United States Department of Agriculture

Risk Management Agency



Research and Evaluation Division

**FCIC 23010** 

# NEW PROGRAM DEVELOPMENT HANDBOOK

# RISK MANAGEMENT AGENCY WASHINGTON, D.C. 20250

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# 1 PURPOSE

The purpose of this handbook is to provide standards and guidelines for handling requests for new insurance programs that are developed within the Risk Management Agency (RMA). The handling of such requests falls within the functional area of the Deputy Administrator for Research and Development (DARD), at the Research and Evaluation Division (RED). The handbook (1) identifies the RMA's mission for expanding the Federal Crop Insurance program, (2) outlines the process and procedures by which the RMA responds to requests to add a new insurance program to the Federal Crop Insurance program, (3) specifies data submission requirements for analysis of the new program request, and (4) establishes the framework RMA will use to implement, maintain, and evaluate a new program expansion.

Reinsured Company submissions of new programs (e.g., Alternative and Supplemental policies) are handled as provided in the Submission Standards Handbook (FCIC-24030) in accordance with the Federal Crop Insurance Act, as amended. These submissions also fall within the functional area of the Deputy Administrator for Research and Development; however they are handled at the Product Development Division.

#### 2 ABBREVIATIONS

Abbreviations which will be used throughout this handbook are:

CSREES Cooperative State Research, Education, and Extension Service

DAC Deputy Administrator for Compliance

DAIS Deputy Administrator for Insurance Services

DARD Deputy Administrator for Research and Development

FCIC Federal Crop Insurance Corporation

FSA Farm Service Agency

MPCI Multiple Peril Crop Insurance

NASS National Agricultural Statistics Service
NPDT New Program Development Team
NPRC New Program Review Council

NRCS Natural Resources Conservation Service

RED Research and Evaluation Division

RMA Risk Management Agency RSO Regional Service Office

USDA United States Department of Agriculture

#### 3 EXPANSION MISSION

- A <u>The expansion mission of the RMA</u> is to meet our obligations for mandatory program development and to expand the current program to provide desired risk management products to the greatest number of people covering the greatest dollar value of commodities.
- B The Federal Crop Insurance Act (the "Act"), as amended, contains the following provisions specific to this program expansion mission.
  - (1) Sec. 502(a) defines the purpose of the Act as follows:

"It is the purpose of this chapter to promote the national welfare by improving the economic stability of agriculture through a sound system of crop insurance and providing the means for the research and experience helpful in devising and establishing such insurance."

(2) Sec. 507(g) provides for the establishment of a management-level Specialty Crops Coordinator position, with primary responsibility for addressing the needs of specialty crop producers, and for providing information and advice, in connection with the activities of the Corporation to improve and expand the insurance program for specialty crops.

- (3) Sec. 508(a)(6) provides for the issuance of guidelines to assist the Corporation in formulating crop insurance policies for new and specialty crops, and for an annual report to Congress on the progress and expected timetable for expanding crop insurance coverage to new and specialty crops. These guidelines are found in this handbook and are summarized in the Summary of New Program Development Data Requirements Directive (FCIC-23020).
- (4) Sec. 508(1) provides for the offering of optional coverages as follows:
  - "The Corporation may offer specific risk protection programs, including protection against prevented planting, wildlife depredation, tree damage and disease, and insect infestation, under such terms and conditions as the Board may determine, except that no program may be undertaken if insurance for the specific risk involved is generally available from private companies."
- (5) Sec. 508(m) provides for the conducting of research as follows:
  - "(1) **In general.**--Except as provided in paragraph (2), the Corporation may conduct research, surveys, pilot programs, and investigations relating to crop insurance and agriculture-related risks and losses including insurance on losses involving reduced forage on rangeland caused by drought and by insect infestation, livestock poisoning and disease, destruction of bees due to the use of pesticides, and other unique special risks related to fruits, nuts, vegetables, aquacultural species, forest industry needs (including appreciation), and other agricultural products as determined by the Board.
  - (2) **Exception.**--No action may be undertaken with respect to a risk under paragraph (1) if insurance protection against the risk is generally available from private companies.
  - (3) **Evaluation.**--After the completion of any pilot program under this subsection, the Corporation shall evaluate the pilot program and submit to the Committee on Agriculture of the House of Representatives and the Committee on Agriculture, Nutrition, and Forestry of the Senate, a report of the operations of the pilot program, including the evaluation by the Corporation of the pilot program and the recommendations of the Corporation with respect to implementing the program on a national basis."
- C <u>Program expansion consists of two distinct processes:</u> county program expansion and new program expansion. County program expansion is defined as expansion of

existing crop insurance programs into counties with no program for the specific crop or program. New program expansion is defined as expansion into programs which do not exist in any counties. Since the enactment of The 1980 Federal Crop Insurance Act, as amended, the FCIC expanded crop coverage from 26 crops and 5,969 county crop programs in 1981 to 63 crops and over 20,000 county crop programs for the 1997 crop year. This expansion was in response to requests for insurance received from various individuals and groups with interests in crop insurance.

- D For simplification, "programs" as used in this handbook includes new crops as well as new insurance concepts, which may or may not cover currently-insured crops. In recent years, increased expansion into new insurance concepts has occurred in conjunction with the expansion into new crops. Examples of expansion into new insurance concepts include the Group Risk Plan (GRP) and Income Protection (IP). Where information in this handbook is most likely crop relevant, the term "crop" is used in lieu of "program." Handbook users are to exercise judgment in determining whether the specific information is relevant to crop-specific programs or to general insurance concepts.
- E Interests external to RMA which have supported expansion of crop insurance include individual growers; grower associations; Cooperative State Research, Education, and Extension Service agents; land grant university researchers; state agriculture departments; lending institutions; private insurance companies and organizations; commodity brokers; politicians; and others with agricultural interests and involvement. Within RMA, field staff recommend expansion based on interest expressed locally, or needs foreseen or anticipated by their analysis.
- The DARD has responsibility for making new program expansion recommendations to the Administrator of the RMA. By defining an acceptable risk and comparing expansion possibilities to a defined standard, expansion opportunities are identified. An acceptable insurance risk may exist when (1) an actuarially sound premium can be determined and charged to customers who are willing to accept that price, (2) the customers cannot adversely select against the program, (3) moral and morale hazards are avoidable or controllable, (4) there is sufficient interest to spread risk over an acceptable number of insureds and geographic area, (5) effective loss control methods are available, and (6) the covered perils are identified by frequency and severity.
- G Program expansion is a process of comparing the characteristics and magnitude of the insurable risks that an expansion possibility poses, with the Agency's criteria for acceptable risks and various program models or designs which might be considered appropriate tools for producers to manage those risks. These models are defined and maintained by the RED, and are available upon request. Since RMA may not have the resources to take advantage of all such acceptable expansion opportunities for a given crop year, the opportunities are prioritized by the Research and Evaluation Division with consideration given to input from the Regional Service Offices and other organizational units.

