A Review of the USDA-NASS Agricultural Prices Program:

Challenges & Opportunities *for the* 21st Century

Executive Summary

Coordinated by

FARE The Council on Food, Agricultural & Resource Economics

Washington, DC | June 2009

A Review of the USDA-NASS Agricultural Prices Program:

Challenges & Opportunities *for the* 21st Century

Coordinated by

Washington, DC | June 2009

NOTICE: The project that is the subject of this report was approved by the Council on Food, Agricultural & Resource Economics (C-FARE) Board of Directors. The members of the Review Panel responsible for the report were chosen for their special competences and with regard to appropriate representation. This study was supported by Contract/Grant Nos. 08–OA–2090–038 and 09–OA–2090–001 between C-FARE and the U.S. Department of Agriculture's National Agricultural Statistics Service (USDA-NASS).

Additional copies of this report are available from C-FARE (www.cfare.org) or USDA-NASS (www.nass.usda.gov).

Suggested citation: The Council on Food, Agricultural & Resource Economics (C-FARE). (2009). A Review of the USDA-NASS Agricultural Prices Program: Challenges & Opportunities for the 21st Century. Washington, DC.


Executive Summary

The key findings of this Review are:

- NASS needs a fresh vision for the prices program.
- Fundamental improvements are needed in the conceptual basis for prices and price indexes.
- NASS must address the responsibility that goes with heavy dependence on data and indexes from other agencies.
- To address these needs, NASS must commit to a stronger program of future-oriented research to support the operations program.
- Increased transparency is essential to all aspects of the Agricultural Prices Program.


Background and Overview

In April 2008, the U.S. Department of Agriculture's (USDA)[3] National Agricultural Statistics Service (NASS) asked the Council on Food, Agricultural & Resource Economics (C-FARE) to assemble a panel of expert social scientists from academia, government and the private sector to conduct an "independent, comprehensive and objective review" of the NASS Agricultural Prices Program. The purpose of the Review was to identify the strengths and weaknesses of the Agricultural Prices Program and to recommend changes.

The collection and publication of statistics on agricultural prices have a long history in USDA. Collection of prices received data began in 1866. Prices paid data were first collected in 1911, as USDA and the Congress began to examine economic conditions in the farm sector more closely. The collapse of agricultural commodity markets after World War I and the onset of the Great Depression in 1929 gave new impetus to analyses of the well-being of farmers and to the generation of statistics to support those analyses. At that time the concept of parity appeared. It established a relationship between prices received by farmers for the commodities they sold and prices paid for the inputs they purchased. The parity concept was used to define public policy objectives until the 1980s, in some cases. The inclusion of the concept of parity prices for farm commodities into the Agricultural Adjustment Act (AAA) of 1938, a permanent act, effectively mandated USDA and the

[3] Refer to Acronyms, pp. 55.

predecessor agencies to NASS to collect and publish statistics necessary to define parity indexes as well. Over the ensuing decades, coverage of commodities sold and of inputs purchased has expanded, and index base periods and item weights have been updated periodically. Because of the modernization of agriculture and changes in farm policies, the need to calculate parity measures, while still mandated by law, is no longer the primary reason for producing price statistics. Today, price statistics produced by NASS are heavily used in the administration of Federal programs, the calculation of various economic indicators, analyses of commodity markets and in a host of other ways by public and private users. Despite the critical importance of price statistics, they have had to compete for limited resources in recent years. It appears that price statistics have received lower priority than other more market sensitive commodity production statistics produced by NASS. It is in recognition of the need to reexamine and revitalize the Agricultural Prices Program that NASS requested this Review.

The three major components of the NASS Agricultural Prices Program were the subject of this Review:

1. Prices received (for agricultural commodities);
2. Prices paid (for inputs to agricultural production); and
3. Price indexes (for prices received, prices paid, and parity).

Sub-panels of the larger Review Panel were organized around these three components. Each addressed objectives and uses of the statistics, as well as statistical issues such as data sources, sampling, collection, processing, analysis and index construction. Considerable attention was paid to transparency and documentation of all aspects of the Agricultural Prices Program, including program purposes.

For its part, NASS provided the Review Panel with data and information requested, but did not in any way intervene in the Review Panel's deliberations. NASS also gave the Review Panel the freedom to consider issues not specifically included in the charge, but at the same time made clear that the Agency is constrained in its ability to respond to recommendations on issues outside the scope of the Review. For example, NASS is not at liberty to dictate policies to other agencies whose data are important to the NASS Agricultural Prices Program. Finally, NASS committed to publish this report without alteration or comment and make it available to the public.

