An Evaluation of Agricultural Development Board Investments in Kentucky Agriculture 2001-2007:

Non-Model Projects, Model Programs, and the Kentucky Agricultural Finance Corporation

Executive Summary

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An Evaluation of ADB Investments in Kentucky Agriculture 2001-2007

In 2000, the Kentucky General Assembly passed House Bill 611, establishing how Kentucky's Master Settlement Agreement funds would be allocated. Fifty percent of the funds were designated for agriculture. The Kentucky Agricultural Development Board (ADB) was established to distribute these funds, and the Governor's Office of Agricultural Policy (GOAP) was created to provide the administrative duties. Sixty-five percent of the funds were allocated for statewide projects and 35 percent for counties under the oversight of County Agricultural Development Councils.

In 2007, the ADB and the GOAP contracted with the University of Kentucky to conduct a study to evaluate the impacts of the Agricultural Development Fund (ADF) expenditures on state non-model projects. Later in the project, the evaluation study was broadened to coordinate with the study of expenditures for county model programs and to include the Kentucky Agricultural Finance Corporation (KAFC).

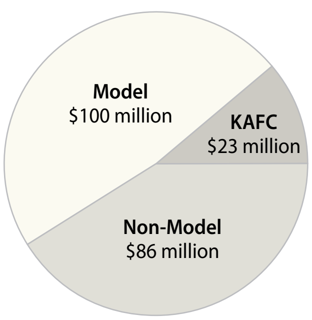
Evaluation Format

This evaluation was based on the Board's overall investment philosophy:

The Board will invest these funds in innovative proposals that increase net farm income and affect tobacco farmers, tobacco-impacted communities, and agriculture across the state by stimulating markets for Kentucky agricultural products, finding new ways to add value to Kentucky agricultural products, and exploring new opportunities for Kentucky farms and farm products.

The evaluation results are presented in three parts: Part I addresses the impacts of non-model projects, which are projects that were individually funded by the Kentucky Agricultural Development Board. Part II examines the county model programs, which are standardized programs administered through counties, primarily with county funding. Part III looks at the Kentucky Agricultural Finance Corporation, the entity that gives agricultural loans to producers. For each part, important findings are presented along with overall conclusions from the study results.

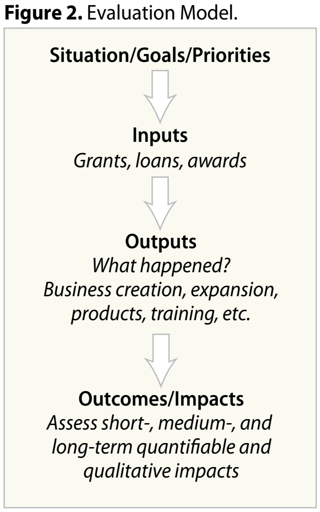
Figure 1. ADB Expenditures, 2001-06.



Funding

A total of $209 million was invested in programs and projects by the ADB during the study period. The distribution of these funds across the types of programs is presented in Figure 1.

Figure 2. Evaluation Model.



Evaluation Methodology

The overall goal of this evaluation is to assess the effectiveness of the ADB investments in agriculture, agribusiness, and leadership development for those funds awarded from 2001 to 2006. Figure 2 depicts the model that was developed to guide the evaluation project.

To evaluate the non-model projects, the UK Evaluation Team visited and interviewed recipients of all 64 projects funded at $100,000 or more and 25 of 111 smaller projects. Model programs were assessed based on reporting data from counties and program participants with additional assessment of impacts by groups of experts (referred to as "expert groups"). The Kentucky Agricultural Finance Corporation loan programs were evaluated through site visits and interviews with a sample of project recipients and participating lenders and assessments of program data. Expert groups of industry and association representatives, producers, and university faculty were utilized to help assess overall impacts in all phases of the evaluation.

The Non-Model Projects

Over the evaluation period, the Agricultural Development Board (ADB) invested $86 million in non-model projects. Data were collected and site visits and interviews conducted during summer 2007 for all 31 large projects (>$500,000) and 33 medium-sized projects ($100,000 to $499,000), plus a sample (25) of small projects (<$100,000).

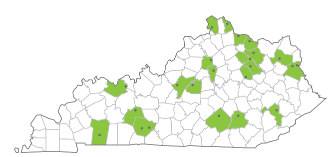
148 new markets have been created or existing markets expanded.

Evaluation Criteria and Approach

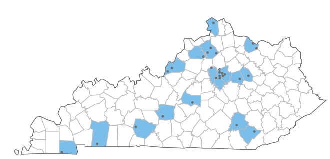
The evaluation criteria were focused on attempting to measure the performance of funded projects in contributing to the overall ADB investment philosophy and the priorities for marketing and market development, farm family education, leadership, and research. Detailed questions were included in the questionnaire to assess outcomes and impacts of all projects. The evaluation results and conclusions are based on the data from the GOAP files, site visits and interviews, and analysis by expert groups and outside consultants.

A standardized questionnaire was used to assess progress and identify specific major impacts. Expert groups were invited to review the results of the interviews and assist in the analysis of impacts. The overall impacts of the investments for non-model projects are reported in three ways: 1) specific major impacts on farm income generation, jobs, etc.; 2) performance rankings for large and medium-sized projects; and 3) impacts on key sectors like livestock or horticulture production, marketing, and leadership.

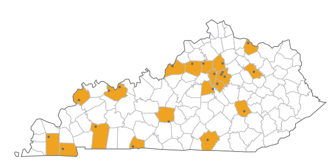
Project Site Visits



Small projects



Medium projects



Large projects

Specific Major Impacts

Since 98 percent of the project recipients indicated they had achieved "all" or "some" of their goals at the site visit, specific questions were asked and information collected on various types of potential impacts:

- *New markets or expansion of existing markets*—It is clear that these investments have led to broad market improvements. Over 148 new markets have been created or existing markets expanded, primarily through investments in livestock and horticulture projects plus marketing promotion. Examples of new markets include Siemer Milling purchases of low-quality wheat for industrial

Over 500 new products have been created in the last six years.

glue, naturally cured hams and the Process Verified Program (PVP) for cattle, and northern destinations for nursery products. Markets have been expanded for Certified Preconditions for Health (CPH-45) feeder calf sales, apple cider, and "Kentucky Proud" branding.