H In 1994, the Agency initiated a major effort to research specialty crops in cooperation with the Economic Research Service of the USDA. The purpose of this effort was to assess the feasibility of developing risk management policies and programs for new and specialty crops. At the completion of each study a report examines the costs and benefits associated with offering insurance on the crop, risk management alternatives available to producers by region, and the potential problems associated with developing a viable risk management program. These reports and appropriate executive summaries can be accessed through the RMA's Internet home page at the Web Site location http://www.act.fcic.usda.gov. Research studies will be initiated for new programs as they are identified as viable candidates for expansion consideration.

- I Section 5 of this handbook specifies the objective criteria that a new program request MUST meet to initiate consideration of a new program. If a request does not meet these criteria, time spent gathering the data specified in Sections 6-9 would most likely be wasted. If a request meets the criteria specified in Section 5, Sections 6-9 specify the dataset that MUST be compiled for RMA to perform a complete evaluation of a new program expansion request.
- The person or organization requesting a new program (e.g., a commodity association) is expected to submit a dataset addressing as many of the required items in Sections 5-9 of this handbook as possible. For data not readily available, or for questions or assistance, the respective Regional Service Office (RSO) or the RED should be contacted. Data submissions are to be organized by the section numbers in this handbook or in the Summary of New Program Development Data Requirements Directive (FCIC-23020) which is provided to growers' associations, commodity groups, etc. for this purpose. Submissions in electronic formats such as ASCII, WordPerfect or Lotus are encouraged but not required. Any omissions in the dataset will be completed by the RSO's, the NPDT, or RED.
- K Compiling the dataset defined in Sections 6-9 represents only one task in the project that results in a new RMA product. For a comprehensive picture of a typical RMA new product development refer to the Task Worksheet in Exhibit 1.

#### 4 OVERVIEW OF THE NEW PROGRAM DEVELOPMENT PROCESS

RMA will handle new program requests as follows.

- A <u>All requests, whatever their origin or point of receipt within RMA, will be forwarded</u> to the RED. Requests prepared within RMA will be submitted to the RED through the respective Deputy Administrator of the requesting organization.
- B <u>Each request will be logged</u> and entered into a tracking system.

A response to the person or organization making the request will be prepared by the recipient of the request and a copy of the request and response will be forwarded to the RED within 30 days of receipt of the request. The RED will determine whether the request warrants further consideration based on recommendations and comments by the respective RSO's and the criteria in Section 5 of this handbook. If the request does not warrant further consideration the RED will prepare a response advising the requester accordingly (and will provide a copy of the determination to the respective RSO's).

- D If the consensus of the RSO(s) and the RED is that the request warrants further consideration, RED will identify a Project Manager to establish and lead a New Program Development Team (NPDT) to manage the new program development project.
  - (1) As a general rule, a representative of the RED will serve as the Project Manager for pilot programs which are projected to be somewhat national in scope, and a representative of an RSO will serve as the Project Manager for pilot programs which are projected to be more limited or regional in scope.
    - (a) If the Project Manger is a representative of the RED, the Project Manager will coordinate all responsibilities of the NPDT.
    - (b) If the Project Manager is a representative of an RSO, a representative of the RED will serve as the RED Liaison to coordinate the NPDT's activities with functional units within the RMA's offices located in Kansas City, Missouri. As a general rule, the NPDT representative from the RED will serve as the RED Liaison.
  - (2) The New Program Development Team (NPDT) will consist of representatives from all DARD divisions and the DAIS. The NPDT is to:
    - (a) Coordinate (with the requester, the respective RSO(s), the DAC, the DAIS, and the DARD) the completion and evaluation of the dataset specified in Sections 6-9 of this handbook.
    - (b) Ensure that a Task Worksheet and Project Timeline are developed and followed for the team's new program development project.
    - (c) Ensure that minutes of all meetings and teleconferences of the NPDT are printed and distributed to all members of the team.
    - (d) Advise the RED Director in writing that expansion into the new program is recommended or not recommended, based upon the dataset in Sections 6-9 of this handbook.

(e) Identify the implementation parameters, performance goals, and implementation activities for the pilot program. (See Section 10.)

(f) Prepare a New Program Package (NP Package) for presentation to the New Program Review Council (NPRC) and a Project Proposal for presentation to the FCIC Board of Directors. See section 14 for membership and responsibilities of the NPRC as well as information regarding NP Packages. Also see Exhibit 5 for information regarding project proposals.

# E <u>If the results of the dataset evaluation</u> (Sections 6-9 of this handbook):

- (1) do not support the new program expansion, a notification to the person or organization making the request, and all RMA management, will be prepared by RED for the DARD's signature.
- (2) support the new program expansion, the NPDT will develop an NP Package and present it to the NPRC. The NPRC will review the NP Package and recommend that the NPDT either (a) not proceed with program development for specified reasons, (b) modify the program with specific changes before proceeding, or (c) proceed with program development as recommended by the NPDT. If the NPRC recommends that the NPDT:
  - (a) not proceed with program development for specified reasons, a
    notification to the person or organization making the request, and all
    RMA management, will be prepared by RED for the DARD's signature.
  - (b) modify the program with specific changes before proceeding, the NPDT will make the appropriate modifications and resubmit the NP Package to the NPRC until the NPRC elects option (a) above or (c) below.
  - (c) proceed with program development as recommended by the NPDT, the NPDT will prepare a Decision Memorandum for the DARD recommending that RMA proceed with development of the expansion program. If the DARD recommends:
    - not to proceed with development of the expansion program, a notification to the person or organization making the request, and all RMA management, will be prepared by RED for the DARD's signature.
    - 2 to proceed with development of the expansion program, the NPDT will develop a draft *Decision Memorandum for the Administrator of the RMA* (through the DARD) to all Deputy Administrators for comments and recommendations. After incorporating all RMA Deputy Administrator comments, the NPDT will prepare a

Decision Memorandum for the Administrator of the RMA (through the DARD) either recommending for or against the new program expansion. If the Decision Memorandum:

- <u>a</u> does not support expansion, a notification to the person or organization making the request, and all RMA management, will be prepared by the RED for the DARD's signature.
- <u>b</u> supports expansion, the Administrator of RMA will either concur or not concur on the new program implementation. If the Administrator of RMA:
  - (i) does not concur on the new program implementation, a notification to the person or organization making the request, and all RMA management, will be prepared by RED for the DARD's signature.
  - (ii) concurs on the new program implementation, the NPDT will develop and submit to the FCIC Board of Directors a project proposal for implementation of the new program (in coordination with the respective RSO(s), the DAC, the DAIS, and the DARD). As a general rule, the Project Manager will present the proposal to the Board of Directors.
- F <u>A notification of the decision of the Board of Directors will be prepared</u> by RED for the DARD's signature. The signed notification will be forwarded to the person or organization making the request, as well as all RMA management.