It is the intent of the Review Panel that the recommendations in this report, and the text which explains and supports those recommendations, be useful to NASS as it develops vision, purpose and content of the Agricultural Prices Program to meet the needs of the 21st century. All the recommendations are also intended to improve the quality of NASS price statistics.

Common Themes and General Recommendations

Several common and important themes emerged from the Review Panel's deliberations on needed improvements in the NASS Agricultural Prices Program. For the most part, the common themes cut across all components of the Program. The themes pertain to:

1. transparency and documentation,
2. the critical importance of research,
3. the use of data from external sources,
4. NASS's response to changes in agriculture and demands of modern statistical systems,
5. the importance of specificity in defining attributes of items for which prices are collected, and
6. index construction (treated in Chapter 7).

Recommendation 4–1

NASS should increase transparency and documentation of all aspects of its Agricultural Prices Program.

NASS's data users should have easy access to understandable, up-to-date information on data sources, data collection methods, sampling methods, list completeness, processing and editing procedures, sources and magnitude of errors and changes in the industry that affect the collection and usefulness of the data. This applies to statistics that NASS publishes which are derived from data from other agencies, as well as

statistics based on NASS surveys. It is equally important that the purposes and conceptual basis for price statistics be apparent to users. NASS should clearly define formulas for calculating price indexes and terms used in calculations and document justifications for their use.

Recommendation 4–2

NASS should substantially strengthen its core research capacity.

NASS has a longstanding reputation as a supplier of dependable, objective and accurate statistics to the Federal government and to the American public. To continue its prominence, NASS should enhance its capacity to conduct and gain access to research to support its operations programs. The Review Panel noted that NASS's research capability—once a source of public and professional confidence in the Agency's statistics—has been diminished over recent decades. In the report, the Review Panel identified the need for more research expertise in index construction, information systems and data-collection methodology. To the extent possible, NASS should justify with documented research all substantial decisions about price collection procedures, use of data from external sources versus internal survey data and index construction methods. The documentation should include estimates of effects of these decisions on the accuracy of the statistics produced. Documentation and research are necessary to assure the use of up-to-date statistical methods and consistency across the Agency. It is important for Agency credibility, in that it allows academics and others outside the Agency to evaluate procedures and revisions. Increased transparency could also generate some supportive external research, e.g., by university faculty, if NASS establishes a working procedure for receiving and responding to input from such external research.

Recommendation 4–3

NASS should accept full responsibility for how it uses, and explains the uses of, data from other agencies for calculating prices and price indexes.

Other agencies, principally the Agricultural Marketing Service (AMS) and the Bureau of Labor Statistics (BLS), are major sources of data used in the calculation of NASS price statistics. The prices for most livestock and livestock products and for most fruits, vegetable and specialty crops come from the AMS price reports. The statistical qualities of the AMS data are either unknown or not transparent. The total weight of items in the index of prices paid which come from AMS, BLS, ERS and DMRkynetec is 48 percent for the base survey month of April and 72 percent for other months. It was not apparent to the Review Panel that NASS had full access to, and made full use of, information on statistical properties of these external data, the nature and timing of changes and the appropriateness of uses being made of the data. The Review Panel recommends that NASS should establish an internal team that works on methodological and other issues related to the uses of prices from other agencies. Also, NASS should assume a leadership role in coordinating communications between NASS and other agencies producing data used by NASS. These suggestions imply that NASS should seek to better understand the price collection procedures of AMS and index construction concepts used in BLS and the implications of changes in those agencies' procedures.

Recommendation 4–4

NASS should undertake a comprehensive re-examination of its Agricultural Prices Program to develop a vision for a system of price statistics relevant to the emerging global food and agricultural economy and consistent with broader Federal and international statistical systems.

