

**REPORT TO THE TWENTY-EIGHTH LEGISLATURE
2016 REGULAR SESSION
STATE OF HAWAII**

**ANNUAL REPORT ON THE
AGRICULTURAL DEVELOPMENT AND FOOD SECURITY SPECIAL FUND**

ACT 73, SLH 2010

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HAWAII DEPARTMENT OF AGRICULTURE

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SECTION I

Background

A. Act 73, 2010 Session Laws of Hawaii

In an effort to address Hawaii's over reliance on imported food and energy and the vulnerability that this creates in energy and food security, as well as negative impacts on biosecurity and our economy, the Hawaii State Legislature approved HB 2421, H.D. 2, S.D. 2, C.D. 1, which was enacted as Act 73, 2010 SLH. Act 73 provided for the creation of an energy and food security tax in the amount of \$1.05 which is to be levied "on each barrel or fractional part of a barrel of imported petroleum product sold by a distributor to a retailer or end user". Fifteen cents of the tax is to be deposited into a new Agriculture Development and Food Security special fund; fifteen cents is to be deposited into the new Energy Security special fund; ten cents is to be deposited into the new Energy Systems Development special fund; five cents is to be deposited into the existing Environmental Response revolving fund; and sixty cents is to be deposited into the general fund. In addition to the establishment of the new special funds, Act 73 also created the Hawaii Economic Development Task Force whose purpose is to "facilitate the accelerated adoption and completion of renewable-energy projects, energy-efficiency programs, agricultural infrastructure and development, and other measures to meet the purposes of this Act".

B. Agricultural Development and Food Security Special Fund

Part IV, Section 7 describes the Agricultural Development and Food Security Special Fund and the responsibilities of the Hawaii Department of Agriculture (HDOA).

"§141- Agricultural development and food security special fund; establishment. (a) there is established within the state treasury the agricultural development and food security special fund.

(b) The following moneys shall be deposited into the special fund:

(1) The portion of the environmental response, energy, and food security tax specified under section 243-3.5;

(2) Any appropriation by the legislature into the special fund;

(3) Any grant or donation made to the special fund; and

(4) Any interest earned on the balance of the special fund.

(c) Subject to legislative appropriation, moneys in the special fund may be expended for the following purposes:

(1) The awarding of grants to farmers for agricultural production or processing activity;

(2) The acquisition of real property for agricultural production or processing activity;

(3) The improvement of real property, irrigation systems, and transportation networks necessary to promote agricultural production or processing activity;

(4) The purchase of equipment necessary for agricultural production or processing activity;

(5) The conduct of research on and testing of agricultural products and markets;

(6) The funding of agricultural inspector positions within the department of agriculture;

(7) The promotion and marketing of agricultural products grown or raised in the state; and

(8) Any other activity intended to increase agricultural production or processing that may lead to reduced importation of food, fodder, or feed from outside the state.

C. Role of the Hawaii Department of Agriculture

(d) The department of agriculture shall submit a report to the legislature no later than twenty days prior to the convening of each regular session on the status and progress of existing programs and activities and the status of new programs and activities funded under the agricultural development and food security special fund. The report shall also include:

- (1) The spending plan of the agricultural development and food security special fund;
- (2) All expenditures of agricultural development and food security special fund moneys;
- (3) The targeted markets of the expenditures, including the reason for selecting those markets;
- (4) The persons to be served using the expenditures; and
- (5) The specific objectives of the expenditures, including measurable outcomes.

This report includes a description of the status and progress made in implementing Act 73 as of November 30, 2011 and a plan for new programs and activities proposed through the period ending June 30, 2015.

SECTION II

Description of Funded Projects and Activities in FY15

Section II contains descriptions of projects and activities. The suggestions are organized under the allowable uses found in HRS Chapter 141 establishing the agricultural development and food security special fund. They are not prioritized.