## 5 NEW PROGRAM REQUEST CRITERIA

To initiate consideration of a new program, a request must include at least one item from 5A and all items from 5B. Priority consideration will be given to requests that meet at least one criterion from 5C. Report the sources where appropriate, and include data for the past five years. Although requests may be for an area comprising numerous counties, most supporting data will be aggregated at the county level. In this case, the responses to the following criteria should include each county in the area of the request. Responses and reported sources for 5A, 5B and 5C will be reviewed for accuracy and relevance by RMA.

#### A Significant Grower Interest

(1) Request. A petition, letter, or similar request suggesting a minimum 10% level of participation by growers of the crop program in the area of the request.

(2) Participation Expectations. A quantified assessment that a minimum 10% level of participation by growers of the crop program in the area of the request is likely, based upon information submitted by agents or companies operating in the area, or by RSO extrapolation of experience on comparable programs in proximate and comparable areas.

Supporting documentation for 5A must include all of the following:

- (a) Number of Growers. An estimate of the number of growers of the crop in the area of the request.
- (b) Number of Requests. The number of grower requests for insurance coverage in this area.
- (c) Percent Requesting Coverage. An estimate of the percent of growers of the crop requesting insurance (number of growers requesting insurance ÷ number of growers of the crop in the area), and the percent of total acreage of this crop represented by these growers (acreage represented by the growers requesting insurance coverage on this program ÷ total acreage of this crop in the area).

# B Past, Current, and Future Economic Significance of the Crop/Program

Report the sources cited, and include data for the past five years.

- (1) Acres. Estimate the number of acres of the crop program in the area. Report the percent of all acres dedicated to the proposed crop in the area (number of acres of the crop in the area ÷ number of acres of all crops in the area).
- (2) Value. Estimate the value of the crop program in the area.
- (3) Value Percent of All Crops. Estimate the value of the crop in the area as a percent of the crop value of all crops grown in the area (value of the crop in the area ÷ value of all crops grown in the area).
- (4) Percent Income Contribution. Estimate the average percent contribution of the crop program to individual farm income (for those producers of the program in the area).
- (5) Economic Significance. Estimate the economic significance of the crop program in the area for the next five years. Include estimates of acreage and value. Articulate the reasons for any significant expected changes.
- (6) Individual Records. In the case of a petition or similar request from a growers' association, make every effort to obtain from the association, accurate and verifiable acreage, yield, and/or revenue data (as appropriate) for individual

members. The importance of obtaining data upon which to base a program cannot be overemphasized.

## C Economic Threshold

Report the sources cited, and include data for the past five years. Priority consideration will be given to new program requests that, for the most recent year, meet at least one of the following criteria:

- (1) Within the respective NASS Crop Reporting District, the value of the program exceeds \$3,000,000.
- (2) Within the respective State, the value of the program exceeds \$9,000,000.
- (3) Within the area served by the respective Regional Service Office, the value of the program exceeds \$15,000,000.
- (4) At the national level, the value of the program exceeds \$30,000,000.

#### 6 RISK PROFILE AND ANALYSIS

The data from this section IS REQUIRED and will be used to analyze risk characteristics. These data should be based on historical information for the program being analyzed. For crop programs, if the crop has not been produced in the area being considered for at least five years, the respective RSO may extrapolate these data from similar crops grown in the area. In this case, extreme caution should be exercised to assure that potential differences in the risks of producing the similar crops are accurately presented.

# A Perils Affecting the Crop/Program Being Considered

Determine the frequency, severity, and the time of occurrence with respect to the growing cycle/insurance period of the crop for each of the following:

- (1) Natural Perils (Including Fire). Identify all natural perils to which the program is subject by county, state or region. Identify the extent, including frequency and severity, to which the peril is likely to cause loss.
- (2) Economic Perils. Identify economic perils under Section 9, Marketing Dynamics.
- (3) Human Perils. Identify perils such as the risk resulting from failure to follow recommended good farming practices, moral and morale hazards, adverse selection, theft, etc.

(a) Failure to Follow Recognized Good Farming Practices. Identify potential risk by practice and any underwriting/loss adjustment methods and policy terms and conditions that may reduce this risk.

- (b) Adverse Selection. Identify adverse selection potential, and underwriting/loss adjustment methods and policy terms and conditions that may reduce this potential.
- (c) Moral Hazard. Moral hazard is a condition that exists where a person may try to cause a loss, or may exaggerate a loss that has occurred. Potential indicators of moral hazard include weak financial condition, undesirable associates, and poor moral character. Identify potential moral hazards and underwriting/loss adjustment methods and policy terms and conditions that may reduce moral hazard.
- (d) Morale Hazard. Morale hazard ("motivation hazard") is a condition that exists when a person is less careful than he or she should be because of the existence of insurance. Morale hazards may be indicated by poor personality traits (e.g., carelessness or thoughtlessness) or poor management (e.g., indifference to necessary record keeping). Identify potential morale hazards and underwriting/loss adjustment methods and policy terms and conditions that may reduce morale hazard.

#### B Loss Valuation

- (1) Values and Prices. Determine the pre-harvest value per unit (bushel, ton, etc.) of the crop. Document differences in value of different types or varieties. Pre-harvest value does not include costs associated with harvesting or handling the crop (storage, packing, processing, etc.). See Section 9B(1) also.
- Quality Deficiencies. Evaluate the causes and nature of quality deficiencies. Determine how quality is measured and documented (grade, etc.), and how it affects value. Document the dispersion of a harvested crop among the classes of quality. If the crop is sold on a grade basis, identify the grading standards for the county, State, or region; and determine whether they vary within these areas and comply with any applicable USDA grading standards. Determine the identity and independence of the grading agency and the entity performing the quality evaluation (if different). Provide a copy of the most recent grading standards from the agency providing the grading service.
- (3) Input Costs. Determine the timing and costs of inputs as they relate to crop development and calendar/insurance periods. Present a crop production budget. Preferably, this will include representative budgets of low, medium, and highly efficient producers of the crop.

(4) Alternative Uses. Determine alternative uses for the reduced quality crop, and availability of alternative-use marketing outlets in the geographic area being considered. State the values normally received for the crop when sold for uses other than for which it was originally intended. State the historic percentage of crops marketed as substandard for the past five years.

- (5) Production Records. Determine the quality and availability of production records. Identify the units of measurement for production (for the amounts guaranteed and the amounts counted in the event of loss), including grade or other defining characteristic; e.g., bushels of U.S. No. 1 commodity, marketable pounds, etc.).
- (6) Alternative Coverage and Indemnity Models. Identify one or more alternative methods considered for determining insurance coverages and indemnity calculations; e.g., yield-based coverage and indemnities versus revenue-based coverage and indemnities.

