averaged to obtain the final figure used in the ID-MSFW EPS.

## **3. Food Processing**

The number of all employees engaged in businesses classified under the old

industrial classification system using SIC codes 2033 and 2037 was found in the *Directory of Canning, Freezing, Preserving Industries, 2002* (Edward E. Judge and Sons). This source lists such operations by location and offers a range for total employment at each site. The mid-point of this range was chosen to represent exact number of employees. To define the percent of all employees who are temporary, an average of a similar factor developed for eleven other state *MSFW Enumeration Profiles* Study reports was used.

The second source for food processing operations was the "Idaho Commerce and Labor Community Profiles" listing of major employers for each county. Those businesses related to agriculture food processing or packing were pulled, and the total number of employees noted. The same factor was used to determine the percent of all employees who are temporary workers.

The county numbers for food processing MSFWs resulted from combining the information in these two sources taking the largest number when each source presented figures for the same county.

Additional sources were used to increase estimates for workers employed in potato processing/potato sheds. These included Idaho Grower Shippers Association "Membership List," 2006, and county-level data from the Idaho Migrant Education Program. Section F 3 "Enumeration Methodology, Food Processing" describes the process utilized.

#### **4. Reforestation**

The DFL factors used in the first method to estimate reforestation workers were the same as those in the *Washington* and in the *Oregon MSFW Enumeration Profiles Study* reports. *Idaho's Forest Products Industry: A Descriptive Analysis* (Morgan, 1997) was used to verify that the type of trees grown in Idaho were similar to those in the other two states. The following DFL factors were used:

**Acreage** information in past Enumeration reports has been taken from the annual publication *Tree Planting in the United States*. However this source is no longer available. Unpublished data for more recent years was obtained directly from personnel at the USDA Forest Service Cooperative Forestry Office. Information for the year 2002 appeared to be incomplete. A five year average was pulled using 1998 figures from previous *Tree Planting in the United States* publications and 1999-2001, and 2003 unpublished figures.

**Work Hours** were generally agreed to be eight per day as reported by various forestry experts.

**Hours for Task** to plant fir, cedar, hemlock and other similar trees grown in Oregon is thought to be 3.8, calculated at an average 2.105 acres per day planted per worker in an 8 hour day (Sargent, 2000).

**Season Length** for similar types of trees averages 22.14 days, calculated on a 45 day peak season working 40 hours per week minus 10 days for weather-related reasons (Sargent, 2000).

The second estimation method for reforestation workers, built around Bell's "rule of thumb" of one acre per day per worker, used *Tree Planting in the United States* and similar unpublished information to estimate statewide acres on which trees are planted divided by the average number of days per year worked by those involved in reforestation – estimated to be 22.14 (Sargent, 2000).

The final statewide reforestation estimate average the results of these two methods.

## 5. Duplication Rate

No data on the number of temporary farm jobs per county or per state could be located related to Idaho. The only information found was national and regional level reports from NAWS (1996-2000) for average jobs/worker in a twelve-month period. The national estimate of 1.6515 was used as the factor for jobs/worker – the "duplication rate."

## 6. Sub-Groups

**Migrant/Seasonal:** Two sources were found to report the migrant and seasonal percent by county of MSFW farmworkers. These were: NAWS national data and direct patient counts from those seen at five federally-funded health centers in Idaho ("UDS Data"). The individual health center reports related to the specific counties in their service area. NAWS national rather than regional data were used as the regional data showed that only 25% of the sample for the five-year period involved harvest workers, and there is reason to believe that more migrant farmworkers, who were missed by the survey, might be engaged in such labor.

Where county-specific information was available, it was averaged with NAWS data to determine the migrant/seasonal percent for that county. Where county-specific data were not available, a statewide average from the five health centers was combined with NAWS data to derive the migrant/seasonal percent. Table Three in this report lists these migrant/seasonal percentages by county.

**Accompanied:** The only source found to have information on accompanied migrant workers was NAWS. The five-year average for regional data was used resulting in 29.2% accompanied migrant farmworkers. Idaho Migrant Council's Farmworker Job Training Program (WIA 167) and NAWS regional data provided information for accompanied seasonal farmworkers. These two sources were averaged to derive an estimate of 73.6% accompanied seasonal farmworkers.