A. Grants to farmers for agricultural production or processing activity

The Sponsorship and Product Promotion grant has the primary goal of enhancing competitiveness of local agricultural products and their industries, including, but not limited to, agritourism, aquaponics, dairy, eggs, fish, floriculture, livestock, organic, specialty crops, and value-added. This year the program awarded grants to 13 agriculturalists statewide covering a range of products and industries from coffee to livestock to cut flowers to organic. Some of the notable projects included: Hawaiian coffee industry promotion, cut flower and plant varieties for special occasions, and a Christmas tree demonstration project.

B. The improvement of real property, dams, reservoirs, irrigation systems, and transportation networks necessary to promote agricultural production or processing activity, including investigative studies to identify and assess necessary improvements to dams, reservoirs, irrigations systems, and transportation networks.

Water is the lifeblood of agriculture. Efficient and reliable irrigation systems transport this resource to where it can be effectively used best. These systems are called upon to provide billions of gallons of agricultural water every year. Many of these systems were originally constructed at the turn of the twentieth

century by sugarcane plantations. The decline of the plantations has led to the rapid deterioration of the systems and in order for them to remain effective, they must be maintained daily. This is a time and labor intensive process that does not have automated alternatives. The funds from the Agricultural Development and Food Security Special Fund provided additional irrigation maintenance workers and operating funds while keeping water prices affordable for agricultural users.

Recently, the Department, through the Agribusiness Development Corporation (ADC), has come in to possession of 1,200 acres of agricultural lands from the Galbraith Trust Estates. ADC is working diligently to prepare the lands for active agricultural use. Land preparation includes clearing of underbrush and liming the soil in preparation for agricultural use. Additionally, funds were used for pumps and piping to allow for access to water for those future farmers on the Galbraith lands.

C. The conduct of research on and testing of agricultural products and markets.

Act 56 of the 2014 legislative session created a pilot program to investigate industrial hemp as a new agricultural crop for Hawaii. In partnership with the University of Hawaii, College of Tropical Agriculture and Human Resources, the Department is continuing its work on this initiative to test the viability of industrial hemp as a new agricultural product for Hawaii.

Aquaponics is a growing industry in Hawaii that can potentially provide another source of protein and fresh commodities for our local markets and increase our food security. However, aquaponics is considered a hobby or backyard level operation. To be considered a sustainable segment of agriculture, the economic viability of commercial scale aquaponics needs to be demonstrated. Towards this goal, HDOA has provided funding for research in to the viability of commercial grade aquaponics facilities in Hawaii and whether the market is able to sustain a profitable aquaponics industry. The project scope is 1 acre of aquaponics (fish/plants) under greenhouse where all inputs, throughput and output expenses and revenues will be tracked. The greenhouse will address biosecurity and food safety issues. The project is wrapping up its second year of the two year project which has shown that commercial aquaponics can be successful. According to the operator, the operation is now making a net profit. Future projects will focus on lowering both start-up and investment costs.

D. The funding of agricultural inspector positions within the department of agriculture.

Inspector positions are key in protecting our local agricultural community and also providing support to those who are trying to get their products to market. The lack of key support staff have meant that remaining staff have had to take on more responsibilities in addition to their own daily tasks. This means that inspectors and field staff are sometimes forced to do requisite paperwork that is taking them away from their other required duties. Hiring more inspectors and freeing up key staff by hiring needed support personnel is vital in order to increase agricultural production. Funds from the special fund have gone towards hiring commodities inspectors and key planners and support staff.

E. The promotion and marketing of agricultural products grown or raised in the State

Increasing access to markets both locally and abroad is vital in creating greater economic opportunities for our local farmers to sell their products and remain economically viable. The Agricultural Development Division has initiated a number of projects aimed at increasing demand for Hawaii agricultural products both here and internationally.

The Buy local, It Matters, EAT LOCAL campaign was promoted at the retail level every Tuesday for 52 weeks at all 32 Foodland Supermarkets statewide and promoted through media via Oceanic Time Warner Cable. During the retail campaign, there has been to date over 200,000 customers made a commitment to eat local at least one day a week, over \$4,000,000 spent by customers for buying local on Tuesdays at Foodland, and significant increased sales of local produce include sunburst melon, sweet corn, kai choy, mushrooms, avocados, kabocha, rambutan, tangerines, sea asparagus, winter melon, and green papaya.