# C Loss Control Techniques/Tools Currently Available for the Crop/Program

- (1) Production Risk
  - (a) Loss Prevention. Identify methods by which losses can be prevented; e.g., irrigation, avoiding varieties susceptible to loss, preventive pest control measures, etc.
  - (b) Loss Reduction. Identify methods by which losses may be reduced; e.g., frost protection methods, pest control measures, site selection, cultivar selection, cultural practices, and handling methods which mitigate damage, etc.
  - (c) Reconditioning/Salvage. Identify methods by which the crop can be reconditioned or salvaged to reduce the financial impact of the loss.
- (2) Market Risk (See Section 9.)
- D RSO Analysis of the Insurance Experience of Other Programs Currently Insured in the Same Area as the Proposed Program
  - (1) Report the county participation and loss experience by year for the past ten years.
  - (2) Report the distribution of loss sizes for the past ten years.
- E Potential Impact of the Proposed Program

Identify the anticipated impact of offering the proposed program. This includes impacts such as sudden increases in production of a crop in an area resulting in depressed prices; increased production of crops which are considered to be weeds to producers of other commodities; increased production of crops which will be considered beneficial by some people or groups (due to increased employment), yet may be considered adverse by others (due to competition for available labor); etc.

- (1) Impact on insured and uninsured producers of the proposed program in the areas where the proposed program will be available as well as other areas.
- (2) Impact on insured and uninsured producers of other crops in the areas where the new program will be available.
- (3) Impact on other Federal or State programs. What is the history of disaster/Non-insured Assistance Program (NAP) payments on this program?

# 7 ACTUARIAL SUFFICIENCY AND DATA AVAILABILITY

The data from this section IS REQUIRED and will be compiled to develop a risk management assessment and a rating structure. The primary components of risk management are identification, evaluation, selection of risk treatment, and implementation. From the assessment of these four primary components, a quantitative analysis of inputs can be developed for a sound actuarial structure.

Data include producer records that identify acreage and actual yields, production costs, marketing data, and extension information. These data will be analyzed to identify potential exposure units upon which to base a rate (units upon which separate indemnities are established; e.g., enterprise units, basic units by share, optional units, units by type, etc.). Each exposure unit should be readily identifiable and readily measurable. These exposure units will provide a means to develop premiums commensurate with the exposed liability. The exposure units selected for rating each insurance coverage should allow an accurate measurement of expected loss frequency and severity. The following resources can provide additional historical data.

#### A Weather Data

- (1) U.S. Department of Commerce, National Weather Service
- (2) U.S. Forest Service Experiment Stations
- (3) Natural Resources Conservation Service
- (4) Department of Natural Resources

# B Agronomic Data

- (1) Agricultural Research Service
- (2) Natural Resources Conservation Service
- (3) USDA Research Centers

#### C Economic and Production Data

- (1) Economic Research Service
- (2) Farm Service Agency
- (3) National Agricultural Statistics Service
- (4) USDA Research Centers

# D Other Government and State Agency Data

- (1) Cooperative State Research, Education, and Extension Service
- (2) Natural Resources Conservation Service

# E <u>Industry Association Data</u>

- (1) Grower Association Records
- (2) Mill or Processing Plant Records

# F State or Federal Marketing Orders

Federal marketing orders are Congressionally authorized industry self-regulation programs that enable producers of certain fruits, vegetables, tree nuts, and specialty crops to raise growers' prices and their incomes indirectly by controlling product quality, the quantity marketed, and other marketing conditions. In addition to Federal marketing orders, there are many State orders and agreements that provide support for research and promotion.

#### G Other Data Sources

- (1) State and County Departments of Agriculture
- (2) Private Agricultural Consulting Services
- (3) Agricultural Chemical Company Research Branches
- (4) Cooperatives

(5) Hybrid Seed Companies

#### H FSA-Specific

Forms, copies of forms, or information from FSA, if available or applicable:

- (1) AD-1026, Highly Erodible Land Conservation (HELC) and Wetland Conservation (WC) Certification, and Appendix to AD-1026
- (2) AD-1026A (Supplemental to AD-1026)
- (3) FSA-423, Report of Farm Bases/Yields and Planted Acres
- (4) FSA-424, Crop Insurance Tract Data
- (5) FSA-426, MPCI-FCIC Information Request Worksheet
- (6) FSA-578, Report of Acreage

#### 8 AGRONOMIC AND HORTICULTURAL SUITABILITY

The data from this Section IS REQUIRED and will be used to evaluate the agronomic and horticultural suitability of the crop for the intended growing area. These data include written recommendations and supporting documentation from the Cooperative State Research, Education, and Extension Service or independent field research facilities on acceptable varieties or species for the area. This documentation should cover the following areas:

# A <u>Identify Whether the Crop is an Annual, Biennial, or Perennial</u>

- (1) Annuals plants that complete their life cycle in one growing season
- (2) Biennials plants that grow vegetatively for one year, then fruit and die the second year
- (3) Perennials plants that have a life cycle exceeding two years

# B Commercial Life Cycle of the Crop

(1) Dates and Initial Insurability. Identify, by recommended variety, the generally recommended planting dates and normal maturity dates. For perennial crops, identify how long it generally takes the plant to reach full production levels and identify alternative methods upon which to base initial insurability requirements (e.g., sixth growing season after being set out; having produced at least 300 bushels per acre in a previous crop year; etc.).

(2) Alternate Bearing. Identify crops prone to alternate bearing cycles and identify the average cycle length.

- (3) Stages. Identify any appropriate significant crop stages of development if significant changes in production costs or risks take place between such stages (e.g., stakes driven, one tie, and pruning; thinning; etc.).
- (4) Harvesting. Identify the common harvesting methods available, the number of times the crop is harvested during a growing season, and harvesting dates (earliest, latest, and normal).

# C Cultural Factors

Identify the following growing-area criteria with supporting documentation.

- (1) Rotations. Document any appropriate rotation requirements of the crop as they pertain to disease buildup, nutrient depletions, problems with pesticide resistance, or other risks. Can the crop be successfully cultivated with no loss to quality, using sustainable agriculture practices? Does the crop fit rotations required in NRCS conservation plans?
- (2) Fumigation/Sterilization Requirements. Are there soil (or other environment) fumigation/sterilization requirements?
- (3) Soils. Identify general and specific soil limitations as they apply to the specific crop in its recommended growing area. Consult NRCS soil capability class maps. Identify soils in the area with agronomic limitations as well as suitability for different agricultural crops.
- (4) Cultural Practices. Identify common and recommended cultural practices and differences by state, county or region for the crop in its various growing areas. Contact grower and industry association representatives for information dealing with the crops in their areas. For a crop that is relatively new to an area, include specific information on production experience in similar growing areas.
- (5) Weather. If applicable to the crop and area, provide annual average rainfall, mean high and low temperatures, average growing days, number of frost-free days, and the average first and last killing frost in the recommended growing area for at least the previous five years.
- (6) Varieties. Identify the prominent varieties available and their compatibility to the county, state or region for which program expansion is requested.

