

DISTRICT ANNUAL REPORT ON AGRICULTURAL ACTIVITIES

JANUARY - DECEMBER 2022

District Agricultural Departments

KARAGA

15th FEBRUARY, 2023

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CHAPTER ONE: MANAGEMENT AND ADMINISTRATION

1.0 Financial Management

The Modernizing Agriculture in Ghana (MAG) Secretariat approved an amount of Gh¢53,941.00 and about 70% of the approved amount was assessed by the department for the implementation of the activities based on the work plan. The part of the approved budget was released to the sub- CF Account of the Karaga District Assembly on April, 2022 for onwards disbursement using the GIFMIS platform. But due to the bureaucratic procedures in accessing the funds from the assembly coupled with unreasonable frustrations, the first release was made to the department on 20th October, 2022. The second trench is yet to be accessed as at the time of reporting.

Table 1 Approved Budget, Releases and Expenditure (District level)

Source	Component	Approved Budget (Gh¢)			Releases (Gh¢)			Expenditure (Gh)		
		2021	2022	% Change	2021	2022	% Change	2021	2022	% Change
DADs	GoG Funds	30000	30,000	-	30,000	9,000	-70	30,000	9,000	-70
	ABFA									
	Financial support from Assemblies									
	IGF									
	Donors (MAG)	107,415.11	53,941	-49	63,788.17	53,941	-43	63,788.17	53,941	-43
	Others									

Source: KARAGA DADU, 2022

Analysis: In 2022 farming year, only 30% of the department's share of the GOG was given to the department and the approved budget of MAG was also decreased as compared to 2021. There was also an undue delay in the release of the funds which seriously affected the performances of planned activities since most of these activities were not carried out on scheduled times.

1.1 MAG financial Transfers

The MAG funds were transferred to the District Sub-CF in April, 2022 and the first release of funds transferred into the department's account was in October, 2022. This is approximately 129 days that it took the department to after the department could have access to the funds.

Table 2 Financial Transfers

District	Total Districts	Number of Districts submitting reports	Duration of funds Transfer (days) ¹
KARAGA	1	1	129

Source: DADU, Karaga 2022

1.2 District Activity Implementation Efficiency Ratio

There is an overall decrease in the rate of implementation of activities per the work plan and budget due to the budget cuts and delay in the release of funds for the planned activities. However, a closer look at the activities shows an improvement in the gender tailored activities this year as compared to the same period in the 2021 work plan. This is attributed to the continuous sensitization and training on the need to implement gender balanced activities in the region. However due to the cut in the budget most of the planned activities could not be implemented.

Table 3 District Activity Implementation Efficiency Ratio

Unit	Total number of activities planned (1)		Total Number of activities implemented and completed (2)		Number of activities implemented that are gender sensitive (3)		Activity implementation rate (2/1)		% of implemented activities that are gender sensitive (3/2)	
	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022
M&E	3	3	2	2	1	1	1	0.7	75	50
MIS/SRID	3	3	3	3	1	2	1	1	100	70
CROPS	9	7	9	7	0	5	1	1	89	71
PPRSD	1	2	1	2	1	1	1	1	100	50
WIAD	11	5	11	5	8	5	1	1	100	100
EXT	10	6	10	5	10	4	4	0.83	89	80
APD	2	2	2	1	2	0	1	0.5	100	-
ENG	3	7	3	6	1	4	1	0.85	85	70
VET	5	8	5	8	4	5	1	1	80	63
Totals	47	42	47	39	36	27				

Source: DADU, Karaga 2022

Analyses: Generally, this year's budget is less than last year's budget which is about 49% reduction. This reduction has affected the expenditure on each activity to be carried out and thus, affected the number of farmers reached/trained. The low performance of the activities would have been in aggravated situations if the MAG motor bikes were not in place.