**Farmworkers Per Household:** The NWS Public Access Database did not have information on the number of farmworkers per household. A special run had been made by the administrators of the NAWS survey for the *Oregon and Washington MSFW Enumeration Profiles Study* reports. These factors, used in the ID-MSFW EPS, were for NAWS regional information and showed 2.45 farmworkers for migrant households and 2.00 for seasonal households.

**Non-Farmworkers Per Household:** NAWS regional information for accompanied household size was available through the Public Access Database. For migrant households, similar figures were offered by the Women, Infants and Children program of the Idaho Department of Health. Numbers for fifteen or more families were only available for six counties. The WIC and NAWS results were averaged for those counties where such information was available. For other counties, the average of the six WIC reporting counties was used against NAWS information. The results varied per county for migrant farmworker households.

Accompanied seasonal farmworker household size was available from two sources: NAWS regional information and Idaho Migrant Council Farmworker Job Training Program (WIA 167). These two sources were averaged to estimate 5.27 persons per accompanied seasonal farmworker household.

The number of farmworkers per accompanied household (noted above) was subtracted from the household size of each group to calculate non-farmworkers. The results showed 3.27 non-farmworkers per seasonal household and a varied figure per migrant household. This information is summarized on Table Three.

## **7. Children and Youth by Age Groups**

"Children and youth," as defined in the ID-MSFW EPS are those ages infant through 19. Whether or not these individuals perform farm work does not matter for purposes of this calculation, and therefore, the group "non-farmworkers in MSFW households" and the group "children and youth" are not mutually exclusive.

NAWS regional figures on children and youth per household were used for migrants, and an average of NAWS regional figures and information from the Idaho Migrant Council Farmworker Job Training Program (WIA 167) were used for seasonals. These factors (2.62 for migrants; 2.17 for seasonals) were applied to determine the number of individuals under 20 years of age. The results found 3,915 migrant and 13,439 seasonal children and youth, statewide.

Age-related information from patients seen at Terry Reilly Health Services was the only data found to divide children and youth into age groups. No separate migrant and seasonal figures were available. The percentages were as follows:

- Under 1 = 6%,
- Ages 1-4 = 27%,
- Ages 5-12 = 39%,
- Ages 13-14 = 8%,
- Ages 15-18 = 16%
- Age 19 = 4%

**TABLE ONE**  
**IDAHO MSFW ENUMERATION PROFILES ESTIMATES**

**FIELD AGRICULTURE, NURSERY/GREENHOUSE AND FOOD PROCESSING**

<b>County</b>	<b>MSFW Farmworker Estimates</b>	<b>Migrant Farmworkers</b>	<b>Seasonal Farmworkers</b>	<b>Non-Farmworkers In Migrant Households</b>	<b>Non-Farmworkers In Seasonal Households</b>	<b>MSFW Farmworkers And Non-Farmworkers</b>
Ada	1,336	426	910	163	1,095	2,594
Adams	2	1	1	0	1	4
Bannock	282	117	165	45	199	525
Bear Lake	8	3	5	1	6	16
Benewah	117	45	73	17	88	222
Bingham	2,790	1,155	1,635	427	1,967	5,184
Blaine	140	53	87	20	105	265
Boise	105	40	65	15	78	198
Bonner	337	128	209	49	251	636
Bonneville	1,124	767	356	293	429	1,845
Boundary	1,052	400	652	167	785	2,004
Butte	41	15	25	6	30	77
Camas	26	10	16	4	19	49
Canyon	5,160	1,646	3,514	608	4,228	9,996
Caribou	40	15	25	6	30	77
Cassia	1,410	536	874	217	1,052	2,679
Clark	16	12	4	5	5	26
Clearwater	108	41	67	16	81	205
Custer	31	12	19	4	23	59
Elmore	452	192	260	73	313	838
Franklin	188	142	46	54	55	297
Fremont	812	615	197	235	237	1,284
Gem	652	296	355	113	427	1,192
Gooding	632	478	153	182	185	999
Idaho	169	64	105	24	126	320
Jefferson	691	263	429	100	516	1,307
Jerome	430	164	267	62	321	814
Kootenai	441	168	274	64	329	835
Latah	213	81	132	31	159	404
Lemhi	54	21	34	8	41	103
Lewis	2	1	1	0	1	4
Lincoln	177	67	110	26	132	336
Madison	637	242	395	92	475	1,204
Minidoka	1,801	684	1,116	261	1,343	3,405
Nez Perce	262	100	162	38	196	496
Oneida	55	21	34	8	41	103
Owyhee	962	729	233	278	280	1,521
Payette	922	419	502	160	605	1,686
Power	823	341	482	122	580	1,525
Shoshone	0	0	0	0	0	0