#### 9 MARKETING DYNAMICS

The data from this Section IS REQUIRED and will be used to evaluate the market potential, and thus the economic viability, of the crop (particularly for crops which are relatively new in the intended growing area) and market risks.

## A <u>Marketing Characteristics and Risks</u>

Provide an analysis of market potential and the risk associated with the post-harvest movement of the proposed crop into market channels. This analysis should evaluate the need for labor, machinery, and facilities, and contrast requirements such as delivery dates and conditions. Document post-harvest perils (including storage-related problems) that are affected by events occurring during the insurance period.

- (1) Perishable/Time-Sensitive Crops. State the logistics of marketing the crop. Evaluate availability of labor and facilities necessary to move the mature crop into market channels. Include analysis of risk associated with specific delivery dates required by buyers of the crop.
- (2) Non-Perishable Crops. Present an analysis of crop movement from harvest to market channels.

#### B Marketing Components

- (1) Pricing Mechanisms Contract or Open Market
  - (a) Provide information that describes prices received by growers. If the price is contracted, include a sample of the contract(s). If the price is determined on the open market, identify the location(s) in the marketing system at which that price is determined and paid (e.g., farm gate, "on tree," packinghouse door, FOB shipping point, or some other identifiable location).
  - (b) Contracting Tools. Identify the types and availability of forward contracting/options contracts for managing the market risk of the crop. Identify the form or configuration most likely to be utilized (straight hedge, cross hedge, synthetic hedge, etc.). Assess the effectiveness of the available tools, in their most likely form, for the management of market risk.
  - (c) Identify "field prices" as well as harvested/delivered prices.
  - (d) Identify any marketing windows of opportunity for the crop.
  - (e) Identify any changes in consumer taste (demand), etc., that might impact the value of the crop.
- (2) Grading (See Section 6B(2).)

# (3) Marketing Orders

If the crop is sold under a marketing order, provide a copy of the marketing order with information that identifies the administering official by name, address, and telephone number.

#### C Market Competition

#### (1) Domestic Market

Crop Utilization. Provide data for at least the most recent five years which document utilization of the crop. State NASS offices often collect these data. Identify the sources of the data.

- (a) Storage Facilities. If the crop can be stored, identify storage facilities utilized in the growing area by ownership and capacity. For example, commercial, xxx units capacity; grower facilities, xxx units capacity. Identify the problems associated with storage of the crop that would diminish the viability of storage as a market risk management alternative.
- (b) Processing Facilities. If the crop can be sold for processing, identify processing facilities serving the growing area by name, address (include distance from the growing area), capacity, and ability to accept the commodity in a timely manner. Specify if the processing facility is a cooperative or privately owned facility, and the years in operation.
- (c) Fresh Market Packing Facilities. If the crop can be sold for fresh market use, identify the fresh market packing facilities serving the growing area by name, address (include distance from the growing area), capacity, and ability to accept the commodity in a timely manner. Specify if the packing facility is a cooperative or privately owned facility, and the years in operation.

#### (2) International Market

(a) Provide data for at least the most recent five years which identify the quantity of the crop produced, the quantity exported, and the quantity imported. Also provide any recent studies that evaluate export and import potential of this crop. Sources of information include the Economic Research Service, Foreign Agricultural Service, and land grant universities. Grower associations often track studies related to their commodity.

(b) Identify any government regulations or agreements with foreign governments which significantly affect export or import marketing of the crop.

(c) Is this crop eligible for foreign crop insurance or in any other way subsidized by any other government? If so, provide details including any contacts from whom information can be obtained concerning such insurance or subsidy.

# 10 IMPLEMENTATION PARAMETERS, GOALS, AND ACTIVITIES

This Section DOES NOT require a response from the person or organization making the request; however, recommendations on the implementation parameters will be given consideration in the program development process. The Section provides a framework that RMA will use to plan and implement any new program expansion pilot program. The items included in this section are intended to provide guidance on the parameters, goals, and activities, but are not intended to be exclusive. Many pilot programs will have unique features and characteristics that warrant use of specific parameters, goals, or activities not included below. These standards intentionally provide the latitude to create parameters, goals, and activities that are uniquely suited to individual pilot programs. The items in this framework also provide the basis for evaluation of the pilot program. The RED will coordinate with the DAC, the DAIS and DARD divisions and make recommendations for these parameters, goals, and activities through the DARD to the FCIC Board of Directors.

## A <u>Implementation Parameters</u>

- (1) Crop year for implementation
- (2) Number of states
- (3) Number of counties
- (4) Duration of the pilot
- (5) Additional objective parameters State any additional objective parameters or goals that will define success of the pilot. These are items that MUST be addressed in the pilot program evaluations to consider extension, expansion, termination, or conversion of the pilot program to permanent program status.

#### B Performance Goals

- (1) Premium income
- (2) Insured acreage
- (3) Percent participation
- (4) Loss ratio target
- (5) Additional performance goals State any additional performance goals to be used to define success of the pilot. These are items that MUST be addressed in the pilot program evaluations to consider extension, expansion, or termination of the pilot program, or conversion to permanent program status.

# C <u>Implementation Activities</u>

The RED is responsible for ensuring that the pilot program is implemented by performing or coordinating with other appropriate units, activities such as:

- (1) Developing and releasing policies, standards, or procedures necessary,
- (2) Developing and filing actuarial documents,
- (3) Developing or modifying data reporting requirements,
- (4) Developing training materials and conducting appropriate training,
- (5) Developing and issuing appropriate news releases,
- (6) Conducting focus groups, and
- (7) Developing and releasing other materials necessary to implement the pilot program.

#### 11 MAINTENANCE OF THE PILOT PROGRAM

The RED is responsible for ensuring that the pilot program is maintained by performing or coordinating with other appropriate units, activities such as:

- A <u>Developing and releasing any necessary changes to the policies, standards, or procedures,</u>
- B Developing and filing actuarial documents,
- C <u>Developing or modifying data reporting requirements.</u>

- D <u>Developing any additional/new training materials</u> and conducting appropriate training,
- E Developing and issuing any appropriate news releases,
- F Conducting any additional focus groups,
- G Performing the annual evaluations of the pilot program, and
- H <u>Developing and releasing any other materials necessary to maintain the pilot program.</u>

#### 12 EVALUATION OF THE PILOT PROGRAM

This Section provides a framework that RMA will use to evaluate the implementation of any new program expansion. The items included in this section are intended to provide guidance on the evaluation parameters that RMA will consider, but are not intended to be exclusive. Many pilot programs will have unique features and characteristics that warrant use of specific evaluation parameters not included below. These standards intentionally provide the latitude to develop evaluation parameters that are uniquely suited to individual pilot programs. This Section DOES NOT require a response from the person or organization making the request.