1.3 Institutional Collaboration with Department of Agriculture (KARAGA DAD)

The department of agriculture collaborated with and benefited from some Agricultural based Non-governmental organisations. The aim was to enhance agricultural production through extension service delivery. The Non-governmental organisations which the department was able to collaborate with are as follows:

Agri-Foundation (One Household One Garden), Garden inputs like watering cans; organic manure, organic insecticides and fence rubber were distributed to One hundred (100) women in the District. The objective of One Household One garden is to improve household nutrition through the establishment of back yard vegetable gardens.

SSPING; trainings were conducted on the benefits and post-harvest losses in soybean production.

World Vision Ghana also partner with the Department of agriculture to build sixty farmers capacity on beekeeping. These training took place in Sung, Tong, Pishegu, Sampayili and Nyong Naayili. The male farmers who participated in the trainings were forty and females twenty.

OCP Ghana a fertilizer company collaborated with the Department to collected soil samples for analysis; also a durbar was organized to train farmers on GAPs (females 652 and males 1148) on the importance of soil testing. Three hundred (300) farmers, males 191 and females 109 soil samples were taken in different locations. The purpose of the soil samples analysis is to enhance farmer's knowledge on the appropriate fertilizers that their crops required to enhance yields.

1.3.1 Collaboration with Projects (MoFA)

Table 4: Some of the crops activities carried out in the district

Name of Project / Activity	Beneficiaries or participants					Achievement (Result from intervention)
	Male	Female	Youth	Age d	PLW D	
Conduct GAPS trainings on backyard garden establishment. Agri house foundation	-	100	40	60	-	Hundred women Farmers knowledge on back yard garden were GAPs enhanced. Through our visits, we realized that eighty nine farmers way of establishing back yard garden has been improved.
Sensitization of farmers on the new PFJ implementation modalities	1,017	654	983	688	-	Sensitizations on new PFJ implementation modalities were carried out and ninety five per cent of the farmers knowledge were enhanced on 2022 PFJ activities.
Train farmers on compost preparation and its usage.	173	113	214	72	-	Eighty nine Farmers in the District knowledge on compost preparation have been improved. The farmers now know how to prepare compost on their own.
Training farmers on good livestock management and proper husbandry	26	4	15	14	1	Thirty farmers in Komoa Yili's knowledge on good livestock management and proper animal husbandry practices have been

practices						improved. The farmers now adapted to caging and feeding their animals properly.
Training farmers on value addition of farm produce.	103	77	110	79		Ninety six of the farmer's knowledge on value addition of farm produce has been enhanced at malgunaayili and Tamalgu community.
Train sixty farmers on climate smart Agriculture	40	20	28	32	-	Fifty eighty per cent of the farmers who were trained enhanced knowledge on climate mitigation measures its effects on agriculture. They now know how to prepare themselves against changes in the cropping calendar.
World Vision/Management of Beehives	120	75	184	11		One hundred and ninety five bee farmers trained on beehives management to increase quality honey production to enhance more income for the farmers
Train (30) farmers on Dry season vegetable production.	20	10		11	19	80 % of Sung vegetable seed beneficiaries and non-beneficiaries' farmers' knowledge was enhanced and they are now practical practicing the knowledge in their dry season gardening.

Source: DADU, Karaga 2022

Analysis: The collaborated partners targeted more of the women than the men. About 57.7% and more than 80% of women and youth respectively benefited from the partners' programmes. This is the way to motivate and to encourage more youth in agriculture to boost productivity and to improving the livelihoods of women in agriculture in the District.



DDA backstopping on GAPs at Sung community



DAO Crops Training farmers in Karaga on Climate smart Agriculture



Training of farmers on beekeeping in Sung community



Trained vegetable production farmers at Sung now practice the knowledge in their garden.