- *New products*—A large array of over 500 new products has been created by Kentucky agricultural entrepreneurs, including both animal-based and crop-based products. Some of the new products are being produced on a large-scale basis (e.g., ethanol, industrial glues, naturally cured hams, wines) and more on a small-scale basis (e.g., aquaculture seedstock, romaine lettuce, private label food products).
- *Farm income generation*—The estimated new gross income generated by the investments for non-model projects is substantial. For every $1 invested in non-model projects, there was $1.87 in new farm income generated. Over the study period, the estimated new farm income was $42 million per year for a total of $161 million. The livestock projects had the largest impact on new income, followed by the marketing and promotional investments.
- *New jobs*—Non-model projects were not large job creators for rural Kentucky. About 1,300 total new jobs are related to these investments, mostly part-time, seasonal jobs.
- *Leveraged resources*—Most of the project participants leveraged funds for their ADF project. In total, the $86 million from the ADF was matched with $96 million in participant equity or borrowed funds. Medium- and small-sized projects matched the ADF funds on a 2:1 ratio.
- *Tobacco farmers*—The surveys and interviews confirmed that the non-model projects impacted an estimated 50,000 current and former tobacco producers. The Kentucky Beef Network and the Kentucky Cattlemen's projects had the most impact on tobacco farmers, and the horticulture investments also had broad impact.
- *Tobacco-dependent communities*—The new farm and business income generated by the investments in non-model projects also had a secondary impact in the form of new income in rural communities. Using economic base multipliers for production agriculture and processing from UK researchers, it is estimated that the total new income impact from the investments in non-model projects was $325 to $355 million, primarily in central and western regions.

The specific major impacts by project category and size are summarized in Table 1.

Table 1. Non-Model Projects, Specific Impacts by Sector and Size, 2001-2007.[1]

				Income Generated:[2]		Income Generated[2] per $1 of Investment	New or Expanded:			Tobacco Farmers Impacted
	No. of projects	Amount of Award *(millions)*	Amount Leveraged *(millions)*	Additional Annual *(millions)*	Total, 2001-07 *(millions)*		Markets	Jobs	Products	
Large/Medium Projects by Sector										
Horticulture	*12*	$23.6	$16.4	$5.8	$32.0	$1.36	9	232	71	4,618
Livestock	*18*	$18.5	$17.6	$18.0	$58.3	$3.15	9	117	21	34,822
Added Value, Processing	*16*	$18.0	$42.0	$5.8	$24.2	$1.35	11	210	22	4,115
Education, Leadership, Other	*15*	$11.4	$6.2	$.076	$.243	$0.02	0	35	27	1,909
Marketing and Promotion	*3*	$10.6	$5.6	$8.8	$33.9	$3.19	19	8	34	2,409
Impacts by Sectors	**64**	**$82.2**	**$87.8**	**$38.4**	**$148.6**	**$1.81**	**48**	**602**	**175**	**47,873**
Projects by Size										
Large Projects	*31*	$74.3	$70.8	$35.0	$136.4	$1.84	35	465	108	43,555
Medium Projects	*33*	$7.9	$17.0	$3.4	$12.2	$1.55	13	137	67	4,318
Subtotal	**64**	**$82.2**	**$87.8**	**$38.4**	**$148.6**	**$1.81**	**48**	**602**	**175**	**47,873**
Small Projects[3]	*111*	$4.3	$8.6	$4.1	$12.8	$3.00	100	712	347	2,202
Est. Total Impact	**175**	**$86.4**	**$96.4**	**$42.5**	**$161.4**	**$1.87**	**148**	**1,314**	**522**	**50,075**

[1] *Projects that were awarded funds in 2007 are not included.*
[2] *Estimated.*
[3] *Results extrapolated from a sample of 25 projects.*

Estimated Impacts on Key Sectors

The non-model projects were, by their very nature, a diverse set of investments with different goals and strategies. However, there were projects focused on key sectors of the agricultural economy (e.g., livestock production). The non-model projects were categorized as investments by key sector and analyzed for impact.

- *Livestock Production*—The largest impact of the $18.5 million invested in non-model projects for livestock production was generated by the comprehensive "package" approach to improved technology and marketing implemented by the Beef Network, Kentucky Cattlemen, and Kentucky Dairy Council projects. Through the expansion of PVP cattle and CPH-45 feeder calf sales, income to cattle producers has increased significantly with premiums of $41/head in CPH-45 sales and $12/head in PVP sales, on average. Overall, the reputation and marketablilty of Kentucky cattle were raised. The result is an estimated 2 percentage-point basis improvement. It is estimated that every $1 invested in all livestock projects has generated $3.15 in new farm income.
- *Horticulture*—Although most of the vegetable marketing cooperatives have closed, the impact of the investments on non-model projects has been strongly positive. The horticulture sector has continued to grow as vegetable production has continued, wine grapes and wine production have increased, and nursery/greenhouse crops have expanded. About one-half of the 8 percent annual growth rate in horticulture output can be traced directly to the ADF-funded projects, especially the Kentucky Horticulture Council, the Kentucky Grape and Wine Council, and the markets opened by the horticulture cooperatives. Overall, the $23 million invested in the horticulture sector generated about $5.7 million in new income per year.
- *Value-Added Processing*—About $18 million has been invested in 16 value-added processing projects, with participants leveraging $41 million. Several of these projects have had high impacts: the ethanol plant, the industrial glue production operation, natural ham production, Evan's Orchard, and Equus Run Vineyards. Although the combined total output of these projects is small relative to the overall post-farmgate economy in Kentucky, they have had a positive impact in improving marketing and raising farm income, generating an estimated $5.8 million in new income per year.
- *Marketing and Promotion*—Almost $11 million has been invested in primarily two marketing improvement projects: the Kentucky Department of Agriculture promotional work with "Kentucky Proud" and the marketing assistance work by Allied Food Marketers West. Careful analysis indicates the "Kentucky Proud" state branding effort is one of the most successful in the United States. The Allied Food Markets West project was plagued with financial issues and conflicts of interest; however, some positive work was completed. Overall, the marketing projects generated an additional $8.7 million in new farm income per year, or $3.19 per dollar invested.
- *Education and Leadership*—Over $11 million has been invested in a diverse set of projects which range from leadership education for young Kentuckians in agriculture and agribusiness to the widely admired digital ag curriculum for Vo-Ag teachers and welding education for farmers. There were also leadership impacts from the work of the County Agricultural Development Councils, primarily strengthening the relationships among local agricultural organizations.

Project Performance Rankings

Over 90 percent of the expenditures for non-model projects were devoted to large and medium-sized projects. Because such a large proportion of non-model expenditures was invested in these projects, site visits and interviews were completed for each project, and a system was developed to rank performance. Utilizing data from the survey and expert group discussions, each project was ranked on activities initiated, goals achieved, and evidence of positive impacts (see Table 2).

Every $1 invested in all livestock projects has generated $3.15 in new farm income.

Table 2. Large and Medium Projects—Rated on Goals and Impacts (based on site visits through 2007).