The Buy Local, It Matters, EAT LOCAL media campaign was promoted in :30 second public service ads 16,500+ showings on Oceanic Time Warner Cable during telecasts of UH Sports, High School Sports, and during regular programming in the following counties and frequencies for the period August 2015 to December 22, 2015:

- Hawaii County = 6377 spots
- Maui County = 2930 spots
- Kauai County = 3561 spots
- Oahu = 2228 spots
- Statewide showings (additional) = 1485 spots

Two export projects were initiated to increase market access for agricultural products into the international markets of Japan and Australia. Japan has been Hawaii's number one market for agricultural exports since 2004, with sales of \$49 million in 2015, and our focus on this market is to maintain and expand sales for Hawaii's food products. Funding enabled the sponsorship of four booth spaces at the FOODEX 2015 trade show in Japan where consumer level retail products are promoted. The show attracted over 77,361 visitors. As a result of the sponsorship, the 12 participating Hawaii companies made 800 buyer contacts and reported actual sales of \$549,000 by September 2015, six months following the trade show. This is an increase of 72 percent when compared to participating companies' sales to the Japan market six months prior to the trade show. The six Hawaii companies participating in the FOODEX trade show for the first time reported sales of \$118,000 for the six-month period following the trade show.

At the Fine Food Australia 2015 in Sydney, funding allowed participation in two booths enhancing the opportunities for Hawaii products in a market that was our number eight market in 2015 with agricultural exports of \$2.3 million and where there is the addition of new nonstop air service from Hawaii. As a new market, we promoted Hawaii products in general, attracted participation from two Hawaii companies and products from an additional three companies. Actual sales numbers over the next 12 months is approximately \$220,000 with one company securing a sale from COSTCO Australia for \$200,000.

F. Other activity intended to increase agricultural production or processing that may lead to reduced importation of food, fodder, or feed from outside the State.

Access to a certified slaughterhouse facility is often a limiting factor for our local livestock producers, particularly those situated in rural communities. However, the cost of building a certified slaughter facility can be cost prohibitive to any single rancher or livestock producer. HDOA is looking to mobile slaughterhouses as a potential low-cost solution to this problem. Mobile slaughterhouses would have the added advantage of being able to move to the areas where a slaughter facility is needed and further increase the ability for livestock producers to move their product to market. HDOA has contracted with the Big Island Resource Conservation and Development to continue its work with the Big Island Meat Cooperative and support the efforts of a mobile slaughter unit for the livestock industry. The project received the mobile slaughter unit from the mainland and had an open house in late 2015. The project will continue to run its project with a 5 year plan to aid the local livestock industry.

The organic sector of agriculture is a burgeoning industry that has seen significant growth over the past few years. While still a small part of the overall picture of agriculture, the demand for organically grown agricultural commodities can mean that those farmers able to produce organically can command premium prices in the marketplace. As a result, the department plans to partner with the University of Hawaii to further promote the growth of the organics industry and continue to provide support for this industry.

Conservation plans are needed by farmers to best allow them to grade and grub their land in preparation for planting. It also insures that farmers are using best management practices in the proper stewardship of the land. The Hawaii Association of Conservation Districts (HACD) helps farmers to create the conservation plans they need in order to farm. Funding from the Department has helped maintain staff at HACD so that they can continue to provide this service to farmers.

Biosecurity issues can have far reaching and often devastating effects on local agriculture. The little fire ant (LFA) is one such pest that can cause problems for our agricultural industry. As the ant is an arboreal species that can live in trees, our coffee, macadamia nut and fruit tree industries are particularly concerned for the health and wellness of their employees who need to be in the field picking commodities in places where the ant could fall on them and cause painful welts. In 2014, the Department of Parks and Recreation of the County of Hawaii participated in a pilot program with the Hawaii Ant Lab under the guidance of Dr. Casper Vanderwoude to conduct baiting treatments at Richardson's Ocean Park and the Panaewa Zoo. Staff was trained at the Ant Lab studies showed that treated areas of the parks were reduced by up to 40 percent. As the pilot project showed positive results, HDOA helped the Department of Parks and Recreation of the County of Hawaii establish the Little Fire Ant Control Program to reduce, control, and eradicate other areas on the Big Island.