**FIELD AGRICULTURE, NURSERY/GREENHOUSE AND FOOD PROCESSING - continued**

<b>County</b>	<b>MSFW Farmworker Estimates</b>	<b>Migrant Farmworkers</b>	<b>Seasonal Farmworkers</b>	<b>Non-Farmworkers In Migrant Households</b>	<b>Non-Farmworkers In Seasonal Households</b>	<b>MSFW Farmworkers And Non-Farmworkers</b>
Teton	324	123	201	47	242	612
Twin Falls	2,399	912	1,487	348	1,790	4,537
Valley	421	318	102	121	123	665
Washington	275	125	150	48	180	502
<b>Total State</b>	<b>27,920</b>	<b>11,988</b>	<b>15,932</b>	<b>4,558</b>	<b>19,171</b>	<b>51,649</b>
<b>Reforestation</b>						
<b>Total State</b>	<b>1,447</b>	<b>550</b>	<b>897</b>	<b>210</b>	<b>1,354</b>	<b>3,010</b>
<b>Grand State Total</b>	<b>29,367</b>	<b>12,538</b>	<b>16,829</b>	<b>4,767</b>	<b>20,525</b>	<b>54,659</b>

**NOTE:** County numbers have been rounded and, therefore, may not exactly add to totals.

**CHILDREN AND YOUTH BY AGE GROUPS (STATEWIDE)**

<b>Age Groups</b>	<b>Migrant Percent</b>	<b>Number of Migrant Children And Youth</b>	<b>Seasonal Percent</b>	<b>Number of Seasonal Children And Youth</b>
< 1	6%	235	6%	806
1-4	27%	1,057	27%	3,628
5-12	39%	1,527	39%	5,241
13-14	8%	313	8%	1,075
15-18	16%	626	16%	2,150
19	4%	157	4%	538
<b>Total</b>	<b>100.0%</b>	<b>3,915</b>	<b>100.0%</b>	<b>13,439</b>

**NOTE:** "Children and Youth" are defined as those under 20 years of age. Some may be farmworkers



**TABLE TWO**  
**IDAHO DEMAND FOR LABOR FACTORS**

**SEASON LENGTH**

<b>Crop</b>	<b>Task</b>	<b>Days</b>
<b>apples</b>	harvest	15.71
	prune	128.57
	train	43.57
<b>apricots</b>	harvest	16.43
<b>asparagus</b>	harvest	32.5
<b>blueberries</b>	harvest	51
	prune	21.43
<b>cantaloups</b>	harvest	23.93
<b>cherries-sweet</b>	harvest	11.99
<b>Christmas Trees</b>	harvest	21.43
<b>dry edible beans</b>	harvest	11.79
	preharvest	43.57
<b>dry onions</b>	harvest	28.57
	preharvest	45.97
<b>grapes</b>	harv wine	17.14
	prune	87.86
<b>green onions</b>	harvest	51
<b>hops</b>	harvest	23.86
<b>lima beans</b>	preharvest	8.21
<b>mint</b>	preharvest	48.36
<b>nectarines</b>	harvest	30
<b>peaches</b>	harvest	23.93
<b>pears</b>	harvest	13.31
	prune	85.71
	thin	87.14
<b>peas-chinese(sugar/snow)</b>	harvest	37.14
<b>peas-green(not southern)</b>	harvest	37.14
<b>pepper-bell</b>	harvest	57
<b>plums &amp; prunes</b>	harvest	10.60
<b>potatoes</b>	harvest	40
<b>pumpkins</b>	harvest	53
<b>raspberries</b>	harvest	20.29
	prune	43.57
<b>snap beans</b>	harvest	30
<b>squash</b>	harvest	30
<b>sugarbeet for sugar</b>	weed	18.21
	plant	43.57
<b>sweet corn</b>	harvest	27.59
<b>sweet corn seed-detassling</b>		71.6 acres/worker
<b>watermelons</b>	harvest	28.54