Rating	Award Recipient	Project Description	Award
★★★★★	Commonwealth Agri-Energy	Ethanol plant	$9,311,000
★★★★★	Kentucky Horticulture Council	Horticulture marketing and technical support	$8,685,671
★★★★★	Kentucky Beef Network	Beef cattle marketing and technical support	$8,545,863
★★★★★	Kentucky Department of Agriculture	Marketing and promotion	$5,329,300
★★★★★	Little Kentucky Smokehouse	Ham processing expansion: Kentucky Fresh Pork, Natural Kentucky Premium Pork	$1,950,000
★★★★★	Siemer Milling	Wheat-based glue extender facility	$1,000,000
★★★★★	Burton Livestock, LLC	Dairy Heifer Custom	$424,818
★★★★★	Equus Run Vineyards, LLC	Winery expansion	$263,825
★★★★★	Evans Orchard and Cider Mill, LLC	Apple cider processing	$122,923
★★★★	Kentucky Cattlemen's Assoc.	Collaborative marketing (Beef Council, Pork Producers, WKGC, GE)	$1,930,000
★★★★	KCARD	Center for Cooperative Development	$1,250,460
★★★★	Buffalo Trace ADD District	Agricultural Revolving Loan Fund for Buffalo Trace Area	$1,000,000
★★★★	Boone's Abattoir	Livestock slaughter and processing facility	$572,676
★★★★	Kentucky Thoroughbred Owners and Breeders	MRLS Research I and II	$501,200
★★★★	Katelyn's Honey, Inc.	Private label value-added food products manufacture	$293,850
★★★★	Murray State University Foundation, Inc.	Ag diversification demonstration and education	$257,995
★★★★	Kentucky Vo-Ag Teachers Association	Statewide digital ag curriculum	$250,000
★★★★	Roundstone Native Seed, LLC	Native grass seed production	$202,600
★★★★	University of Kentucky - KALP	Leadership development program	$146,360
★★★★	Thoroughbred Shrimp Company	Freshwater prawn seedstock hatchery	$125,000
★★★	Kentucky West Nursery Co-op	Nursery Stock Cooperative	$4,788,966
★★★	University of Kentucky—KECI	Entrepreneur development for NE Kentucky	$1,282,206
★★★	Lake Cumberland Milling	Grain milling	$1,165,000
★★★	Kentucky Community and Technical College System	Computers for farmers	$1,155,000
★★★	Central Kentucky Growers Co-op	Vegetable management recruitment and equipment	$1,033,988
★★★	Kentucky Grape and Wine	Technical assistance for grape and wine production	$785,125
★★★	Creech Services	Compost production expansion	$618,309
★★★	Aquaculture of Kentucky, Inc.	Fish hatchery, fingerlings for aquaculture, value-added smoked fish products	$411,500
★★★	Kentucky Forage and Grasslands Council	Forage education and extension marketing assistance	$362,561
★★★	Christian County Grain, Inc.	Specialty grain marketing	$327,419
★★★	Shuckman's Restaurant Service, Inc.	Smoked fish aquaculture products	$300,000
★★★	Kentucky State University Bee Project	Honey extraction facilities for producers	$292,750
★★★	Community Ventures Corporation	Ag micro-loan program	$275,000
★★★	Kentucky Highlands Investment Corp.	Ag micro-loan program	$158,750
★★★	Maysville Community and Technical College	Welding and diesel courses for farmers	$124,800
★★★	Fishmarket Seafoods, Inc.	Freshwater prawn processing and marketing	$109,250
★★★	Kentucky Poultry Federation	Poultry indemnity fund	$102,000
★★	Allied Food Marketers West	Consulting firm to help Kentucky farmers and agribusinesses with business planning, market consulting, business development and brand development.	$4,891,561
★★	West Kentucky Growers Co-op	Vegetable cooperative development and expansion	$3,760,326
★★	Kentucky FFA Foundation	Youth endowment program	$2,000,000
★★	Friends of 4-H	Youth endowment program	$2,000,000
★★	Bath County Ag Marketing Center	Build, develop marketing facility in conjunction with new Extension Office Educational Center	$1,520,000
★★	Green River Growers Co-op	Vegetable co-op operating capital and equipment	$1,258,946
★★	Purchase Area Aquaculture Co-op	Cooperative storage and handling facility improvements	$1,191,525
★★	Cumberland Farm Products	Vegetable co-op equipment and operating capital	$684,649
★★	Goodinview Farms, Inc.	Vegetable packing facility equipment and operating losses	$439,537
★★	In Town Winery, LLC	Winery development (equipment)	$295,509
★★	John's Custom Meats	Livestock slaughter and processing facility	$250,000
★★	Commodity Growers - Buffalo Trace Auction	Produce and hay auction	$220,000
★★	Elmwood Stock Farm	On-farm compost manufacturing	$143,100
★★	Shady Lane Poultry Farm, Inc.	Poultry hatchery for pastured poultry production seedstock	$105,000
★★	Kentucky Beekeepers Association	Kentucky adopted honeybee development	$100,103
★★	Appalachian Sweet Sorghum Marketing Association, Inc.	Sorghum processing and marketing co-op	$100,000
★	Pig Improvement Corp.	Hog breeding facility construction	$800,000
★	Knotwood Craftsmen Investments, Inc.	High-tech woodworking facility and woodworking school	$642,000
★	Southeast Kentucky Agriculture Cooperative	Vegetable marketing co-op	$352,525
★	Burns Larkins Farm, LLC	Goat demonstration farm	$259,910
★	ApoImmune	Bio-research - medical use compounds from tobacco plants	$255,000
★	KentuckyVirtual.com	Internet marketing	$250,000
N/R	Kentucky Dairy Development Council	Infrastructure development	$2,450,170
N/R	Owensboro Grain	Biodiesel facility and equipment	$1,151,250
N/R	Kentucky Agriculture Heritage Center	Agricultural Heritage Center study and design	$1,000,000
N/R	Agritourism Interagency	Kentucky Department of Agriculture and Kentucky Department of Tourism, to develop and promote agritourism in Kentucky	$400,000
N/R	Kentucky Sheep and Wool Producers, Inc.	Establish goat and sheep industry development office	$184,000
Total Amount ADF Funds—Large and Medium Projects			**$82,161,276**

★★★★★ All goals accomplished; evidence of sustained positive impacts; indications that benefits are greater than ADB investment.
★★★★ All goals accomplished; clear, documented positive impacts.
★★★ Most or all goals accomplished; evidence of positive impacts.
★★ Most or all project activities or goals attempted; limited evidence of positive impacts.
★ Few or no goals accomplished; no impacts.
NR Not rated; project too new at site visit.

The $86 million invested to date in non-model projects has resulted in an estimated $161 million in additional farm income.

The majority of non-model projects accomplished most or all goals by the time of the site visit. As would be expected in venture capital financing, there are non-performing projects which deserve further examination to determine the source of the problems. Five projects were not rated ("NR") because they were not yet in operation or had only recently received funding.

Analysis of County Non-Model Investments

County Councils spent $20 million on non-model investments. These funds supported a wide variety of projects. Because of spending classifications, 41 percent of these funds still were used for model programs. There were 181 investments for a total of $4.1 million in group marketing or value-added processing facilities. County Council members identified a wide variety of anecdotal evidence for positive impacts, but the actual impacts could not be analyzed.

Conclusions

1. The ADF's investments in non-model projects have had a significant positive impact on agriculture and agribusiness. From 2001 to 2007, the $86 million invested has resulted in an estimated $161 million in additional farm income, created or expanded markets for 148 products, and generated about 1,300 new jobs.

2. On average, every dollar invested from the ADF in non-model projects resulted in $1.87 of additional farm income. Additional income was highest for marketing and promotion ($3.19) and livestock ($3.15). Project participants leveraged $96 million in additional funding.