The recent 2012 Agricultural Census highlighted the "graying" of our agricultural workforce as a problem facing agriculture nationwide. This issue is especially significant in Hawaii where we saw an increase in the average age of our farmers to above 63 years old. Without new, younger farmers willing to join the industry, agriculture is facing a difficult road. The Department is partnering with the University of Hawaii to fund an

effort to increase opportunities for new farmers to gain the needed education and experience to begin a successful career in agriculture. The goal of this effort is to reverse the trend of our aging agricultural workforce and revitalize the industry to insure continued success in to the future.

HDOA will be finishing work on two agricultural planning studies by early 2016. The Hawaii Agricultural Metrics Project will inform the Department as to how much of a commodity is imported and how much is grown here in Hawaii allowing us to target agricultural commodities where we can make a positive impact. The Statewide Agricultural Land Use Baseline Study will map out in GIS form where agriculture is currently happening, what is being grown on those farms, and water resources that are available regionally for agricultural development. By knowing these baseline metrics, the State of Hawaii will be better informed to make policy decisions regarding food security and sustainability.

SECTION III

Proposed Projects and Activities for FY16

A. The improvement of real property, dams, reservoirs, irrigation systems, and transportation networks necessary to promote agricultural production or processing activity, including investigative studies to identify and assess necessary improvements to dams, reservoirs, irrigations systems, and transportation networks.

Water is the lifeblood of agriculture. Efficient and reliable irrigation systems transport this resource to where it can be effectively used best. These systems are called upon to provide billions of gallons of agricultural water every year. Many of these systems were originally constructed at the turn of the twentieth century by sugarcane plantations. The decline of the plantations has led to the rapid deterioration of the systems and in order for them to remain effective, they must be maintained daily. This is a time and labor intensive process that does not have automated alternatives. The funds from the Agricultural Development and Food Security Special Fund will provide for additional irrigation maintenance workers and operating funds while keeping water prices affordable for agricultural users.

B. The conduct of research on and testing of agricultural products and markets.

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Aquaponics is a growing industry in Hawaii that can potentially provide another source of protein and fresh commodities for our local markets and increase our food security. However, aquaponics is considered a hobby or backyard level operation. To be considered a sustainable segment of agriculture, the economic viability of commercial scale aquaponics needs to be demonstrated. Towards this goal, HDOA has provided funding for research in to the viability of commercial grade aquaponics facilities in Hawaii and whether the market is able to sustain a profitable aquaponics industry. The project scope is 1 acre of aquaponics (fish/plants) under greenhouse where all inputs, throughput and output expenses and revenues will be tracked. The greenhouse

will address biosecurity and food safety issues. In its second year the project is expected to ramp up and begin commercial scale production.

C. The funding of agricultural inspector positions within the department of agriculture.

Inspector positions are vital in helping those in the agricultural community who are trying to get their products to market. Support staff allow inspectors to stay focus on their required duties. This means that inspectors and field staff are free from doing requisite paperwork that would take them away from their other required duties. Hiring more inspectors and freeing up key staff by hiring needed support personnel is vital in order to increase agricultural production. Funds from the special fund will go towards hiring commodities inspectors and key planners and support staff.

Inspectors are not only charged with overseeing agricultural commodities, but they are also tasked with ensuring that all scales of measurement statewide are calibrated correctly. The Measurement Standards Branch is charged with the express purpose of maintaining state measurement standards and governing the use and application of measurement standards, measuring devices, and equitable transactions. Without the accuracy of measurement devices inefficiencies would occur that would potentially decrease the processing and production of agricultural commodities. The Measurement Standards Branch would use funds from the special fund to ensure they can carry out their mandated duties.