## HOURS PER TASK

<u>1/ Crop/Location</u>	<u>Task</u>	<u>Hours Per Task</u>	
apples	harvest	91.4	
		- or -	
	harvest prune thin	of total 44.13 37.2	
apricots	harvest	96	
asparagus	harvest	84	
blueberries	harvest	160.15	
	prune	40	
cantaloups	harvest	60	
cherries-sweet	harvest	191.53	
Christmas Trees	harvest	31.7	
dry edible beans	plant	0.40	
dry onions	weed	12.5	
grapes	harvest-wine	53.4	
	prune	40	
green onions	harvest	220	
hops	harvest	33.98	
lima beans	preharvest	9	
mint	preharvest	3.68	
nectarines	harvest	38	
peaches	harvest	73	
pears	harvest	75.43	
	prune	51.16	
	thin	38.75	
peas-chinese(sugar/snow)	harvest	28	
peas-green(not southern)	harvest	28	
peppers-bell	harvest	128	
plums and prunes	harvest	34	
potatoes	Southwest Idaho	plant, harvest	3.29
	South Central Idaho	plant, harvest	2.92
	Eastern Idaho	plant, harvest	2.82
	Northern Idaho, other	avg plant, harv	3.01
pumpkins	harvest	22	
raspberries	harvest	58.25	
	prune	57.5	
snap beans	harvest	19.96	
squash	harvest	110	

HOURS PER TASK CONTINUED

<u>1/ Crop/Location</u>	<u>Task</u>	<u>Hours Per Task</u>
<b>sugarbeets for sugar</b>		
Southwest Idaho	weed	5.59
South Central Idaho	weed	3.5
Eastern Idaho	weed	4.9
Northern Idaho, other	average weed	4.66
<b>sweet corn</b>		
Southwest Idaho	plant	2.9
South Central Idaho	plant	2.6
Eastern Idaho	plant	0.58
Northern Idaho, other	average plant	2.03
<b>sweet corn seed-detassling</b>		
South Central Idaho	harvest	0
Remainder of Idaho	harvest	1.44
<b>sweet corn seed-detassling</b>		71.6 acres/worker
<b>watermelons</b>		53

**NOTES**

1/ If no location specified, information is statewide.

Work hours for all tasks and crops = 7.8/day.