1.3.2 Collaboration with Development Partner Projects (GASIP, SNV (2Scale), WORLD VISION GHANA, CIP, JICA and USAID NUTRITION)

A number of demonstration fields were established by the collaborators mentioned in the table to build the capacities of both technical staff and train farmers on Good Agricultural Practices (GAPs) in selected crops including maize, rice, soybeans, and vegetables. These demos were sited in different communities to ensure more farmers were involved ensuring the full participation of women. Many female farmers are direct beneficiaries of these projects which are deliberately instituted to bridge the male dominance in the agricultural value chain especially in the area of production which has always been the case for men in the district for years now.

Table 5: District Development Partner Projects and the Direct Beneficiaries

Name of Project / Activity	Beneficiaries					Achievement (Result from intervention)
	Male	Female	Youth	Age d	PLW D	
MOFA/JICA community entering FBO sensitization	70	50	80	40		85% of the farmer's knowledge on rice cultivation was enhanced.
ADVANCE NUTRITION (USAID)/ Food demonstrations conduct and dissemination of nutritional values to people	105	276	280	101		To eliminate malnutrition in children and improve the health status of the old as well
SSPING	40	43	30	52	1	Farmers now know that soybean yield more when apply fertilizer and inoculant. They have enhanced knowledge on the right dosage of inoculant and fertilizer to use.

SAPIP	30	61	75	16		Ninety-one Farmers knowledge on proper drying of legumes and grains to desire moisture content and how to control aflatoxin were enhanced.
MOFA/JICA rice Training on timely roguing and timely harvesting.	51	39	60	30	-	Farmers in rice intervention communities' enhanced knowledge on MOFA/JICA rice and basic agronomic practices in rice production. Through AEAs evaluations with the farmers they realised that eighty five per cent of the farmers now know the basic agronomics practices in rice harvesting and roguing.
World Vision	140	101	99	92	50	Farmers trained on GAPs on the major crops cultivated. Physically challenged farmers were also assisted with farm inputs
RING II (USAID)/ Establishment of crop demonstrations for knowledge transfer and adoption	95	76	120	51		Train farmers on good agronomic practices and food utilization of groundnuts and soya bean.

Source: DADU, Karaga 2022

***Analysis:** For achieving good yields, good agronomic practices are key in crop production. In line with this, SSPiNG and RING II projects are into demonstrations of good agronomic practices of soya bean that will bring about increased yield of the crop. Both male and female farmers are part of these projects because soya bean is more or less a cash crop to the farmers.*

For the ADVANCE NUTRITION, about 72.4% of the total participants were women. The low participation of men could be attributed to the perception that women are always in charge of preparation of food for members of households



Training farmers on Aflatoxins management in Yemo-Karaga



Advance food demonstration mini dubar at Tamaligu



Soyabean processing training at Malgu Naa Yili



Planting SPPiNG Demo field at Yemo-Karaga

1.4 Human Resource Development and Management

1.4.1 Agricultural technical Staff Strength

Table 5: Staff strength in the Agric. Department

Category	No. Req'd	No. at post		Total	Age Distribution								Total
		M	F		21-30		31-40		41-50		51-60		
					M	F	M	F	M	F	M	F	
DDA	1	1	0	1	0	0	0	0	1	0	0	0	1
DAOs	8	4	0	4	0	0	3	0	1	0	0	0	4
VET DAOs	1	1	0	1	0	0	0	0	1	0	0	0	1
VTOs	10	9	1	10	0	1	8	0	0	0	1	0	10
AEAs	22	9	0	9	0	0	8	0	0	0	0	0	9
NABCo	25	0	0	0	0	0	0	0	0	0	0	0	0
NSS	-	5	0	5	1	0	0	0	0	0	0	0	5
Totals	67	29	1	30	1	1	20	0	4	0	1	0	30

Source: DADU, Karaga 2022

Analysis: The data in the Table below shows that the department is under-staffed particularly with the agriculture extension agents. Three(3) officers have been transferred out of the department including a PPRSD staff; One PPRSD staff was posted to the department towards the end of the 2022 farming season as a replacement for the officer on transfer. Out of the total of six officers posted to the department, only three have reported as at the time of reporting. There is no permanent female staff in the department and this serves a major barrier to the implementation of most the gender planned activities. Of late, most of the programs of the collaborated project partners are into the activities of women, hence the availability of women staff at post would serve as a motivating factor to the collaborators and encourage more women farmers to go into agriculture.

