

The notes below are supplementary to the fact sheets produced for the LWVUS Agricultural Update.

## The Farm Service Agency's Farm Loan Program<sup>i</sup>

### Guaranteed Loan Program

Guaranteed loans are made and serviced by commercial lenders, such as banks, the Farm Credit System, or credit unions. FSA guarantees the lender's loan against loss, up to 95 percent. FSA has the responsibility of approving all eligible loan guarantees and providing oversight of the lender's activities.

These loans may be of the following types:

**Farm Ownership loans** will help a qualified applicant purchase or enlarge a farm or ranch, construct a new or improve an existing farm or ranch building, pay closing costs, and pay for soil and water conservation and protection.

**Operating loans** will help a qualified applicant purchase livestock and equipment and pay for minor real estate repairs and annual operating expenses.

**Conservation loans** will help a qualified applicant help complete a conservation practice in an approved conservation plan.

### Direct Loan Program

Direct loans are made and serviced by FSA using Government money. FSA has the responsibility of providing credit counseling and supervision to its direct borrowers by helping applicants evaluate the adequacy of their real estate and facilities, machinery and equipment, financial and production management, and goals.

In addition to the guaranteed loans described above a direct loan may also be made for an emergency.

**Emergency loans** will help you if you suffered a qualifying loss caused by natural disasters that damaged your farming or ranching operation. Emergency loan funds may be used to restore or replace essential property, pay all or part of production costs associated with the disaster year, pay essential family living expenses, reorganize the farming operation, and refinance certain debts.

### Land Contract Guarantee Program

Land contract guarantees are available to the owner of a farm or ranch who wishes to sell real estate through a land contract to a **beginning or socially disadvantaged** farmer or rancher. The seller may request either of the following:

**Prompt Payment Guarantee:** A guarantee up to the amount of three amortized annual installments plus the cost of any related real estate taxes and insurance. The seller must choose a third-party escrow agent who will handle transactions related to the contract.

**Standard Guarantee:** A guarantee of 90 percent of the outstanding principal balance under the land contract. The seller must choose a third-party servicing agent.

**Qualifications:** In addition to qualifications such as citizenship or legal status and credit worthiness, other criteria are applied for guaranteed and direct loans. The applicant must have the training, education, or experience to effectively manage a farm or ranch. For farm ownership loans only: the applicant must have participated in the business operations of a farm or ranch for at least 3 out of the last 10 years. For beginning farmer or rancher targeted funds only: the applicant must have operated a farm or ranch for 10 years or less. For beginning farmer or rancher targeted funds only: If the applicant currently owns a farm or ranch, it is less than 30% of the median farm size in the county. For down payment loans only: the applicant must be able to make a cash down payment of at least 5% of the purchase price for the farm or ranch he wants to buy, and its price is less than \$500,000. For emergency loans only: The applicant's operation must be in a county that has a disaster designation, and it has not been more than 8 months since the designation was declared. The applicant must have suffered a production loss (at least 30%) or a physical loss due to the designated disaster.

FSA offers other types of loans, such as marketing assistance loans and farm storage facility loans. These are not part of FSA's Farm Loan Programs and, therefore, may have different application or eligibility requirements.

## **Crop Insurance**

Crop insurance is available for 100 crops spread over most of the country. Two policies are available to cover price losses in animal production. While the concept of crop insurance began to protect against crop loss, in 2011, 7% of the policies were yield insurance and 87% were revenue insurance. Revenue insurance is much more expensive because it protects against both upward and downward price risk.

**Revenue=yieldXprice.** The anticipated revenue is set when the policy is purchased as follows: the anticipated yield is based upon the farmer's records and the projected price when the policy is purchased. The farmer chooses a coverage level – usually 65% to 85% , the balance being a deductible or the self insured portion.

The actual revenue is the actual yield X the actual price. The farmer is compensated if this product is less than the anticipated. Usually if the yield generally is low, the price will rise and the anticipated revenue is near what was anticipated. The result of this type of insurance is that the farmer is protected against loss in forward contracting

However, most farmers buy a more expensive revenue coverage (the government pays 55% of the cost of coverage) that increases the revenue guarantee of the fall prices are higher than anticipated. This guarantee is equivalent to the old guarantee X the ratio of the new price to the old price. – Thus if the price goes up 25%, so does the insurance coverage. This type of insurance provides that the farmer is protected against loss in forward contracting

Here the taxpayer is paying for a very expensive policy (usually twice the premium of a yield loss policy) and the farmer can receive an insurance payout even if the farmer has not suffered any loss. The servicing agent is richly rewarded in commission payment.

## **Research and Development**

In addition to the research and development functions described in the fact sheets, it is important to note that both CDC and NIH have an interest in agriculture-related research and development. CDC's National Institute of Occupational Safety and Health has an interest in conducting research regarding the health of children and agricultural workers in areas such as lung diseases, neurological diseases and depression which may be related to handling pesticides.

NIH's National Institute of Environmental Health is interested in endocrine disruptors such as were identified when arsenic was an ingredient in chicken feed and which may be among the inert ingredients in pesticides. Research looking at environmental factors across various stages of development has been identified as a priority area for research.

USDA has 5 R&D aquaculture centers under the National Institute of Food and Agriculture.

## **GMO Field Testing**

The Animal and Plant Health Inspection Service (APHIS) regulates the introduction (importation, interstate movement, or environmental release) of certain genetically engineered (GE) organisms. All regulated introductions of GE organisms must be authorized by APHIS under either its permitting or notification

procedures.<sup>ii</sup> The Biotechnology Regulatory Service (BRS) by notification or permit authorizes any field testing of genetically modified plants.