D. The promotion and marketing of agricultural products grown or raised in the State

Promotion and marketing of Hawaii agricultural products to local, domestic and international markets creates greater economic opportunities for local farmers to maintain their current market share and to increase sales to new markets. The Agricultural Development Division has a number of projects in 2016 aimed at increasing demand for Hawaii agricultural products both in Hawaii and globally.

The Buy local, It Matters, EAT LOCAL message will be promoted at the retail level and via a media campaign. The Seal of Quality Program (SOQ) that identifies genuine Hawaii-grown and Hawaii-made products will be promoted via a media campaign. Funding was provided for the three campaigns with vendor selection to be made in January 2016.

Funding will be provided that allows staff to conduct outreach to the counties – Kauai, Hawaii, Maui and Oahu – to inform the agriculture community about the programs, including state and federal grant programs, that are available to them. These “road shows” have been successful in introducing the marketing team to the farmers and producers and provides an opportunity for us to hear from the industry.

E. Other activity intended to increase agricultural production or processing that may lead to reduced importation of food, fodder, or feed from outside the State.

The organic sector of agriculture is a burgeoning industry that has seen significant growth over the past few years. While still a small part of the overall picture of agriculture, the demand for organically grown agricultural commodities can mean that those farmers able to produce organically can command premium

prices in the marketplace. As a result, the department plans to partner with the University of Hawaii to further promote the growth of the organics industry and to provide support for this industry.

Conservation plans are needed by farmers to best allow them to grade and grub their land in preparation for planting. It also insures that farmers are using best management practices in the proper stewardship of the land. The Hawaii Association of Conservation Districts (HACD) helps farmers to create the conservation plans they need in order to farm. Funding from the Department has helped maintain staff at HACD so that they can continue to provide this service to farmers.

On July 9, 2010, the U.S. Food and Drug Administration (FDA) issued the Egg Safety Rule which requires shell egg producers to implement measures on the farm to prevent Salmonella Enteritidis contamination of eggs. The FDA is performing audits of farms to ensure that that the farms meet the requirements of the Egg Safety Rule. HDOA will be contracting the University of Hawaii College of Tropical Agriculture and Human Resources (CTAHR) to provide training to Hawaii's egg producers and assist in providing technical guidance on various aspects, such as procuring replacement chickens from certified sources, maintenance of grounds and buildings to prevent entry of rodents or feral animals which are considered potential vectors of Salmonella, premise biosecurity, premise sanitation, including cleaning and disinfection procedures, rodent control monitoring, refrigeration and egg storage. CTAHR will help each farm develop a written quality assurance plan, and establish required record keeping on chick and pullet purchases, feed purchases, use of medications, feed additives and pesticides, flock health and rodent monitoring, disinfection schedule and environmental assessment.

The recent 2012 Agricultural Census highlighted the "graying" of our agricultural workforce as a problem facing agriculture nationwide. This issue is especially significant in Hawaii where we saw an increase in the average age of our farmers to above 63 years old. Without new, younger farmers willing to join the industry, agriculture is facing a difficult road. The Department is partnering with the University of Hawaii to fund an effort to increase opportunities for new farmers to gain the needed education and experience to begin a successful career in agriculture. The goal of this effort is to reverse the trend of our aging agricultural workforce and revitalize the industry to insure continued success in to the future.

Training new agricultural leaders is an essential component to Hawaii's food security goals. HDOA is tasked with promoting and protecting the agriculture industry in Hawaii and continues to find ways to increase the number of qualified new farmers. HDOA will work with the Agricultural Leadership Foundation of Hawaii (ALFH) to train new farmers to become our future agricultural leaders. ALFH offers specialized training and education from renowned industry representatives to prepare for a career as effective leaders for agriculture in each perspective business, industry, and community.