#### A Annual Evaluation

- (1) Measure performance of the pilot program by year, by state, by county, and by delivery organization. This evaluation will include name of delivery organization, number of policies, net acres, total premium, liability, indemnity, loss ratio, loss cost ratio, and earned premium rate.
- (2) Measure the actual performance relative to established performance goals from 10(B).
- (3) What is the relationship between program participation, program costs, and acceptable distribution of risk?
- (4) Solicit comments and recommendations from all RMA functional units and the delivery organizations on the operation of the pilot program.
- (5) What risks were assumed by the private sector?
- (6) What program adjustments are warranted based on experience gained in delivering the pilot program?
- (7) What elements of the pilot program work better than expected? What elements do not work at all?

- (8) What specifically can be done to improve the pilot program?
- (9) Should the pilot program be maintained, extended, expanded, or converted to permanent program status? If so:
  - (a) Are program adjustments necessary based on data from the annual evaluations?
  - (b) Are program adjustments necessary based on the experiences of RMA functional units or the delivery organization in delivering the pilot?
  - (c) What is the period for reevaluation of the extended or expanded pilot program or permanent program?
- (10) Should the pilot program be terminated? If so:
  - (a) What new knowledge can be articulated from the experience gained from this pilot program?
  - (b) What are some likely applications of this new knowledge?
  - (c) What existing programs might benefit from application of this new knowledge?
  - (d) What were the best things about this pilot program?
  - (e) What were the worst things about this pilot program?

#### B Post-pilot Evaluation

- (1) Was the pilot program successful based on the performance goals established from 10(B)?
- (2) Should the pilot be maintained, extended, expanded, or converted to permanent program status? If so:
  - (a) Are program adjustments necessary based on data from the annual evaluations?
  - (b) Are program adjustments necessary based on the experiences of RMA functional units or the delivery organization in delivering the pilot program?
  - (c) What is the period for reevaluation of the extended or expanded pilot program or permanent program?

- (3) Should the pilot program be terminated? If so:
  - (a) What new knowledge can be articulated from the experience gained from this pilot program?
  - (b) What are some likely applications of this new knowledge?
  - (c) What existing programs might benefit from application of this new knowledge?
  - (d) What were the best things about this pilot program?
  - (e) What were the worst things about this pilot program?

#### 13 RECOMMENDATION TO THE ADMINISTRATOR

During the life of the pilot program, the DARD will annually coordinate evaluation of the performance of the pilot program based in part on the framework established in Section 12A, Annual Evaluation. At the conclusion of the pilot program, the DARD will coordinate evaluation of the performance of the pilot program based in part on the framework established in Section 12B, Post-Pilot Evaluation.

Results of the Annual Evaluation will be provided to the Administrator of the RMA annually. Upon completion of the pilot program, the Post-Pilot Evaluation will be conducted. A summary of all Annual Evaluations will be combined with results of the Post-Pilot Evaluation into a Decision Memorandum for the Administrator of the RMA, recommending for or against conversion of the pilot program to permanent program status.

#### 14 NEW PROGRAM REVIEW COUNCIL

# A Council Purpose

The New Program Review Council (NPRC) will meet periodically, as scheduled by the council, to discuss and provide concurrence on the design of new programs and to review the progress of all proposed new program projects.

## B NPRC Membership

The NPRC will be comprised of:

- (1) A representative for the DARD
- (2) A representative for the DAIS
- (3) The Senior Actuary
- (4) The Senior Underwriter

(5) The Division Directors within the office of the DARD

# C New Program Package (NP Package)

- (1) The NP Package is a package of material used to present a new program proposal to the NPRC. To facilitate review of NP Packages for approval by the NPRC, and to ensure that packages are thorough and complete, NP packages are to be uniform to the extent appropriate. The Research and Evaluation Division will provide the Project Manager with the latest appropriate version of an NP package for use by the NPDT in developing the package for a specific pilot program.
- (2) NP packages are to include the following major components as a general rule; however, the nature of the program and the model design may necessitate changes in the package content.
  - (a) Insurance model (e.g., APH, revenue protection, etc.)
  - (b) Implementation parameters
    - 1 Crop year for implementation
    - 2 Area of implementation (states and counties)
    - <u>3</u> Proposed duration
    - 4 Other program-specific parameters to define success of the pilot program (list for each pilot program)
  - (c) Performance goals
    - 1 Premium income
    - 2 Insured acreage
    - <u>3</u> Percent participation
    - 4 Loss ratio target
    - 5 Other program-specific goals to define success of the pilot program (list for each pilot program)
  - (d) Coverage concepts
    - 1 Crop/program insured

- Insurance values (basis for guarantees; e.g., commodity units, dollars, etc., and measurement of commodity units (field run, packed, etc.)
- 3 Insured and uninsured causes of loss
- 4 Insurance period
- 5 Insurance units
- 6 Quality provisions
- (e) Premium rates
- (f) Loss adjustment standards
- (3) Each major component identified in (2) above is to be supported by the following documentation:
  - (a) Statement of alternatives considered,
  - (b) Description of the data analyzed,
  - (c) Reasons for selection of the proposed alternative, and
  - (d) Statement of confidence in the validity of the component.

For example, the premium rate component would be substantiated by a document that delineates the alternative methodologies considered for the rates, the nature and sources of data analyzed, the reasons the chosen method was accepted, and an assessment of the reliability of the proposed rates. This documentation provides a basis for making judgments on the overall quality of the proposal.

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# **TASK WORKSHEET (continued)**

Compiling the dataset described in the New Program Development Handbook is only one task in the project that results in a new RMA product. To provide a comprehensive picture of the tasks involved in a typical RMA new product project (after the criteria in Section 5 of the handbook have been met), please refer to the sample Task Worksheet below.