**Notification** is an administratively-streamlined alternative to a permit. The GE plant must meet specified eligibility criteria. Upon approval, notifications are valid for 1 year from the date of issue.

**Eligibility criteria:**

1. Recipient organism is not listed as a noxious weed nor considered by APHIS to be a weed in the area of release
2. Stable integration of genetic material
3. Known function of genetic material that does not result in plant disease
4. Characteristics of the gene and gene product: The introduced genetic material does not: (i) Cause the production of an infectious entity, or (ii) Encode substances that are known or likely to be toxic to nontarget organisms known or likely to feed or live on the plant species, or (iii) Encode products intended for pharmaceutical or industrial use.
5. Does not pose significant risk of creating new plant viruses
6. Does not contain sequences from human or animal pathogens

**Permitting**

If the genetically engineered organism is not a plant or if the plant does not meet all six of the eligibility criteria for notification, the permitting process applies and requires that six performance standards be met. Permits are valid for up to 3 years from the date of issue

**Performance Standards**

**1.** Movements of the regulated material must be conducted to prevent dissemination during transit, and stored at the destination facility to prevent unintended release.

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**2.** If the article is to be released into the environment, it must be planted in order to prevent inadvertent mixing with other nonregulated materials, such as in a location separated from adjacent plots to prevent mechanical mixing. Planting, harvesting, and other equipment must be segregated or cleaned. If seed or fruit will be produced, the regulated material must be prevented from entering the food or feed supply.

**3.** The identity of the regulated materials must be maintained at all times, for example, by labeling and packaging. The release site must be identified and separated from other planting areas, using flags, stakes, markers, fallow zones, etc. Additionally, methods to be used to destroy or devitalize the regulated material after use (e.g., autoclaving, composting, chemical treatment), or how the regulated material will be returned to and maintained in a contained facility must be devised. Destruction/devitalization of plant and plant material remaining at the release site must occur on or before the expiration date of the notification.

**4.** The applicant must ensure that no viable vector agent is associated with the regulated material (e.g., antibiotic or other chemical treatment of tissues/cells during transformation/regeneration or of seeds, or no vector agents were used).

**5.** If the article is to be released into the environment, methods must be used to ensure that the regulated materials and any possible offspring remain confined to the release site and do not persist in the environment. For example, isolation distances, use of border rows or fallow zones, use of temporal isolation, cages, flower removal or bagging, male sterility, etc.

**6.** If the article is to be released into the environment, the release must be terminated to minimize the likelihood of volunteers in subsequent seasons (e.g., disking, chemical treatment), and volunteers must be managed to prevent persistence in subsequent seasons (e.g., frequency, timing, and area of monitoring, methods of

removal, other crops to be planted in the field in subsequent seasons that can be readily differentiated from the regulated material). Destruction/devitalization of plant and plant material remaining at the field release site must occur on or before the expiration date of the notification.

When a developer has collected enough evidence that a GE organism poses no more of a plant pest risk than an equivalent non-GE organism, the developer may petition APHIS to determine non-regulated status for the GE organism. If the petition is approved by APHIS, the GE organism may then be introduced into the United States without any further APHIS regulatory oversight.

## Post-market Monitoring<sup>iii</sup>

The European Food Safety Authority EFSA, who plays a fundamental role in assessing the risk of [GM crops](#) and derived food and feed in Europe, has included a recommendation for so-called post-market monitoring (PMM) in its [Guidance for risk assessment](#) of food and feed from [genetically modified](#) plants, published in 2011. As part of the project, the researchers conducted feeding experiments with pigs, mice, salmon and rats. They fed them with a variety of commercially available [GM maize](#), called MON 810, and a pea containing a [pest resistance](#) gene derived from a bean. "We were using the peas because we knew it had effects", Epstein says. Indeed, a [previous study](#) published in 2005 by Australian scientists had shown allergenic responses in mice feeding on the pea.

However, the researchers were not successful in their search for biomarkers. "We didn't see any health effects", Epstein comments. Moreover, when looking at the allergenic effect the peas had caused in the original study, the scientists found the same effects in the native bean, implying that the GM pea did not cause the allergic reaction. They attributed this discrepancy to a cross-reaction with a substance called pea lectin and to technical differences between testing laboratories

Experts doubt the usefulness of PMM, in this case. "In my view, in contrast to the mandatory post-market environmental monitoring, monitoring GM food is questionable," comments Joachim Schiemann, biosafety expert at the Julius Kühn-Institut, Federal Research Centre for Cultivated Plants, Germany. He considers the pre-market risk assessment of GM food as sufficient in most cases. He argues that uncertainties should be defined prior to introducing a product to the market. "The regulatory authorities have to decide how much uncertainty is acceptable," Schiemann adds.

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[http://www.fsa.usda.gov/FSA/newsReleases?area=newsroom&subject=landing&topic=pfs&newstype=prfactsheet&type=detail&item=pf\\_20110201\\_farln\\_en\\_loans.html](http://www.fsa.usda.gov/FSA/newsReleases?area=newsroom&subject=landing&topic=pfs&newstype=prfactsheet&type=detail&item=pf_20110201_farln_en_loans.html)

<sup>ii</sup> <http://www.aphis.usda.gov/biotechnology/submissions.shtml>

<sup>iii</sup> <http://phys.org/news/2013-06-biomarkers-potential-health-effects-gmos.html>