**TABLE THREE**

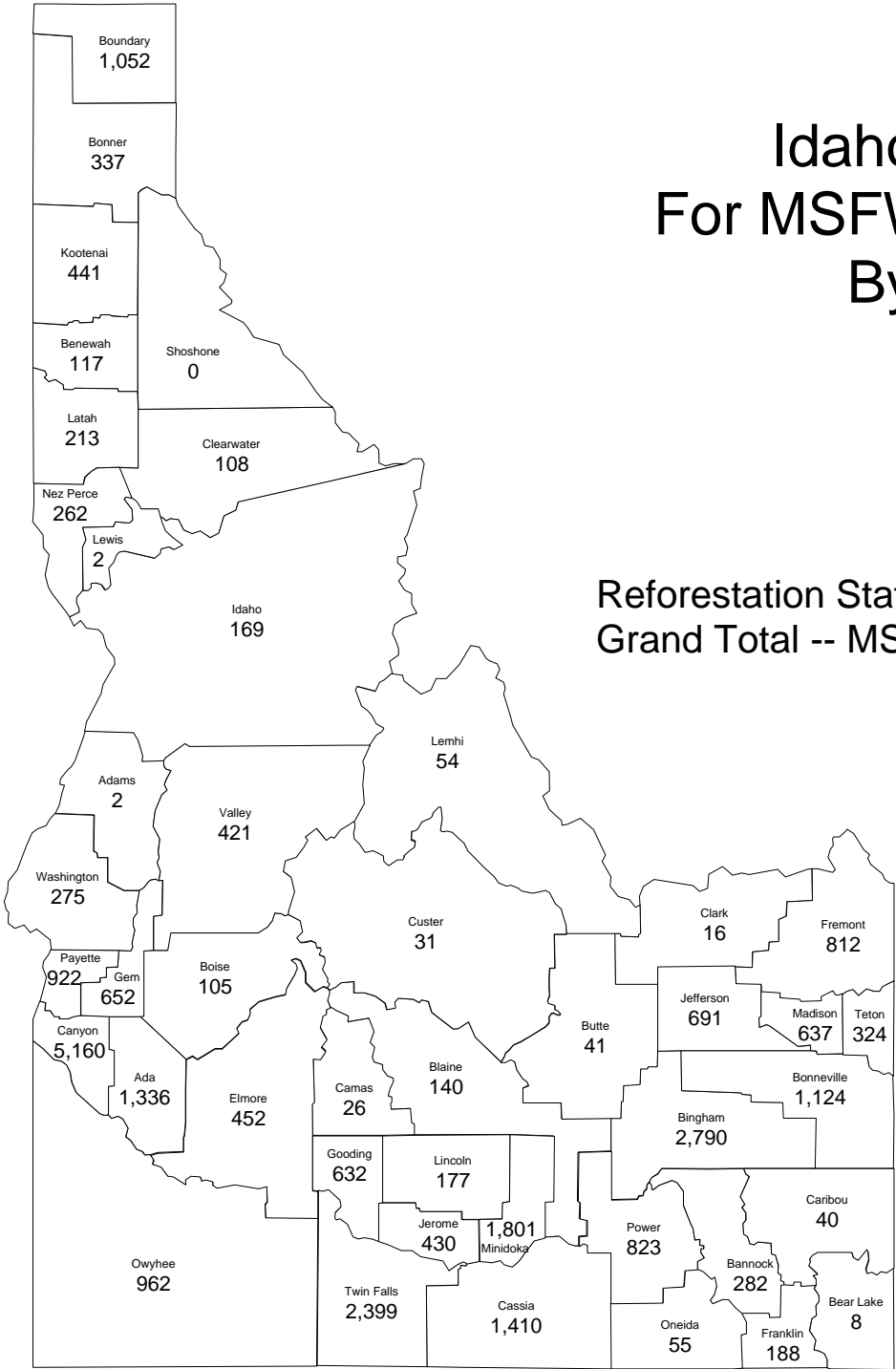
**IDAHO PERCENT MIGRANT FARMWORKER,**  
**PERCENT SEASONAL FARMWORKER**

<b>County</b>	<b>Migrant Percent</b>	<b>Seasonal Percent</b>
Ada	31.9%	68.1%
Bannock	41.4%	58.6%
Bingham	41.4%	58.6%
Blaine	38.0%	62.0%
Camas	38.0%	62.0%
Canyon	31.9%	68.1%
Cassia	38.0%	62.0%
Elmore	42.4%	57.6%
Gem	45.5%	54.5%
Gooding	38.0%	62.0%
Jerome	38.0%	62.0%
Lincoln	38.0%	62.0%
Minidoka	38.0%	62.0%
Owyhee	34.0%	66.0%
Payette	45.5%	54.5%
Power	41.4%	58.6%
Twin Falls	38.0%	62.0%
Washington	45.5%	54.5%
Other Counties	38.0%	62.0%