The NABCO personnel who were of massive assistance are no more at post due to the end their contracts.

1.4.2 Capacity Development Training Programs

There had been a number of trainings carried in 2021 farming season. Farmers were more trained as the department desired to facilitate farmers adopting new technologies of farming. However, the staffs were not left out, a few refresher trainings (backstopping) on a number of topics as well as peer reviews of the field activities were carried out for/by the AEAs in their respective operational areas this year. The entire year was devoted largely for field work, reporting and presentation of findings at the peer reviews of the activities at both management and general technical review meetings. Trainings on post-harvest management were conducted for AEAs who in turn trained the farmers at their community levels especially in the last quarter of the year. Some of these trainings also focused on value addition to agricultural produce in the value chain.

Table 6: In-service training

District	Name of program by type	Year	Beneficiaries	
			M	F
Karaga	Training of staff on PFJ activities	2022	26	1
Karaga	Project proposal writing	2022	18	0
Karaga	Solar powered irrigation systems	15-9-2022	1	-
Karaga	M&E and Report Writing	2022	26	1
Karaga	Harvesting and post-harvest handling of produce	2022	26	1
Karaga	Training on climate smart agriculture	2022	13	0
Karaga	Training organised on FAW	2022	20	3
Total				

Source: DADU, Karaga 2022

Analysis: These in-service trainings were organised to enhance the beneficiaries' knowledge on these activities to allow easy delivery or performance of any defined task.



Training of officers on web based reporting at DAD, Karaga.



Training on Climate Smart Agriculture at KDA

1.5 Summary of Monitoring findings and Actions Taken

The staff carried out a lot of monitoring visits on their respective areas. At this time of the season, farming activities were intense in the District. Most plantations were near maturity in the quarter. In close monitoring of planted fields, it revealed that most of the fields were planted with soya beans. Farmers were complaining of high cost of production of maize and as a result they are into soya cultivation.

The monitoring visits also showed that there was about 4 weeks drought experienced in the second quarter which affected crops planted during the first rains experienced in the first quarter.

Through the department's monitoring and interactions with the farmers, access to subsidized fertilizer in District was a tag-of-war. The fertilizer was not accessible and the farmers who struggled to get some bought them of high prices. Because of this issue, most farmers turned their maize farms to soybeans farms with the explanation that soya requires less or no fertilizer.

AEAs and other DAOs used the fertilizer issue as a conduit to re-echo on the need to practice conservative agriculture to allow the soils to regain the loss nutrients.

There were joint-monitoring visits to existing FBOs across the District. It was observed that most unregistered FBOs had started registering. This could allow them as their quest to expand their activities, to have access to loans from reputable financial institutions to carry out their activities.

In the last quarter of the year, our visits showed many farmers carrying out harvesting of their crops including rice and maize. Until the ban on export, there was a sharp rise in the prices of maize and soybeans, since farmers had the opportunity to sell to aggregators who bought good prices for exports.



Interacting with FBOs group (VLSA) on how they save at LANGOGU

Generally, monitoring activities by all stakeholders this year has been very effective despite challenges in accessing fuel allowances. The monitoring was done on MAG activities implemented in the year as well as other Development Partner Projects implemented by the department. The monitoring teams included auditors both internal and external, Regional Agricultural Officers, District Assembly Staff, District Director of Agriculture and Partners.