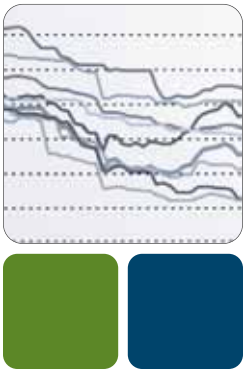
Changes in farm production and marketing methods pose challenges to estimating prices received and prices paid. The emergence of new technologies and business practices in production and harvesting changes the mix and variety of inputs purchased and how they are purchased. This increases the complexity of coverage, weighting and collection of prices paid data. Vertical coordination and integration in the commodity marketing system make it increasingly difficult to determine farm level prices. Equally important, NASS should rethink the role of the price statistics program in

the context of its linkage to national and international statistical systems. With the introduction of the North American Industry Classification System (NAICS), NASS should consider its publication goals broadly within NAICS–Sector 11: Agriculture, Forestry, Fishing and Hunting. NASS should also consider producing price indexes both conceptually and mathematically compatible to the BLS Producer Price Index (PPI), for example, making it possible to combine indexes from the two agencies to produce a complete NAICS–Sector 11 index. In short, the world in which agricultural price statistics are compiled and used has changed, and that change must motivate a comprehensive reassessment of what the NASS price statistics program is all about.

Recommendation 4–5

NASS should address the issue of potential bias in its price estimates caused by lack of specificity in defining attributes of items for which prices are collected.

NASS collects data on prices of items that are defined with varying degrees of generality. This opens the possibility of reported price changes coming from a change of attributes of the item or in the conditions of the transaction rather than from a change in the actual level of prices of items with precisely-defined attributes. Several recommendations in this report relate directly or indirectly to this concern. *(See Recommendations 5–1, 5–3, 6–1 and 7–3.)* The problem is illustrated in NASS's practice of collecting expenditure and quantity data for calculating prices of broadly-defined commodities, products and input items. In contrast, AMS surveys collect actual reported prices for more narrowly-defined products, though not with probability sampling. NASS may have two conflicting objectives in the collection of price data. One is to collect prices that, when multiplied by quantity, give total revenue or expenditures. This helps measure farm income, for example. But, if the objective is to measure price level changes, then prices should be collected for commodities or inputs with specific attributes that are held constant over time, while having a method of dropping outdated items and adding new items, as BLS attempts to do with the Consumer Price Index (CPI). The Review Panel sees this as a critical issue for NASS to address, as it involves both program objectives and accuracy of reported statistics.



In addition to the common themes, the Review Panel offers three additional general recommendations for NASS's consideration:

Recommendation 4–6

NASS should consider collecting and processing monthly prices received and prices paid so that they can be published early in the following month.

Both prices received and prices paid statistics are used for making agricultural projections and for administering farm programs. One of the most important uses of NASS price data is for the monthly World Agricultural Supply and Demand Estimates (WASDE) Report prepared by the World Agricultural Outlook Board (WAOB). The WASDE Report is widely used and has a major influence on commodity markets. It is usually released on the 10th, 11th or 12th of each month. Currently, its price predictions rely on the full-month prices from two months earlier and the mid-month prices for the previous month. The Review Panel expressed concern that the mid-month price is subject to point-estimate sampling problems and may not be representative of overall price patterns. The recommended change would make full-month estimates from the preceding month available for WASDE and other uses. Mid-month prices for field crops would no longer be collected. Moreover, earlier availability of monthly average prices would be advantageous in the administration of farm programs. For example, Milk Income Loss Contract (MILC) payments could be made earlier if NASS's monthly average prices for feed were available earlier. Any change in the schedule of reporting prices would have to be coordinated with WAOB and other users.

Recommendation 4–7

NASS should seek balance between quality improvement efforts and assuring consistency of price statistics series over time.

Historical data on prices and price indexes are valuable to policymakers, researchers and the general public. Consistency in the price statistics series is important to many users who follow price movements over time. Any changes in the methods used to collect data and calculate price statistics should be made as often as necessary to improve statistical quality. However, it is important that these changes be made deliberately and openly. When estimation methods change for a series, reports should provide information for splicing the new estimates onto older series. Consistency is required so the statistics are reliable ongoing indicators of price relationships. This recommendation is for transparency, not an argument against quality improvements. Any changes in data sources, quality characteristics or characteristics of data obtained from other agencies should be made transparent to users, along with information on how to interpret and value the changes.

NASS must continue to seek balance between users' immediate needs and the longer-term goal of improving the quality of the price estimates. It became apparent during the course of the Review Panel's deliberations that maintaining a consistent series to administer existing programs sometimes conflicts with the development of improved price estimates, which might contribute to better policies in the future. This can result from a lack of strong research on what the optimum price series should be. In cases where the data are required for administering programs, but viewed as not meeting best practices, NASS should develop a new series to replace the deficient series and then bridge the old and the new series to minimize disruption to users in the program agencies.