3. Across large, medium, and small projects, investments have helped to create new markets, expand existing markets, and develop new products.

4. Investments in non-model projects have involved about 50,000 tobacco farmers. Some tobacco-dependent communities have been affected; however, this impact has been much less in northeast and eastern Kentucky, where traditional burley production has declined.

Recommendation: GOAP should encourage community-based economic development project proposals from regions where there exists potential for agriculturally-based ventures, especially in northeastern and eastern Kentucky.

Comprehensive approaches have been effective and have produced broad positive impacts.

5. Investments in non-model projects have been only modest generators of new jobs, about 1,300 including full- and part-time jobs.

6. The ADF investments in "comprehensive approaches" that combined education, technical assistance, infrastructure, marketing, and cost-share, such as the Horticulture Council and Beef Network projects, have been effective and produced broad positive impacts.

7. Eleven of the 31 large non-model projects and 9 of 33 medium non-model projects have accomplished all goals with documented evidence of positive impacts. Nine large projects and 10 medium projects are low-performing or non-performing.

Recommendation: The ADB should continue to fund 'risky' new ventures which stimulate new markets, expand the value chain, and encourage value-added processing.

8. The "failure" of some earlier investments (e.g., marketing co-ops) still resulted in advancements in new enterprises, new on-farm technology, production of new crops, and contract marketing.

Recommendation: The ADB should establish practical, even if lengthy, timelines for project implementation with reasonable investment in management and training, if needed, to improve long-run project viability.

9. The non-model projects have had broad impacts across key sectors of the agriculture economy.

- *Livestock*—$18 million invested with additional income generated of $16 million per year.
- *Horticulture*—$23.6 million invested generates an estimated $5 to $6 million per year of additional farm income.
- *Value-added processing*—$18 million invested leveraged $41 million in private investment and $5.7 million in additional farm income per year.
- *Marketing and promotion*—$10 million invested, with "Kentucky Proud" generating an additional $7.8 million in farm income per year.

Recommendation: The ADB should seek a private sector-based partner to collaborate with the KDA on supplying marketing assistance to small agricultural entrepreneurs. The 5% of total funds invested in small projects should be increased since small projects with specific scopes and objectives have had high payoff.

10. It appears that earlier ADF investments were made in riskier and less traditional venture capital projects as compared to more recent investments.

Recommendation: Seek collaboration with KAFC in providing coordinated financial assistance for new ventures which reduces risk through a blended strategy of grant and loan funding.

11. The non-model project reporting system is comprehensive, but the GOAP appears to lack the staff necessary to fully utilize information from these reports or monitor the performance of all projects. Relatively too much staff time was involved in feasibility analysis versus project monitoring.

Recommendation: GOAP staff should more carefully track and monitor award recipients, using site visits to assess strategies and investment performance. Every three years the GOAP should commission a major impact evaluation.

12. There have been a few serious issues in project administration, including private sector marketing assistance that did not accomplish goals and resulted in conflicts of interest, inconsistent terms and conditions of forgivable loans, competing projects funded in the same geographic area, and no coordination between non-model project financing and KAFC financing.

Recommendation: The ADB needs a clear policy on conflicts of interest for award recipients and should rationalize the provisions for forgivable loans.

The County Model Programs

Investments in county model programs were typically small, averaging $1,387 per award, with the total Agricultural Development Board (ADB) investments approaching $100 million with over 72,000 participants. Producers were required to invest at least an equal amount but typically invested much more.

Methodology and Data

Data originated from county model program reports completed by producers or farm representatives assisted by county agricultural agents for each cost-share investment or program area and were submitted to the Governor's Office of Agricultural Policy (GOAP). Reports were submitted electronically using Microsoft Excel®.

Expert Groups

Expert groups were employed to evaluate data for impact assessment and reporting forms for improvement.

There were over 72,000 model program participants, averaging $1,387 per award.

Analysis of Impact

Major Model Programs

Participants in the Cattle Genetics Improvement, Cattle-Handling Facilities, Forage Improvement and Utilization, and Hay, Straw, and Commodity Storage programs were primarily (~90 percent) beef producers. These programs were the top four programs in terms of participation (78 percent) in projects for county model programs and accounted for 72 percent of the money invested. Investments in the program averaged $1,284 per award. Administering agencies developed local leadership and involved young farmers, and educational programs encouraged adoption of science-based farming practices. Net farm income increased in well-established agricultural sectors, especially through increased access to value-added markets. Animal health and human and animal safety were improved through program participation. Programs that shared the costs of durable equipment and

Model programs have contributed to agricultural diversification in Kentucky.

structures (facilities, storage) are expected to provide returns on investments for 10 to 20 years or more.

Diversification Programs, Agricultural

Equine; Fruit and Sorghum; Vegetable, Mushroom and Herb; Commercial Ornamental Horticulture; and Pasture Poultry and Other Fowl Programs are effective and have contributed to agricultural diversification in Kentucky. Agritourism, Certified/Commercial Kitchens, Greenhouse Conversion/Construction, Honeybees, Sheep, Technology, and Timber Programs have made modest contributions and aided few producers. In some cases, access to the programs may be an issue. Commercial Aquaculture, Rabbits, and Sod Production Programs have offered minor contributions to Kentucky agriculture.

Diversification Programs, Other

Commercial Poultry, Swine, and Dairy Programs are clearly not generating new producers or establishing new marketing options. The nature of these industries does not provide the right environment to entice many new producers or provide other diversification options, and these programs should not be labeled as diversification programs. The goat investment area and, to a much lesser extent, the sheep investment area are promoting diversification through establishing new producers and promoting new market options.

Other Model Programs

The Farm Livestock Fencing Improvement Program was highly successful, allowing farm owners to establish more pasture for their cattle and other livestock. This program primarily impacted beef operations. Net farm income was improved, and pasture and hay fields were expanded. Carrying capacity was increased, and improvements increased the grazing season to reduce dependence on stored feed. The On-Farm Water Enhancement Program investments were primarily used for cattle operations. Good-quality water is an essential element of any livestock op-

Table 3. Model Programs Statistics, 2001-2007.