Their main focus was to inspect the extent of implementation, challenges encountered and to make the necessary inputs in the quest to get their interest programmes achieve the needed results. This was largely achieved and actually brought the needed results at the end of the year. The Regional Agricultural Officers with officers from MAG secretariat inspected some demo fields established. They also visited some of the project sites of other partners to confirm their activities on the ground during the production season. Subsequently, they came back for results achieved so far on the various MAG activities implemented in the 2022 Annual Work Plan and Budget at the end of the season. All these were largely successful and had actually put the department on the right pedestal.

CHAPTER TWO: CROP AND LIVESTOCK PRODUCTION

2.0 Highlights of Weather Situation in the District

There was heavy down pours at the early onset of the rains in the district. This enhanced early preparation of yam mounds, groundnut fields and follows by planting and sowing. The weather also favoured animals in the district because there was early onset of rains, in view of this there were abundant grasses for the animals to graze. The average temperature in the year ranged from min 24.5°C (79.1°F) to max 29.5°C (85.1°F), with an average relative humidity of 86%.

2.1 Rainfall and its Effect on Agriculture

The year experienced early onset of rains that is in the early of April. There was heavy down pours of rains in the district. This enhanced early preparation of yam mounds, groundnut fields and followed by planting and sowing. The performance of some of groundnuts, and early cultivated maize were affected due to erratic rainfall pattern in the district. However, at the middle of May 2022 there was three weeks drought, in view of this some crops like maize and groundnuts starter wilting. There was also three weeks droughts which were experienced in July 2022.



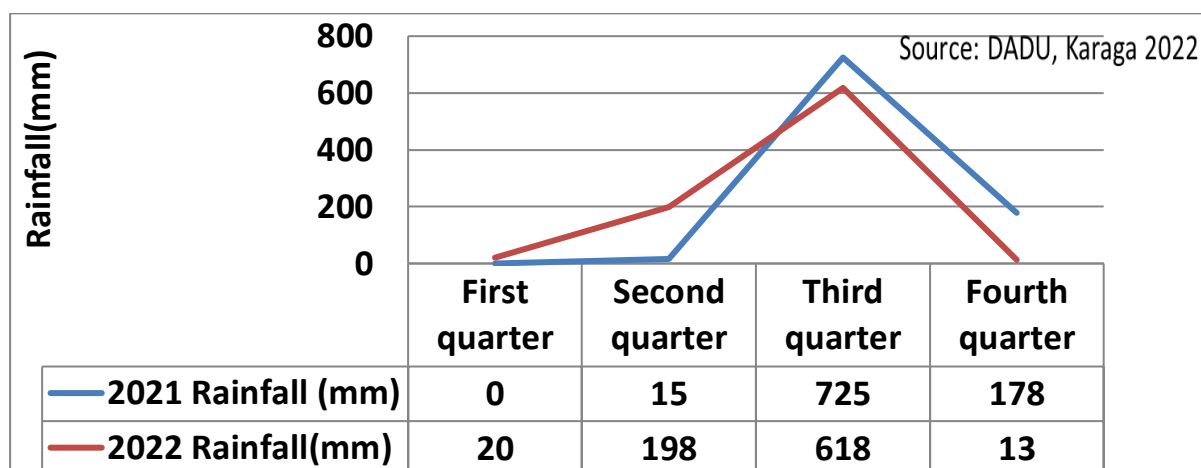
Some plants affected with draught

Table 7: District Annual Average Rainfall Distribution

No	Number of rain days	2021		2022		Percentage Change (%)	
		Rainfall(mm)	Number of wet Rain days	Rainfall(mm)	Number of wet Rain days	Rainfall	No. of Rain days
1	Karaga	917	88	849	69	-7.4	28.4

Source: KRGDAD, 2022.

Analysis: The rain fall figures above indicated that 2021 experienced more rain falls than in 2022. This is as result of climate change. The District experienced most of the rains in the third quarter, thus July and August and September, and the wettest month was August.