Recommendation 4–8

On its website and in its publications, NASS should treat "agricultural prices" as a major subject and not as a sub-category of "Economics."

Identifying "agricultural prices" as a separate category would facilitate user access to information about the prices data (especially online) and would result in NASS combining information now shown under several topics. Also, the resulting higher visibility would be consistent with the Review Panel's view that agricultural prices are important and should be supported with a new vision and clarity of purpose.

Prices Received for Farm Commodities

NASS prices received statistics are critically important to the administration of many Federal farm programs. They are also required for the calculation of key economic indicators for the farm sector (e.g., farm income, commodity costs and returns and farm sector productivity), U.S. and world supply and demand estimates, important components of the National Income Accounts and the calculation of the parity ratio. Statistics on prices received for livestock have fewer apparent uses in the administration of Federal programs, but are important for all the other uses of statistics on prices received. Because prices received statistics are only reported monthly, they are not intended for short-term marketing decisions. For that purpose, AMS Market News reports are more useful. A key issue in the development of prices received statistics is the heavy dependence on price data collected by AMS.

Recommendation 5–1

NASS should review, update and improve criteria for choosing between conducting probability surveys and using price data from AMS and other sources especially for those commodities not included in indexes.

The use of data from probability surveys and from other sources in the same agricultural prices tables and the

same price indexes raises questions about the comparability and accuracy of the two data sources. The survey approach used for field crops provides greater assurance of complete coverage and allows measures of precision to be calculated. The use of price data from AMS is less expensive, and the monthly estimates appear less likely to be affected by monthly and annual changes in the attribute mix within a commodity. NASS should develop procedures for measuring the coverage and accuracy of monthly price estimates based on price data obtained from AMS and other sources. Such procedures should take into account completeness of coverage, bias and precision of estimates, users' needs for accuracy, the value of continuity in series, burdens on respondents and NASS's costs. There may be ways to work more closely with AMS to make their price data collection methods more compatible to NASS's needs.

Recommendation 5–2

NASS should track and evaluate quantitative measures of prices received data collection and processing operations to identify areas for improving the processes and resulting statistics.

The prices received program currently tracks the estimated coefficients of variation (CVs) at the national level. Other quantitative measures that could be tracked include:

1. the proportion of reporters who fail to report in accordance with NASS standards;
2. rates and patterns of item non-response and unit non-response; and
3. edit failure rates for key items.

For each of these, the actual impact on estimates should be assessed. Tracking such measures will provide data for comparing performance over time. A periodic summary and review of changes in these error indicators will help identify points in the survey process in need of error reduction efforts.

Recommendation 5–3

NASS should review, update and improve the criteria used to determine commodity, state and attribute coverage.

The development and implementation of new coverage criteria would serve to determine the overall scale of the price statistics program and which commodities and states to include at the margin. Currently commodities and states to be included for each commodity are determined every three years so that at least 90 percent of aggregate U.S. cash receipts are covered and each included commodity has 90 percent coverage. The 90 percent criterion is somewhat arbitrary. It should be reviewed from time to time and subjected to sensitivity analysis to determine whether and how large deviations from 90 percent would need to be in order to make a meaningful difference in application. In principle, commodities, states and attributes should be added or dropped at the margin depending on whether benefits to users of the statistics exceed the costs to NASS and respondents for generating the statistics.

Prices Paid by Farmers

Prices paid statistics are required for the calculation of parity measures, but may be more important for the calculation of farm income, farm costs and returns and other economic indicators, as well as for uses in the private sector. Data for producing prices paid statistics come from numerous sources, including NASS surveys, AMS, BLS, USDA's Economic Research Service (ERS) and private data companies. These data are largely for inputs used to produce traditional, economically important crops and livestock and livestock products. NASS surveys of prices paid are currently conducted annually. Until 2009, NASS surveyed prices for the month of April; now NASS uses March prices. The indexes of prices paid are reported monthly based on data from BLS, AMS and internal NASS sources.

Recommendation 6–1

NASS should address the goals and principles for changing the mix of inputs and selecting the attributes of items for which prices are to be collected.