Major Programs	Investments	Participants	Average/ Participant	Investment Distribution	Rank	Participant Distribution	Rank	Counties
Forage Improvement and Utilization	$21,467,255	17,496	$1,226	21.52%	1	24.25%	1	103
Cattle-Handling Facilities	$19,516,463	15,073	$1,294	19.57%	2	20.89%	3	101
Cattle Genetics Improvement	$11,910,751	16,602	$717	11.94%	4	23.01%	2	104
Hay, Straw, and Commodity Storage	$19,061,126	6,867	$2,775	19.11%	3	9.52%	4	99
Diversification Programs								
Agricultural Diversification	$11,840,156	5,312	$2,228	11.87%	5	7.36%	5	97
Commercial Poultry Diversification	$114,783	35	$3,279	0.12%	11	0.05%	11	4
Dairy Diversification	$1,235,060	411	$3,250	1.24%	9	0.57%	10	29
Goat and Sheep Diversification	$3,323,766	4,294	$774	3.33%	7	5.95%	7	89
Swine Diversification	$47,516	17	$2,795	0.05%	13	0.02%	13	8
Other Programs								
Farm Livestock Fencing Improvement	$8,813,429	4,674	$1,885	8.84%	6	6.48%	6	67
On-Farm Water Enhancement	$1,477,187	771	$1,915	1.48%	8	1.07%	8	23
Technology	$832,142	563	$1,478	0.83%	10	0.78%	9	28
Timber Production, Utilization, and Marketing	$110,165	36	$3,060	0.11%	12	0.05%	11	7
Total	**$99,749,805**	**72,151**	**$1,386**					

eration, and two years of drought have made water issues more critical. New pasture development and adoption of rotational grazing justify investment in this program. Parts of the Technology Program were successful, and others were not. Producers are increasing acceptance of precision agriculture and using computers to track finances, cattle performance, and farming practices but are not adopting satellite broadband. The Timber Production, Utilization, and Marketing Program helped woodland owners recognize their assets.

Shared-Use Equipment Program

The total ADB investments were $1,125,985 for 2001 through 2007. Fifty-four counties reported participation in the Shared-Use Equipment Program with the majority (35) reporting multiple items purchased. Loan fees, in some cases, have generated enough revenue to buy comparable equipment while maintaining the initial equipment, making this program self-sustaining. See Table 3 for the statistics of all of the model programs.

Forage producers have realized economic benefits and adopted best management practices.

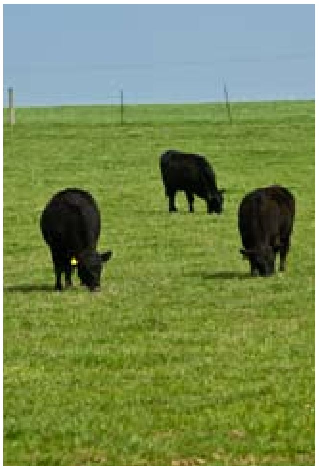
Conclusions

Forage Improvement and Utilization Program

The Forage Program has resulted in additional net farm income for participants. Science-based decisions (soil testing, renovation, improved seed varieties) in forage management have increased through program participation. A high number of forage producers have realized economic benefits and adopted best management practices in their forage operations.

Cattle-Handling Facilities Program

The Cattle-Handling Facilities Program increased net incomes for a high number of cattle producers (primarily beef producers) through labor savings, reduction of medical expenses and lost work time, improved herd health and productivity, and access to value-added markets. The ability to adopt/enhance science-based management and health-care practices is facilitated by the cost-share equipment and structures. Farm safety experts indicated the ADB should consider implementing cattle-related injury prevention/general safety training sessions in conjunction with the Cattle-Handling Facilities Program.



Sustainability of herd genetic improvement may be challenged by lifetime maximum participation levels.

Cattle Genetics Program

Nearly 15,000 bulls were purchased as a result of the Cattle Genetics Program. However, the advantages of artificial insemination are not being fully exploited. Bulls were selected using the science-based approach of expected progeny differences (EPD) data to match producers' management and marketing systems. Increases in net income through genetic improvement of herds can be attributed to:

- improved breeding programs.
- increased calving percentage.
- decreased losses due to dystocia and other health problems.
- value-added market participation.

Sustainability of herd genetic improvement may be challenged by lifetime maximum participation levels. Inflated costs of high-quality bulls may cause producers to go back to purchasing inferior breeding stock.

Hay, Straw, and Commodity Storage Improvement Program

The Storage Program has allowed nearly 7,000 producers to improve farm income by:

- reducing hay/straw losses through inside storage.
- saving on feed costs by utilizing on-farm feed and purchasing bulk commodities.
- pursuing cash hay and straw markets.
- reducing labor costs associated with hay and grain handling.

Facilities established through this program amplify the return on investment over many years.

Diversification Programs, Agricultural

- *Agritourism*—The goals of this investment area were achieved for those few who have utilized this program. The relatively high percentage without liability insurance is of great concern.
- *Commercial Aquaculture Production*—The aquaculture investment areas may have encouraged a few producers to try aquaculture, but it is not known whether those producers are still active. There are indications but no confirmation that existing operations benefited.
- *Certified/Commercial Kitchen Construction or Renovation*—While this program has significant potential, very few counties offered it.
- *Direct-to-Consumer Livestock Production*—This investment area has promoted diversification by encouraging producers who had not previously utilized direct-to-consumer livestock sales. It has been successful in promoting an alternative marketing system for the majority of participants in this program.
- *Equine Production*—Very few respondents were new to the equine business, although participants developed different types of operations. Interest is expected to increase due in part to the World Equestrian Games and equine incentive programs.
- *Commercial Fruit and Sweet Sorghum Production*—This program created diversification by increased production or adoption of different types of production. Many new producers diversified into fruits and sweet sorghum production. All goals were met, and the program was one of the most successful diversification programs.
- *Greenhouse Construction or Conversion for Horticultural Enterprises*—This investment area accomplished two of three goals by assisting former tobacco producers to reconfigure their tobacco transplant greenhouses so that they could produce horticultural crops and by assisting producers with the construction of new greenhouses. There is no indication that this investment has helped develop a year-round horticultural industry in the state.

Small Animal Production

- *Honeybees*—A relatively high percentage of participants considered their prior experience as a hobby. Investments helped many begin to think of their hobby as more of a commercial venture. Equipment investments should pay dividends for several years.
- *Rabbits*—Data were insufficient to determine the viability of this investment area. However, anecdotal evidence suggests that, for the 44 participants, the goals of the small animal program were met.
- *Production of Commercial Ornamental Horticultural Products*—Few were new to this business, but others used the investment to diversify by pursuing other types of horticultural crops. These investments are expected to continue to produce similar improved returns over the life of the cost-share improvements.
- *Poultry Production: Pastured and Other Fowl*—Most of those who participated were new to this enterprise. Two producers who appeared to be commercial poultry operators prior to investment were diversifying into pastured poultry. The goals were achieved by this investment area.
- *Commercial Vegetable, Mushroom, and Herb Production*—While most participants were already in the commercial vegetable, mushroom, and herb business, they used cost-share funds to diversify within this business and to expand their operations. The returns on investment were high for this investment area. Investment area goals were achieved.
- *Sod Production*—There is no indication that this area has been utilized.

Large numbers of goat producers were affected even though total investment was relatively small.

Diversification Programs—Other

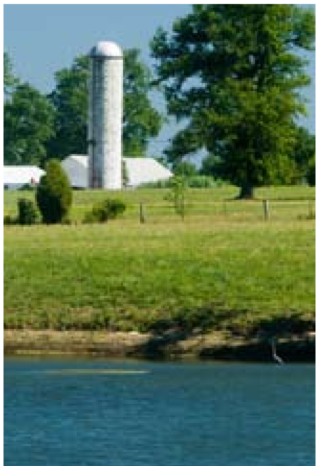
- *Commercial Poultry Diversification Program*—Benefits may be primarily labor savings rather than increased sales due to contract sales. None of those reporting were new to commercial poultry production. Although other goals were met, the goal to assist new producers may have been overly optimistic.
- *Dairy Diversification Program*—Producers indicated other improvements besides increased sales as benefits. This program did not encourage new dairies. Pursuing other markets is not a likely area for diversification either. A few dairy producers appeared to be reaching investment caps.