Rainfall pattern between 2021 and 2022

2.2 External factors impacting on agriculture production

2.2.1 Alien Herdsmen Activities

There is a minimal activity of herdsmen in the district; these people herd their animals around the communities overseas along the White Volta tributaries. There were reported cases of farm destruction by these animals especially at communities around the White Volta in the District.

2.2.2 Poor Road network

The poor road network leading to most farming communities hinders extension service delivery and the road linkage between farms and the market is a major hindrance to agricultural productivity, though there have been several works on many road networks leading to market and production centers in the district. Potential areas of the districts were largely inaccessible during the peak of rains. This results in difficulty in transporting farm inputs.

2.2.3 Fall Army Worm (FAW)

During this year, there were few reports of FAW infestation in the district. This could have been as a result of timely sensitization and intervention from the central government since last year in the Karaga District as most of the farmers who reported the incidence were served with the FAW chemicals to apply on the infested fields across the district.

The AEA's have since June, 2022 been on monitoring and issuing Fall Army Worm (FAW) chemicals to farmers across the district. This helped the farmers to control the FAW cases they reported on their farms. All DAOs have also been issued with the chemicals to control the incidence of FAW in their respective zones based on their reports after monitoring the fields.

2.2.3.1 Quantity of Chemicals Distributed under FAW

There were no distributions of FAW chemicals to farmers during the year since there were few cases. And since most farmers have been sensitized, some individual farmers also procured Chemicals from input dealers and sprayed their farms.

Table 8: Quantity of chemicals distributed in 2022 cropping season

District	Type of Chemical	Quantity of chemical received	Quantity of Chemical Distributed	Unit of measure		Beneficiary farmers		Coverage (Ha)
				Litres	(Kg)	M	F	

Karaga	Agoo								
	Warrior Supper	4	4	L		157	9	142	
	Grow safe	10	10	L		157	9	142	
	Adepa	20	20	L		157	9	142	
	Bio. T Plus	10	6		kg	157	9	142	
	Eradicoate	10	10	L		157	9	142	
	Viper	25	7	L		157	9	142	

Source: KARAGA DAD 2022

Analysis: Six different chemicals were given out to farmers to control fall armyworm cases in the District. A total of 142 of the total area of maize fields were sprayed with these chemicals. Namburugu zone was the worst hit with 45Ha and Karaga zone the least with 25Ha. Men beneficiaries were 157 as against 9 women beneficiaries. The low number of women beneficiaries is attributed to their low participation in farming. Also, men are into maize production than their female counterparts.

Table 9: Fall Army worm situation

District	Total farmland affected (Ha)		Total Area Sprayed (Ha)		Total Area Recovered (Ha)		Total Area Destroyed (Ha)		Number of farmers affected ²		Number of farmers affected	
	2021	2022	2021	2022	2021	2022	2021	2022	2021		2022	
							1	2	M	F	M	F
Karaga	814	142	814	142	814	142	0	0	101	168	157	9

Source: DADU, Karaga 2022

Analysis: There were few cases of fall army worm infestation in the year 2022 as compared to 2021. Also as the department continue to sensitize the farmers on the need to control FAW at the right time, which is yielding results since most farmers sprayed their farms with their own purchased chemicals to spray before the department even start chemical distribution.

2.3 Enhanced utilization of Agricultural Inputs (Fertilizer & Seed)

2.3.1 Fertilizer distribution

27 Input dealers were registered and certified to sell fertilizers under the planting for Food and Jobs.

Table 10: Fertilizer distribution (bags)

	Quantity (Bags)			% distributed	Target	No of beneficiaries		
	Opening stock	Distributed	Balance			Male	Female	Total
NPK	25600	25600	-	100	-	1350	211	1561

Source KARAGA DAD 2022

Analysis: The quantities of fertilizer received by the input dealers in the District were all distributed. The soils are becoming less fertile, so farmers resort to the use of chemical fertilizers to boost their production. NPK was the only fertilizer distributed. However, the supply of fertilizer to the District was woefully inadequate and prices of the few supplied were expensive. Hence fertilizer was a serious challenge to farmers for the 2022 farming season.