Profound changes in the agricultural sector require NASS to be vigilant in determining what input prices should be collected. Large commercial farms are becoming more specialized but in varied ways. Some purchase inputs in bulk, wholesale and not from traditional local retailers. At the same time, there has been an increase in organic farming and in production of other specialty crops and livestock. These likely use very different inputs and inputs from different sources than do large commercial farms. Some inputs become less commonly used or become used in different forms. NASS needs documented criteria for guiding coverage of input items for which data are collected.

The quality and other attributes of some inputs consumed in agricultural production change, sometimes dramatically, over time. For example, embedded technologies make seeds for many crops far more productive today than in the past. A given size or horsepower tractor may be very different and far more productive than a similar size tractor 30 years ago. These changes affect the meaning of price comparisons over time. Criteria should be developed for pricing attributes and for incorporating attribute changes into price series. In any case, attributes of items for which prices are collected should be carefully defined to reduce bias in estimates of price changes, i.e., to distinguish between price level changes and changes in attributes.

Recommendation 6–2

NASS should change to semi-annual or more frequent surveys of prices paid.

Surveys in March or April to collect input prices may be relevant for major crops planted in the spring, but not necessarily for winter wheat or livestock-related inputs. It is not clear that the combination of annual price surveys with BLS-based monthly adjustments can adequately capture the monthly variability in input prices. A second survey period, perhaps August, September or October, would likely reduce the adjustments needed in reported monthly prices paid statistics to bring them in line with survey data.

Recommendation 6–3

NASS should develop a research program in prices paid statistics that addresses critical problems in survey design, documentation and identification of appropriate input items to cover.

Survey research is concerned not only with imprecision arising from sample selection and estimation, but also due to various non-sampling errors such as coverage, specification, measurement, non-response and with processing errors. The Review Panel suggests a need for further information in each of these areas. Specific suggestions are provided.

Price Indexes

The Index of Prices Received (1910) and the Index of Prices Paid (1928) had their origins in attempts to develop simple, aggregate measures of prices received and paid. Over the ensuing years, items (commodities sold and inputs purchased) were added to both Indexes to provide coverage that was more complete. Also, the weights of items in both Indexes were periodically adjusted to reflect changes in commodities produced and inputs purchased. The parity index and related parity measures, based on prices paid and received, were developed in the 1930s as part of the effort to measure well-being of farmers. The years 1910–1914 were the original base reference period for all agricultural indexes used for U.S. farm support programs. Additional base periods and reference periods were established in the 1970s and updated in the 1990s, at which time 5-year moving average quantity weights were introduced. The Review Panel found little evidence of current official use of parity measures, so they were given less attention.

Recommendation 7–1

NASS should have a well-defined conceptual basis for its indexes.

Well-defined concepts underlying and justifying price and index measures are useful to develop a strategy for

integrating changes in supply and demand into those measures on an ongoing basis. NASS should define what types of change it wishes to reflect in what time frame. Decisions about concepts of change do not have to be the same for both average prices and indexes, but consistency is helpful. New index concepts need to be researched and tested in parallel with existing indexes to permit bridging the old and new concepts to minimize disruption of official and other important uses of the indexes. Concern about disruption of ongoing official uses of existing indexes should not be a barrier to researching and testing improved indexes.

Recommendation 7–2

A high-level initiative should be undertaken to evaluate official and public interest in the continued calculation and frequency of publication of parity measures.

A program should be initiated to contact users of parity prices and related measures to determine the desired frequency of publication and scope of the parity measures. This question should be discussed with appropriate USDA officials and Congressional staff. The responses by users to past changes made in the calculations of parity prices should be reviewed as a guide to how much flexibility NASS has within its legal requirements. The goal should be to minimize constraints imposed by the required parity calculations on improvements in the more heavily used prices received and prices paid measures. Finally, NASS should reduce its dependence on the requirement to calculate parity prices as justification of its Agricultural Prices Program. The recent submission to the Office of Management and Budget (OMB) for approval of the Agricultural Prices Program indicates that the collection of the price data is covered by U.S. Code Title 7, Section 2204 and is not dependent on the legislation related to the parity prices.

Recommendation 7–3

NASS should evaluate alternative index formulations and revise the methodology used in construction of its indexes.

The Review Panel carefully examined the calculations underlying the current construction of price indexes in NASS. It appears that the indexes now produced are not true price indexes. The Review Panel offers alternative calculations and provides examples to illustrate the potential for bias if price changes are not computed correctly. NASS should revise its methodology as soon as possible.

Recommendation 7–4

NASS should consider improving its data collection to include probability-based surveys for its indexes.