Goat and Sheep Diversification Program

- *Goats*—Large numbers of producers were affected even though total investment was relatively small. Although only 24 percent were new to goat production, producers were diversifying into more markets. Some of the benefits may also include improved herd health, ease of handling, and improved genetics within the herd. Goals for the goat part of the program were achieved.
- *Sheep*—The sheep participation was small in comparison to goats. Although only 23 percent were new to sheep production, producers were diversifying into more markets. Some of the other benefits may include improved flock health, ease of handling, and improved genetics within the flock. There is no indication that the sheep diversification program has helped improve wool quality in Kentucky.
- *Swine Diversification Program*—The goal to enable farmers to begin a swine enterprise was not achieved.

Other Programs

- *Farm Livestock Fencing Improvement Program*—The farm livestock fencing improvement program was highly successful, allowing farm owners to establish more pasture for their cattle and other livestock. This program primarily impacted beef operations, as did the four major model programs. Net farm income was improved, and pasture and hay fields were expanded. Carrying capacity was increased, and improvements were made that may increase the grazing season, thereby reducing dependence on stored feed. This program attracted the sixth largest number of producers.



Considerable thought should be devoted to how future funds will be invested as numerous producers are reaching the participation caps.

- *On-Farm Water Enhancement Program*—New pasture development and adoption of rotational grazing are enough benefits to justify investment in this program.

Technology Program

- *Precision Agriculture*—Producers were attracted to precision agriculture equipment for the first time. Participants were typically large farmers, but some were from counties with smaller fields, indicating a wider acceptance and scope to this program.
- *Animal Data Management*—Goals were achieved for this investment area. All approvals are not returned in a timely manner by the Kentucky Beef Network.
- *Computer Hardware and Record Management Software*—Seventy percent were still using a handwritten ledger, and 3 percent were not keeping records prior to investment. It is difficult to assess the true benefits of record keeping, but good records are key when determining business status.
- *Satellite Broadband*—With availability of other broadband access limited and the majority of agricultural support Web-based, this investment area should not be dropped unless the availability of other sources is confirmed. However, no participation was apparent for this investment area.
- *Timber Production, Utilization, and Marketing Program*—This program attracted few participants, but, of those reporting, the majority were new timber producers. This is an underutilized resource that many producers have but do not manage or consider as an asset.
- *Shared-Use Equipment Program*—The shared-use equipment program is a special program that may have provided the most impact of all the county model programs. For the most part, it is self-sustaining through the assessment of rental fees. Many counties have generated revenue to purchase new equipment while maintaining existing equipment. A 50 percent cost-share may be difficult for limited-resource counties to generate, and finding an organization willing to administer the program may be another limiting factor. Concern regarding liability, dedicating time to administer the pickup and delivery of the equipment by producers, and the collection and accounting of the fees assessed may prevent some county groups from assuming the responsibilities.

Summary

County model programs have been highly successful in improving producers' knowledge, farming operations, and net returns. The programs aided a large number of former tobacco producers. Counties have contributed by imposing guidelines to distribute funds to as many producers as possible. County councils were given autonomy to choose the types of programs that best served their counties. However, the primary area of emphasis has been the beef industry, which has benefited either directly or indirectly from approximately 70 percent of the cost-share funds invested by the ADB. Producers have moved from a high dependence on tobacco to a high dependence on beef cattle. Considerable thought should be devoted to how future funds will be invested as numerous producers are reaching the participation caps. County model programs bolstered the infrastructure of Kentucky agriculture and provided the knowledge base for producers to make informed decisions regarding input costs, production levels, and projected demand whether they are influenced by weather, the economy, health issues, or consumer preferences.

Data Collection and Reporting Conclusions and Recommendations

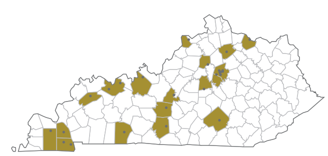
The reporting system needs to be streamlined to improve future impact assessment. Report forms allow the input of variable data that lead to misinterpretation, spelling errors, and inconsistent answers that are difficult to analyze. Dropdown lists with units where appropriate are recommended.

The Kentucky Agricultural Finance Corporation

In 2002, the Agricultural Development Board (ADB) considered the Kentucky Agricultural Finance Corporation (KAFC) as an option to provide access to capital for agricultural diversification and infrastructure projects as part of the Long-Term Plan for Agricultural Development. Subsequently, the ADB initially awarded the KAFC $20 million and has since added more funds.

KAFC has approved 249 projects and committed over $26 million.

KAFC Site Visits



KAFC Loan Programs

There are four primary KAFC loan programs funded by the Agricultural Development Fund (ADF): the Agricultural Infrastructure Loan Program (AILP) and Beginning Farmer Loan Program (BFLP), which are indirect loan programs; and the Agricultural Processing Loan Program (APLP) and Coordinated Value-Added Assistance Program (CVLP), which are direct loan programs. As of mid-2008, the KAFC has approved 249 projects and committed over $26 million.

Evaluation Criteria and Approach

The KAFC Board shares the vision of the ADB that marketing and market development are the top priorities (see 2007 Annual Report). The ADB Priority No. 2 shows that the Board supported reactivation of the KAFC to "provide financing for products and businesses where there is limited financial history."

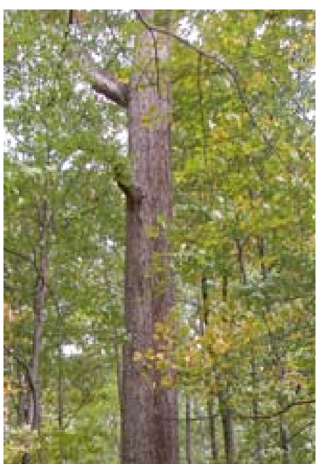
To evaluate the effectiveness of the KAFC loan programs, the UK Evaluation Team examined the list of all 218 outstanding loans as of spring 2008. A representative sample of 20 loans was selected, based on loan type, purpose, and location. Data were collected from KAFC files on all 20 sample loans, and a standardized questionnaire was developed for site visits and interviews with both borrowers and lenders.

The interviews revealed that about 75 percent of borrowers were made aware of KAFC loan opportunities through their lender or direct contact with the KAFC staff. Both borrowers and lenders made positive comments about the KAFC loan process, but several lenders expressed frustration with the "slow" decision-making process. All the loan projects visited by the UK Evaluation Team were completed and in use. Most of the borrowers agree that their project will have a long-term

Table 4. KAFC Loans through May 2008.