Table 11: Fertilizer distribution (Coupons)

Type of Fertilizer	Quantity (Coupons ³)				% distributed	Target	No of beneficiaries		
	Target	Received	Distributed	Balance			Male	Female	Total
NPK	-	-	-	-	-	-	-	-	-
Urea	-	-	-	-	-	-	-	-	-
Sulphate of Ammonia	-	-	-	-	-	-	-	-	-
Organic	Liquid	-	-	-	-	-	-	-	-
	Granular	-	-	-	-	-	-	-	-
	Compost	-	-	-	-	-	-	-	-

NB: Coupons were not use for subsidy fertilizer programme this year

2.3.2 Quantity of Certified Seeds Distributed

Seed access to farmers was also part of the government flagship programme –PFJ. Farmers were able to access certified seeds through registered input dealers.

Table 12: Certified seeds received and distributed

Type of Seed	Unit	Target	Quantity(KG)			% distribution	No of beneficiaries		
			Received	Distributed	Balance		Male	Female	Total
Maize (OPV)	kg	-	4050	4050	-	100	181	89	270

Maize (Hybrid)	kg	-	225	225		100	31	4	35
Rice	kg	-	2000	2000	-	100	165	20	185
Sorghum	-	-	-	-	-	-	-	-	-
Soya bean	kg	-	15,399.9	15,399.9	-	100	100	34	134
Groundnut	-	-	-	-	-	-	-	-	-
Tomato	-	-	-	-	-	-	-	-	-
Onion	-	-	-	-	-	-	-	-	-
Chilli Pepper	-	-	-	-	-	-	-	-	-
Carrot	-	-	-	-	-	-	-	-	-
Cabbage	-	-	-	-	-	-	-	-	-
Lettuce	-	-	-	-	-	-	-	-	-

Source: DADU, Karaga 2022

***Analysis:** All the quantities of seeds received by the input dealers were distributed (sold) to the beneficiary farmers. This is an indication that farmers are embracing the use of improved seeds to enhance production. However, the quantity available was woefully inadequate for the District.*

2.4 Scheduled Disease Outbreaks and control mechanism for livestock and Poultry

The whole of the year 2021 did not witness any major livestock and poultry disease in the district except the few cases where individual farmers reported isolated cases of strange infections on their farms. The DVO with his team quickly responded to those reported cases and successfully dealt with them on time to avert escalation.

Table 13: Scheduled Disease Outbreaks

Diseases	Species Affected	2021				2022			
		No. of outbreaks/ disease	No. of animals affected	Total Loss	Number of Communities Reporting	No. of outbreaks/ disease	No. of animals affected	Total Loss	Number of Communities Reporting
African Swine Fever	Pig	0	0	0	0	0	0	0	NIL
Anthrax	Cattle	0	0	0	0	0	0	0	NIL
	Sheep/	0	0	0	0	0	0	0	NIL

	Goats								
	Pigs	0	0	0	0	0	0	0	NIL
FMD	Cattle	0	0	0	0	0	0	0	NIL
CBPP	Cattle	0	0	0	0	0	0	0	NIL
PPR (susp)	Goats	0	0	0	0	0	0	0	NIL
	Sheep	0	0	0	0	0	0	0	NIL
Rabies	Dogs	0	0	0	0	0	0	0	NIL
Sheep pox (susp.)	Goats	0	0	0	0	0	0	0	NIL
	Sheep	0	0	0	0	0	0	0	NIL
Orf	Goats	0	0	0	0	0	0	0	NIL
Avian Infectious Bronchitis	Poultry	0	0	0	0	0	0	0	NIL
Trypanosomiasis	Cattle	0	0	0	0	0	0	0	NIL
	Pigs	0	0	0	0	0	0	0	NIL
Tuberculosis	Cattle	0	0	0	0	0	0	0	NIL
	Sheep	0	0	0	0	0	0	0	NIL
	Goats	0	0	0	0	0	0	0	NIL
	Dog/Cat/Monkey	0	0	0	0	0	0	0	NIL
Mange	Cattle	0	0	0	0	0	0	0	NIL
	Sheep	0	0	0	0	0	0	0	NIL
	Goat	1	2	0	1	2	12	0	2
	Pigs	0	0	0	0	0	0	0	NIL
	Donkeys	0	0	0	0	0	0	0	NIL
	Dogs	0	0	0	0	0	0	0	NIL
Total		1	2	0	1	2	12	0	2