**PERCENT NON-FARMWORKERS PER**  
**ACCOMPANIED HOUSEHOLD**

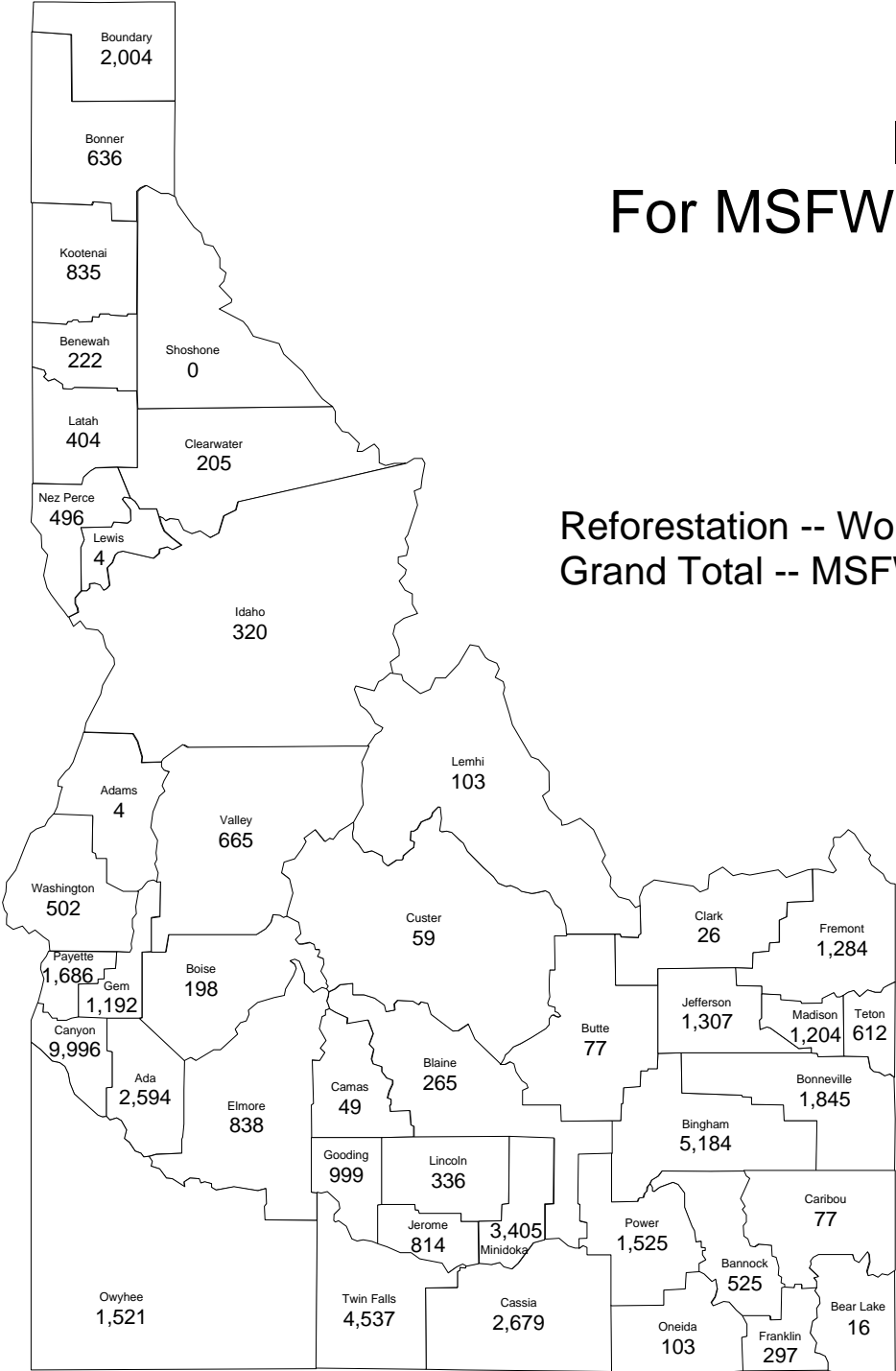
<b>County</b>	<b>Migrant Percent</b>	<b>Seasonal Percent</b>
Bingham	3.1	
Boundary	3.5	
Canyon	3.1	
Cassia	3.4	
Minidoka	3.2	
Power	3.0	
Other Counties	3.2	
Statewide		3.27

# Idaho Estimates For MSFW Workers Only By County



Reforestation Statewide: 1,447  
 Grand Total -- MSFWs in Idaho: 29,367

# Idaho Estimates For MSFW Workers and Non-Workers By County



Reforestation -- Workers and Non-Workers Statewide: 3,010  
 Grand Total -- MSFW Workers and Non-Workers in Idaho: 54,659

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