Loan Category	Number of Loans
AILP: *177 loans, 81% of total*	
Tobacco	73
Grain	31
Dairy	18
Poultry	16
Beef	10
Swine	9
Equine	8
Forage/Hay	5
Other	5
Vegetable	2
BFLP: *36 loans, 17% of total*	
Land	19
Barns	10
Farm shop building	4
Livestock	3
APLP: *4 loans, 2% of total*	
Timber	2
Bio-fuel	1
Pharmaceuticals	1
CVALP: *1 loan, 0% of total*	
Operating funds	1
Total Number of Loans	**218**

Loans were put to the following purposes:
Barns, 149; grain bins, 30; farm land, 19; equipment, 4; processing, 4; farm shop buildings, 3; livestock, 3; operating loans, 1.



There has been a substantial amount of leveraging for the KAFC loan funds.

impact on their business. Survey results show that the borrowers and lenders overwhelmingly agree that the ADB funds have been used in a manner consistent with the investment philosophy.

Loan Portfolio

The following tables show the types of KAFC loans (Table 4) and the dollar amounts for each of the KAFC loan programs as of May 2008 (Table 5). The majority of loans (81 percent) have been made through the Agricultural Infrastructure Loan Program (AILP), primarily for tobacco barns and grain bins. The second largest loan category is the Beginning Farmer Loan Program (BFLP) (17 percent), in which about half of the borrowers purchased land and the others built barns or purchased equipment or livestock. Only four loans have been made through the Agricultural Processing Loan Program (APLP); however, these were for large amounts that encumbered 40 percent of the total KAFC loan fund. Only one loan has been made through the Coordinated Value-Added Assistance Loan Program (CVALP).

There has been a substantial amount of leveraging for the KAFC loan funds. Averaging over all four KAFC loan programs, the KAFC has loaned 28 percent of the total project costs, a 3:1 leverage ratio.

Analysis of Impacts by Loan Program

The estimated impacts of KAFC loan programs were based on the data for the representative sample from KAFC loan files, site visits and interviews, and the analysis from the expert group.

Agricultural Infrastructure Loan Program

The AILP has had the most loan activity, mostly for tobacco barns and grain storage bins in western Kentucky. All of the borrowers interviewed cited the lower interest rates as the primary reason they pursued a loan with the KAFC. The impacts of these investments would include both enterprise expansion and improved prices from the sales of high-quality products (due to better storage or more timely marketing).

However, when borrowers were asked, "Would this loan have happened without the KAFC loan program?," 86 percent of the AILP borrowers interviewed replied in the affirmative. If this result is characteristic of all AILP borrowers, then the actual impact of this KAFC loan program is limited to the reduced interest rate (interest subsidy). Some of the borrowers stated they would not have done the project as soon as they did or maybe not as large without the lower KAFC interest rates. This indicates that low-interest financing is encouraging technology adoption and expansion of production. But if most AILP borrowers can obtain financing elsewhere, the KAFC is essentially duplicating conventionally available agricultural credit.

In the representative sample, the average net worth for AILP borrowers was $2.8 million (see Table 6). One borrower with very high net worth ($12.4 million) skews the average upwards, so removing this borrower and recalculating results in an average net worth of $1.7 million. This is considerably higher than the net worth of the average UK Kentucky Farm Business Management Program (KFBM) participants ($1.4 million) and twice the estimated net worth of "family farms" in the United States ($900,000). If the ADB passed funds to the KAFC "for products and businesses where there is limited financial history," then the AILP loan portfolio does not effectively accomplish the ADB's original intention for the KAFC funding.

Table 5. Kentucky Agricultural Finance Corporation Loan Statistics as of May 2008.

KAFC Program	Loan Amounts	% of Total Funds Loaned	Project Costs	% Funded by KAFC
Ag Infrastructure Loans	$10,137,232	44%	$31,235,418	32%
Beginning Farmer Loans	$2,886,095	12%	$11,398,238	25%
Ag Processing Loans	$9,203,000	40%	$31,756,000	29%
Total*	$23,193,437	96%	$78,258,096	30%

** Because only one Coordinated Value-Added Infrastructure loan was awarded, statistics are not reported for privacy reasons.*

Beginning Farmer Loan Program

The KAFC completed 36 Beginning Farmer loans as of May 2008. Five beginning farmers who received loans were interviewed as well as several lenders who have had multiple experiences with the program.

The Beginning Farmer financing program addresses two serious issues in modern farming: high capital requirements for entry and intergenerational transfer of ownership. The KAFC Beginning Farmer Loan Program directly addresses these issues by providing long-term, low-interest financing at start-up or for intergenerational transfer of existing farms.

Four out of five borrowers and all of the lenders interviewed indicated that the BFLP loans would not have happened without the KAFC participation. In the case of land purchases, beginning farmers were able to borrow the down payment funds from the KAFC. This lowered the risk for the participating lender as the KAFC would take a second position behind the participating lender on the mortgage.

Among the BFLP loans in the representative sample, the average net worth of the Beginning Farmer loans was $133,644. This is modest capitalization for a new agricultural entrepreneur and certainly in keeping with the spirit of the ADB's Priority No. 2.

The impacts on farm income from the BFLP are difficult to measure because these are mostly loans to purchase land, in which case the future income would be a projection of anticipated results. However, it can be reasonably concluded that all of the BFLP loans have resulted in assisting beginning farmers to start operations in an industry with substantial barriers to entry.

Agricultural Processing Loan Program

There were four APLP loans made as of May 2008. Two of the loans were for wood processing firms, another was for plant-based pharmaceutical production, and one was for new bio-diesel fuel processing.

The APLP financing accounts for only 2 percent (4 of 218) all KAFC loans but 40 percent of the value of the total KAFC portfolio. Three of the four loans were included in the representative sample of APLP loans included in this evaluation (the fourth was in the non-model projects evaluation).

The average net worth for the APLP borrowers was $2.2 million. Since these are existing processing firms, the amount of net worth should be considered in light of the goal of working with firms having "limited financial history." However, in all four cases, the APLP borrowers stated they could have borrowed the money elsewhere. The plant-based pharmaceutical manufacturer indicated the company had a very short time line to act on its purchase of an existing facility under bankruptcy proceeding. The assistance of the KAFC staff was instrumental to being able to act quickly to acquire the property.

All of the businesses are adding value to Kentucky agriculture products. In addition, the four APLP borrowers have added 28 full-time employees as a result of their expanded operations. However, actual impacts are difficult to assess because these projects could have been financed elsewhere, plus two of the projects were still under construction or not yet in full production at the time of the site visits. At some point, impacts of these four projects (setting aside concern about alternative financing) could be estimated in terms of additional income generated by

Table 6. Net Worth Comparison: KAFC vs. KFBM vs. U.S. Family Farm Average.