	Task	Responsible Unit	Initials	Date
1	Send memo to appropriate RSO's notifying them of program being developed and soliciting their participation in the development of the program for their area.	Project Manager		
2	Develop memo to R&D Divisions and RSO's requesting representatives to be on the New Program Development Team (NPDT).	Project Manager		
3	Hold meeting/conference call with NPDT members. This includes representatives from the various R&D and IS divisions to establish timelines and resource allocation.	Project Manager		
4	4 Complete initial information assembly and analysis about proposed new program as described in Sections 6-9 of the New Program Development Handbook (NPDH).	Project Manager		
		Regional Service Office		
5	Develop an NP package (Statement of coverage concepts about program to be insured; i.e., covered perils, insurance values, insurance period, rating concept, etc.) and circulate to other RMA units for comment.	Project Manager		
		Regional Service Office	•	
6	Review the NP package and any supporting	Project Manager		
	documentation with the New Program Review Council.	Regional Service Office		
7	Prepare Decision Memorandum for the Deputy Administrator for Research and Development (DARD).	Project Manager		
		Research and Evaluation Division		
8	Approve the development of a pilot program.	Deputy Administrator, R&D		

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# TASK WORKSHEET

	Task	Responsible Unit	Initials	Date
9	Develop letter to all reinsured companies and appropriate FSA offices requesting representatives to participate in the program development.	Project Manager		
10	10 Coordinate the development of a draft policy and procedure for underwriting and loss adjustment.	Project Manager		
		Product Development Division		
11	Develop a preliminary rating model.	Actuarial Division or contractor		
12	Provide approval to proceed with rating model.	Senior Actuary		
13	Develop preliminary rates, coverage levels, dates, actuarial document statements, and prices.	Actuarial Division or team		
14	Conduct focus groups and incorporate findings.	Project Manager		
		Regional Service Offices		
15	Develop a loss calculation module and identify M-13 record descriptor changes.	Actuarial Division or team		
16	Develop premium calculation and identify M-13 record descriptor changes.	Actuarial Division		
17	Develop actuarial structure.	Actuarial Division		
18	Finalize insurance policy and procedure for underwriting and loss adjustment.	Project Manager		
		Product Development Division		
19	Finalize rates, dates, actuarial document statements, and coverages.	Project Manager		
		Actuarial Division		
20	Obtain concurrence of program materials by R&D Divisions and applicable RSO's.	Project Manager		
		R&D Divisions		
		Regional Service Offices		

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# TASK WORKSHEET (continued)

	Task	Responsible Unit	Initials	Date
21	Review program materials for legal sufficiency.	Office of the General Counsel		
22	Develop a project proposal including Docket, Risk Assessment, Decision Memorandum and Executive Summary for pilot approval by the Administrator, RMA and by the Board of Directors.	Project Manager		
23	Develop public relations materials:  a Direct: Brochures, video, software.  b Indirect: Media, trade publications.	Office of Public Affairs		
		Project Manager		
24	Finalize SRA details such as fund assignment, compensation, and others.	Deputy Administrator for Insurance Services		
25	Revise Manual 14.	Deputy Administrator for Insurance Services		
26	Develop training materials and certification programs for agents and adjusters.	Project Manager		
		Training Center		
27	Assemble and release actuarial materials (rates, coverage levels, prices, program dates, codes) for Actuarial Documents Book through the RO Server and via R&D Bulletin.	RED		
		Project Manager		
		Actuarial Division		
		Regional Service Office		
28	Verify revisions to Manual 13.	Actuarial Division		
29	Release training materials and begin training reinsured companies, FSA, extension agents, loss adjusters, and RMA units.	Regional Service Office		
		Project Manager		
		Training Center		
30	Initiate public relations activities: Meet with farm press, commodity associations, grower groups, and Congressional representatives in new program areas.	Regional Service Office		
		Office of Public Affairs		
		Project Manager		
31	Distribute public relations materials.	Office of Public Affairs		

# TASK WORKSHEET (continued)

	Task	Responsible Unit	Initials	Date
32	Maintain the pilot program.  a Yearly actuarial changes, issuance of actuarial materials.	Project Manager		
	b Solicit from RSO's, focus group, company representatives, etc., what's working and what's not.	RED		
33	Evaluate the pilot program (Annual and Post-	Project Manager		
	pilot Evaluations).	RED		
34	Terminate/extend/expand/modify/or convert	Project Manager		
	pilot program to permanent status.	RED		

# **PROJECT TIMELINE (continued)**

# \*\*\*SAMPLE\*\*\* (MILLET - 1996 CROP YEAR) \*\*\*SAMPLE\*\*\*

Milestones:	Duration in Weeks	Calendar <u>Date</u>
New Program Development Team review of background information*	4	04/28/95
New Program Development Team preparation of New Program Package* Primary target market Coverage concepts Focus groups Crop Insurance Industry Involvement State FSA Involvement	4	05/26/95
New Program Package presented to New Program Review Council*	2	06/09/95
Program development coordinated by New Program Development Team Policy terms and conditions Underwriting procedure Loss Adjustment procedure Actuarial Information (rates, coverages, prices, etc.) Data Processing	10	08/18/95
Research and Development concurrence process Actuarial Division Product Development Division Fiscal Systems and Operations Division Senior Actuary Senior Underwriter	2	09/08/95
Other concurrence Compliance Insurance Industry Office of the General Counsel (OGC)	2	09/22/95
Approval of the Deputy Administrator for Research and Development* Approval of the Administrator of the Risk Management Agency* Approval of the FCIC Board of Directors*	2 2 2	10/06/95 10/20/95 11/03/95
Program Implementation:  Release of program materials. (Rates, coverages, policy and procedures). Training of marketing, underwriting and loss adjustment personnel.	6	12/15/95
Expected Sales Closing Date		03/15/96

<sup>\*</sup>A No-Go Decision may be made at this time in lieu of further progress

#### PROJECT TIMELINE

#### \*\*\*SAMPLE\*\*\*

Milestones:

Duration Calendar
in Weeks Date

New Program Development Team review of background information\*

New Program Development Team preparation of New Program Package\*

Primary target market

Coverage concepts

Focus groups

Crop Insurance Industry Involvement

State FSA Involvement

New Program Package presented to New Program Review Council\*

Program development coordinated by New Program Development Team

Policy terms and conditions

Underwriting procedure

Loss Adjustment procedure

Actuarial Information (rates, coverages, prices, etc.)

**Data Processing** 

Research and Development concurrence process

**Actuarial Division** 

Product Development Division

Fiscal Systems and Operations Division

Senior Actuary

Senior Underwriter

# Other concurrence

Compliance

**Insurance Industry** 

Office of the General Counsel (OGC)

Approval of the Deputy Administrator for Research and Development\* Approval of the Administrator of the Risk Management Agency\* Approval of the FCIC Board of Directors\*

#### Program Implementation:

Release of program materials. (Rates, coverages, policy and procedures). Training of marketing, underwriting and loss adjustment personnel.