In order to make an inference about a defined population, probability sampling should be used at all stages. For price index estimation, an overall measure should be estimated by weighting together sub-indexes for the finest level of detail desired for analytical or publication purposes. Probability-based mechanisms should be defined for selecting among all businesses which might sell or buy any of the items and for selecting specific items to be priced over time within a class. For each item stratum, the characteristics that are necessary to distinguish among all the items belonging to the stratum should be enumerated. The level of detail and extent of the "checklist" must be sufficient to insure that a current price for the exact same item at the same outlet can be obtained over time. The long-term problem of reflecting change in the universe of available items and outlets (e.g., the introduction of new technology or entirely new item classes) can be addressed by defining a schedule of sample rotation. While switching to all probability-based surveys for index components may be infeasible in the near-term for budgetary reasons, NASS should seek every opportunity to move in that direction.

Conclusion

The Review Panel concluded that the NASS Agricultural Prices Program produces statistics and economic indicators that are critically important for many official and public uses. The program needs renewed attention to its purposes—a new vision and a reexamination of all its data collections and processes. A new vision for the program should be accompanied by full documentation and transparency of all aspects of the program, including the program's purposes and underlying conceptual foundations. Decisions on improvements and new directions should be based on sound research, which will require strengthening the core research program and linkage with the larger research community. These recommendations are consistent with NASS's history of continued improvement and reputation for professionalism and integrity.

By tradition, and by virtue of authorities delegated to it, NASS is USDA's flagship statistical agency—one of a handful of key statistical agencies in the Federal government. These agencies provide the information base for much of public policy and for decisions which drive the nation's economy. NASS's status brings responsibility for leadership. One of those leadership responsibilities, as seen by the Review Panel, is to deal with the issues related to NASS's heavy dependence on price data from other agencies, especially AMS and BLS. At a minimum, NASS should institutionalize a process for open communications among the agencies involved that is designed to bring transparency, documentation and understanding to all aspects of price data originating in one agency and used by others. Ultimately, this process should reveal opportunities for each agency to improve the quality of data it provides to others, while improving overall efficiency of the collective statistical system.

NASS's response to these recommendations and challenges will determine the future relevance and usefulness of the Agricultural Prices Program. The Review Panel is confident that NASS has the will, competence and commitment to respond—to do the right things and to do them right. It is time to begin to develop a program of agricultural price statistics that meets the needs and opportunities of the 21st century.

Review Committee and Review Panel

Steve C. Turner, *Chair*
Mississippi State University

Gail L. Cramer, *Vice-chair*
Louisiana State University

Sub-panel 1, Prices Received

Ismael Flores Cervantes, *Chair*
Westat, Inc.

Brian Buhr, *Co-chair*
University of Minnesota

Richard Heifner, Co-chair
USDA-Economic Research Service (retired)

Corinne Alexander
Purdue University

Johnny Blair
Abt Associates, Inc.

Richard S. Sigman
Westat, Inc.

James Zavrel
U.S. Department of Commerce, Bureau of Economic Analysis

Sub-panel 2, Prices Paid

William G. Tomek, *Chair*
Cornell University

Arlin Brannstrom
American Society of Farm Managers and Rural Appraisers

Ronald S. Fecso
U.S. Government Accountability Office

Jeffrey T. LaFrance
Washington State University

Sub-panel 3, Price Indexes

Walter J. Armbruster, *Chair*
Farm Foundation (President Emeritus)

Cathryn S. Dippo
U.S. Department of Labor, Bureau of Labor Statistics (retired)

Robert Parker
U.S. Government Accountability Office (retired)

Michael K. Wohlgenant
North Carolina State University

At-large Review Panel Member

William Motes
Informa Economics, Inc.

Staff to Review Panel

John E. Lee Jr., *Review Director*
Mississippi State University (retired)

Tamara Wagester, *Executive Director*
Council on Food, Agricultural & Resource Economics (C-FARE)

Alison Rozema, *Intern*
C-FARE

C-FARE
The Council on Food, Agricultural & Resource Economics

900 Second Street, NE | Suite 205
Washington, DC 20002
202.408.8522 | www.cfare.org

The Council on Food, Agricultural and Resource Economics (C-FARE) is a non-profit, non-partisan organization dedicated to strengthening the national presence of agricultural and applied economics to matters of science policy and budget determination. For more information on C-FARE, please visit our website at www.cfare.org.