Project Description	KAFC Amount	Project Cost	Net Worth Listed on Application
Agricultural Infrastructure Loan Program			
Barn	$20,000	$37,666	$235,861
Barn	$100,000	$758,249	$12,431,905
Renovations	$50,000	$113,841	$1,198,000
Barn	$21,500	$43,000	$1,112,241
Bin	$44,000	$88,000	$6,927,012
Barn	$98,000	$149,427	$4,447,096
Barns	$100,000	$353,800	$976,001
Barns	$100,000	$848,981	$463,886
Barn	$18,250	$36,500	$466,860
Barns	$61,377	$125,506	$828,076
Bin	$35,000	$59,176	$1,180,290
Average Net Worth per Loan			**$2,751,566**
Beginning Farmers Loan Program			
Tractor	$12,597	$25,195	$132,889
Purchase Farm	$100,000	$254,300	$254,300
Farmland	$37,500	$150,000	$25,491
Equipment	$100,000	$200,000	$217,639
Farmland	$100,000	$246,632	$37,900
Average Net Worth per Loan			**$133,644**
Agricultural Processing Loan Program			
Equipment	$550,000	$1,250,000	$4,108,068
Processing	$3,600,000	$8,400,000	$188,049
Processing	$53,000	$106,000	$2,314,900
Average Net Worth per Loan			**$2,203,672**

Since only one Coordinated Value-added Infrastructure loan was awarded, statistics are not reported for privacy reasons.

Other Measures of Net Worth

KFBM Average Net Worth By Farm Type*
- All Kentucky Farms $1,337,098
- Grain $1,515,202
- Hog $892,000
- Dairy $1,140,234
- Beef $860,000

USDA ERS "Family Farm" Average Net Worth
- "Family Farms" $860,000

** 2007 Kentucky Farm Business Management Program*

High net worth AILP and APLP borrowers raise the question of how effectively the current loan portfolio addresses the ADB goal of improved capital access to those with "limited financial history."

multiplying the total annual revenue from the new operations by the percentage of financing provided by the KAFC. It seems clear that the APLP loans have the potential to contribute positively to the ADB goals, but it is not possible to make conclusive statements at this time.

Coordinated Value-Added Assistance Loan Program

The KAFC has completed only one CVALP at the time of the evaluation. This is a large indirect loan providing operating capital. The borrower is providing contract opportunities for other farmers. Therefore, the purposes of the loan are being met, and it appears consistent with the overall goals of the ADB and the KAFC. Due to privacy requirements, details of the sole CVALP loan and impacts are not discussed.

Although the purpose of this CVALP loan is similar to some non-model projects, the level of risk reduction is vastly different. The typical non-model project has a 100 percent forgivable loan, essentially a grant, and the CVALP loan provides only an interest subsidy. If risk reduction to encourage new coordinated ventures is the goal, the CVALP is not offering sufficient incentive to entrepreneurs. In addition, the stipulation that the CVALP can fund only 25 percent of a project severely limits the ability of the KAFC to mitigate risks to encourage new ventures.

Conclusions

1. The KAFC appears to be carefully administering the funds supplied by the ADB for improved capital financing in agriculture. Both borrowers and lenders are pleased with the administration of the program, the KAFC staff are considered helpful and knowledgeable, and there is good financial record keeping—reflecting the collaboration with lenders having due diligence standards. In site visits and interviews, the UK Evaluation Team did not encounter any issues of concern about general program implementation.

2. The outreach educational efforts by the KAFC staff seem primarily focused on agricultural lenders but not farmers. The loan program options are not well understood and recognized by the general farm population.

Recommendation: KAFC should pursue new educational efforts directed at farmers, commodity groups, farm organizations, and agribusinesses.

3. The current loan portfolio is primarily distributed in western Kentucky counties, reflecting the popularity of the Agricultural Infrastructure Loan Program among tobacco and grain producers. If the KAFC is going to expand loan implementation to a more balanced statewide distribution, then loan products will have to appeal to livestock producers and those in horticulture, agritourism, and agribusinesses in central, northeastern, and eastern counties.

Recommendation: Focus outreach efforts towards regions where there is little current loan activity but potential for financing projects with marketing and market development potential.

4. The composition of the current loan portfolio emphasizes low-risk financing of relatively high net worth borrowers. Except for the Beginning Farmer loans (17 percent of all loans), the majority of AILP and APLP borrowers have relatively high net worth and are "experienced" business entities, not new ventures. This raises the question of how effectively the current loan portfolio addresses the ADB goal of improved capital access to those with "limited financial history."

Recommendation: KAFC should have a clear mission statement that identifies program goals which further the stated mission of the ADF and appropriately targets loan products.

5. The Agricultural Infrastructure Loan Program (AILP) is popular because it provides low, blended interest rate financing, preferences for tobacco producers, a convenient and transparent application process, and low risk to the KAFC and agricultural lenders, and it is favored by producers of traditional major crops. However, the projects funded by the AILP do not appear to accomplish the market development objective or risk reduction for entities with limited financial history. While infrastructure loans are having a positive impact on the efficiency and profitability of individual producers, the overall program benefit is limited to the interest subsidy because 86 percent of the borrowers would have completed the projects without the participation of the KAFC. AILP may be duplicating loans that are already readily available from private lenders.

Recommendation: To pursue the mission of support for applicants with "limited financial history, the Board should reorient the AILP to better serve beginning farmers, new ventures, and agricultural diversification.

6. The Beginning Farmer Loan Program (BFLP) directly addresses the issues of barrier to entry for new farmers and intergenerational transfer of farm ownership, making it a key loan product. The current BFLP loans appear to be appropriately targeted and are meeting the goal of improving capital access to those with limited financial history. The financial benefits are clear for borrowers, and impacts should expand over time as participants continue in agriculture and more loans are implemented.

Recommendation: The BFLP should be expanded to fund more new farmers and the guidelines should be changed to accommodate people who have farmed but not owned a commercial size farming operation.

7. The Agricultural Processing Loan Program (APLP) is accomplishing the goals of marketing and market development. However, there are only four loans in this part of the portfolio, and all four borrowers stated they could have borrowed the money elsewhere, but they liked the lower interest rates. It is questionable whether these loans are needed in the normal course of agricultural processing. The fourth APLP loan was made to an innovative plant-based pharmaceutical manufacturer. If successful, this investment could result in a large amount of contract production for Kentucky farmers to raise specialty crops. Of the four APLP loans, perhaps this loan is the only one that could result in new markets and greater opportunities that would not have happened without the KAFC.

Recommendation: KAFC should revise loan program guidelines to target new and existing firms needing venture capital for value-added Kentucky agricultural products.

8. The Coordinated Value-Added Assistance Loan Program (CVLP) seems intended to support value chains involving multiple farms producing and selling into specific large markets. This has the potential to directly address the ADB priorities of marketing and market development. However, only one loan has been made in the CVLP, possibly because participation is limited to 25 percent of the total project. A 25 percent participation loan may not reduce the risk enough for participating lenders to fund new proposals for innovative value-added ventures in agriculture. Because Kentucky has so many small farms, this coordinated approach has high potential to help these producers access larger markets and gear production toward specialty niche markets.

Recommendation: Revise loan program guidelines to expand risk reduction and encourage new and innovative ventures. Seek collaborative funding with the ADB Non-Model Program to provide a combination of loan and grant financing, especially for the CVLP.

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