The farm to school program is aimed at creating a program to increase nutrition education in schools, greater understanding and appreciation of local agriculture in students, and to increase the procurement of local agricultural commodities into schools and governmental agencies. A 2012 report to the Legislature examining the Federal 2008 Farm Bill Amendment to the Richard B. Russell National School Lunch Act found that 17.3% of school-age children are overweight. The report also found that farm to school initiatives can expose students to the agricultural industry in Hawaii and influence their eating habits. For farmers, a farm to

school program can increase the amount of locally grown produce that is being procured by governmental agencies. As per Act 218 Session Laws of Hawaii 2015, HDOA has hired a new Farm to School Coordinator under the Office of the Chair to create a Farm to School Program within the Hawaii Department of Agriculture.

Due to the increase in pesticide regulations, limited number of weed management solutions, and the increase in labor cost, weed management is becoming a major challenge for many growers in Hawaii. These growers include vegetable crops, wetland crops and livestock forage crops. HDOA will partner with the College of Tropical Agriculture and Human Resources (CTAHR) to create the High Technology Agriculture Program. This program will identify high technology equipment and evaluate its applicability for Hawaii’s diverse agriculture systems.

SECTION IV

Expenditures from the Agricultural Development and Food Security Special Fund

AGRICULTURAL DEVELOPMENT AND FOOD SECURITY SPECIAL FUND

	Actual	Projected			
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
BEGINNING FUND BALANCE	4,634,245	4,251,827	4,211,647	3,739,814	3,767,981
REVENUES					
1. Environmental Response, Energy, and Food Security Tax	3,708,195	3,700,000	3,700,000	3,700,000	3,700,000
2. Investment Pool Interest	17,407	17,000	17,000	17,000	17,000
TOTAL REVENUES	3,725,602	3,717,000	3,717,000	3,717,000	3,717,000
EXPENDITURES					
AGR 122 PLANT PEST AND DISEASE CONTROL					
Pest Control/Biosecurity Projects		868,000	618,000	518,000	518,000
Facility Repairs	50,000				
Biocontrol Supplies and Equipment	55,000				
Chemical and Mechanical Supplies and Equipment	45,000				
Environmental Assessment	20,000				
Training and Development	25,000				
AGR 141 AGRICULTURAL RESOURCE MANAGEMENT					
Irrigation Personnel and Program Operations	364,732	400,000	929,700	929,700	929,700

AGR 151 QUALITY AND PRICE ASSURANCE

Commodities Inspectors/Food Safety Coordinator	10,000	90,900	181,853	181,853	181,853
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AGR 153 AQUACULTURAL DEVELOPMENT

Aquaponics	304,000				
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Feed Development, Sustainability Metrics, Risk Assessment		390,000			
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AGR 161 AGRIBUSINESS DEVELOPMENT

Irrigation/Land Projects	246,000	500,000	500,000	300,000	300,000
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Whitmore Agricultural Hub	150,000				
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Galbraith Water Transmission	104,000				
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AGR 171 AGRICULTURAL DEVELOPMENT

Market Development Projects		400,000	400,000	300,000	300,000
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Eat Local Television Campaign	20,000				
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"Buy Local it Matters" Campaign	100,000				
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"Buy Local it Matters" Campaign	100,000				
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Australia Fine Food	19,000				
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FOODEX (Japan)	50,000				
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AGR 192 GENERAL ADMINISTRATION FOR AGRICULTURE

Planner/Neighbor Island Support	246,988	326,280	326,280	326,280	326,280
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Research/ Studies (Sustainability, Organics, Land/Water etc.)	1,868,300	452,000	452,000	352,000	352,000
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Department Support (Deputy AG)	120,000	120,000	120,000	120,000	120,000
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Hawaii Association of Conservation Districts	210,000	210,000	210,000	210,000	210,000
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AGR 812 MEASUREMENT STANDARDS

Measurement Standards Inspectors/Branch Mgr.	-	-	451,000	451,000	451,000
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TOTAL EXPENDITURES	4,108,020	3,757,180	4,188,833	3,688,833	3,688,833
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BALANCE	4,251,827	4,211,647	3,739,814	3,767,981	3,796,148
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