**Expected Sales Closing Date** 

\*A No-Go Decision may be made at this time in lieu of further progress

## **EXPANSION CRITERIA FOR EXISTING PILOT PROGRAMS (continued)**

The following criteria should guide management decisions regarding expansion of existing pilot programs or their conversion to permanent programs. Consumer acceptance, precision of loss adjustment procedures, financial considerations, and the accuracy of program parameters such as rates and transitional yields are the focus. Generally, expansion or conversion are considered when:

- A formal evaluation of at least two years of actual experience for a pilot program has been accepted by RMA management, unless the initial program design authorized phased expansion.
- If expansion is requested, adequate justification is presented as to why the pilot is to be expanded instead of making the program permanently available through the regulatory process. The justification must specify the additional information that is needed to evaluate the feasibility of the pilot program, and must explain why that information can not be collected from the initial pilot area.
- Producers demonstrate satisfaction with the program by participating at a rate that is comparable to other MPCI programs in the area, and by buying additional coverage so that the ratio of buy-up to cat policies matches or exceeds the ratio for those other programs.
- 4 All paid losses can be explained fully by the occurrence of insured perils, or identified losses not consistent with intended policy terms and conditions can be addressed through reasonable underwriting, policy, or rate changes.
- The frequency and severity of losses among policyholders are consistent with similar and comparable MPCI programs in the area after recognizing any unique agronomic characteristics of the subject program (unless changes to the pilot program design are made to bring losses in line).
- The frequency and severity of losses in the aggregate conform to the expectations underlying the premium rates established for the program.
- A controlled experiment demonstrates that losses can be adjusted with a precision consistent with established MPCI programs.
- 8 Transitional yields (if used) reasonably represent the average and range of yields actually produced by growers to whom the transitional yields apply.
- 9 Analysis of pilot program participants indicates little or no adverse selection.
- The costs of administering the program as either an expanded pilot or on a permanent basis has been analyzed and reviewed in the formal evaluation process, and the Fiscal

## **EXPANSION CRITERIA FOR EXISTING PILOT PROGRAMS**

Operations and Systems Division certifies that RMA has adequate budget authority with which to pay the anticipated administrative expenses.

- 11 RMA is able to establish an acceptable actuarial structure for the expansion area.
- The expected loss ratio of the pilot program, after expansion and modification, is consistent with the 0.88 loss ratio target for all programs.
- The expansion or modification of the pilot program does not introduce unnecessary complexity.
- 14 The program does not negatively affect the cropping patterns, market prices, or other agricultural economics of the region.
- An analysis of the advantages and disadvantages supporting expansion or conversion to permanent programs has been completed, and the advantages are deemed to outweigh the disadvantages.

## **OBJECTIVE MEASUREMENT OF RISK (continued)**

This Exhibit provides a summary of an objective measurement of overall risk and determination of viability for expansion. It is included to provide a framework of the analysis that RMA will conduct.

An acceptable insurable risk may exist when (1) an actuarially sound premium rate can be determined and charged to customers who are willing to accept that price, (2) the customers cannot adversely select against the program, (3) moral and morale hazards are avoidable or controllable, (4) there is enough interest for the risk to be spread over an acceptable number of insureds and geographic area, (5) effective loss control methods are available and (6) the perils are identified. Determination of whether this condition exists must be based on both objective and subjective data.

RMA must determine what level of risk producers are willing to bear. Estimates of probable protection levels are then made. Adequate objective data must exist to develop a premium. Sufficient data must be available to develop a demand function to determine what premium producers are willing to pay. Information on the insurable event must be available to ensure terms and conditions are set that preclude adverse selection. Information indicating the occurrence of moral and morale hazard must be available.

The degree of risk related to crop insurance for a specific crop and area is indicated by the loss cost ratio (indemnity divided by liability). The loss cost ratio is the cumulative result from the effect of all the insurable risks. The average loss cost ratio over time is approximately equal to the premium rate which should be charged to reach the break even point between premium and indemnity.

To estimate the average county loss cost for a new program where RMA has no prior experience, a minimum of five years of farm level yield data can be used. The farm yield data is converted to loss costs by dividing the difference of the estimated yield guarantee and the actual yield for a particular year by the estimated yield guarantee. Several farm level loss costs over time allow computation of a mean and standard deviation for the county. The mean and standard deviation is fitted to a probability distribution function to simulate the loss profile over the county.

The sample size necessary to estimate the county yield, and subsequently the loss cost, is determined by three factors. These are (1) standard deviation of yields, (2) the allowable error, and (3) the confidence interval for the allowable error. When a single county does not meet the minimum requirements for sample size, data from several counties across a homogeneous area may be pooled to provide an adequate sample. RMA will generate statistics to evaluate all data. These statistics are very helpful in selecting acceptable insurance risk levels.

The procedure described above serves as a tool in determining the magnitude of risk associated with a specific program and area, but would not be the final deciding factor. The data series will be carefully scrutinized to check for any major changes in farming practices or crop varieties which would affect yield variability. While the procedure above estimates the overall risk for the

#### **OBJECTIVE MEASUREMENT OF RISK**

program, the effects of individual risks on program losses are harder to quantify. However, since most losses are caused by weather related events, the probability of these events (such as the number of consecutive days with no rain) can be calculated. Also, an inquiry will be made into any recent entry of damaging pests that would not have affected the earlier yield data.

Once the amount of risk is estimated, in the form of a premium rate, it is compared to the level of demand for the product. RMA will use methods such as focus groups and demand function models to estimate the maximum dollar amount per acre that farmers are willing to pay. This maximum dollar amount is then converted to an estimate of a maximum subsidized rate. The only other inputs needed to complete the analysis are yield, coverage percent, and price election. For a sensitivity analysis, several levels of price election will be used to estimate a range of maximum unsubsidized rates. Alternatively, several levels of the expected loss cost from the probability distribution will be used.

An index of acceptable expansion can be calculated by taking the difference between the estimated maximum unsubsidized rate and the expected loss cost (plus the reserve rate). If the index is greater than zero, then the demand for crop insurance is probably greater than the risk and the crop may be a viable candidate for expansion. If the index is less than zero, then the risk is probably too great for an acceptable participation level of farmers to afford, and the crop is probably not a viable candidate for expansion. Further confirmation of this analysis may be made by grower focus groups.

## **PROJECT PROPOSALS (continued)**

- A project proposal is a package of material used to present a new program proposal to the FCIC Board of Directors for approval. To facilitate review of new program submissions for approval by appropriate approval authorities, and to ensure that proposals are thorough and complete, project proposal designs are to be uniform to the maximum extent appropriate.
  - A As a general rule, a project proposal is to include the following sections:
    - (1) Decision Memorandum
    - (2) Executive Summary
    - (3) Introduction/Crop History
    - (4) Draft Crop/Policy Provisions
    - (5) Draft Handbook
    - (6) Draft APH Provisions
    - (7) Actuarial Information
    - (8) Draft Manual 13
    - (9) Background
    - (10) Docket
  - B The nature of the program and the model design may necessitate changes in the content of the project proposal (e.g., a non-APH proposal would require a different section than "Draft APH Provisions").
- The RED will provide the Project Manager with the latest appropriate version of a project proposal for use by the NPDT in developing the project proposal for the specific pilot program.

(Reserved)