Source: Veterinary services unit, Karaga, second quarter report, 2022

Analysis; One outbreak was recorded in the notable disease comprising of 12 cases of suspected mange disease with no death in the district during the time of reporting. In the same quarter under review in 2022, one outbreak was recorded on notable disease comprising 2 cases of suspected mange with no death.

2.4.1 Vaccination and Prophylactic Treatment of Animals

Table 14: Vaccination and Prophylactic treatment of animals in the district

Animal Species	Disease	No. of Animals Vaccinated		Achievement (+/-) (2021 vs. 2022)
		2021	2022	
Poultry	Newcastle Orthodox	1,550	3,000	(+)
	I-2	NIL	0	(-)
	Gumboro	500	0	(+)
	Fowl pox	606	0	(+)
	Marek's disease	NIL	0	(-)
Cattle	Anthrax	200	2,100	(+)
	Blackleg	NIL	0	(-)
	PPR	NIL	3,500	(-)
	CBPP	4,100	4,882	(+)
Sheep	PPR	907	764	(+)
	Anthrax	NIL	328	(-)
Goats	PPR	245	336	(-)
	Anthrax	NIL	10	(-)
Dogs	Rabies	NIL	0	(-)
Cats	Rabies	NIL	9	(-)
Cattle	Trypanosomiasis	NIL	3,000	(-)

Source: Veterinary services unit, Karaga, annual report, 2022.

Analysis: During the current period, 2022, livestock and poultry were vaccinated against six of the scheduled diseases (Newcastle disease, Gumboro, fowl-pox, Anthrax, CBPP and PPR) and in the same period, 2022, livestock and poultry were vaccinated against five of the scheduled diseases (Newcastle disease, CBPP, Anthrax, PPR and Fowl pox). There has been an increase in the figures recorded on vaccination in the current year, 2022 under review which is as a result that some of the farmers were willing and cooperating to purchase vaccines for Veterinary staff to carryout vaccinations for them.

The Karaga District Veterinary Service Unit had no funds to procure vaccines to support farmers' efforts to vaccinate their animals against the scheduled diseases. However, we offered technical advice to livestock, pets and poultry farmers to enable them take precautionary

measures to avoid outbreak of diseases on their farms. Emphasis was laid on the scheduled diseases.



Vaccination against PPR at Tanyeli, Karaga District.

2.4.2 Summary of Veterinary Returns for the year 2022

Table 15: Veterinary returns for 1st - 4th Quarter, 2022

Activity	Cattle	Sheep	Goats	Pigs	Poultry	Dogs	Others	Revenue (GHC)
Local movement				-	-	-	-	
Local slaughter			-	-	-	-	-	
Deworming				-	-	-	-	
Castration				-	-	-	-	
Dipping/Spraying				-	-	-	-	
Clinical Treatment				-	-	-	-	
Total				-	-	-	-	
Activity	Cattle	Sheep	Goats	Pigs	Poultry	Dogs	Others	Revenue (GHC)
Local movement	54	168	220	0	0	0	0	1,101.00
Local slaughter	32	56	79	0	0	0	0	231.00
Deworming	0	49	43	0	0	0	0	525.00
Castration	0	0	18	0	0	1	0	60.50
Dipping/Spraying				-	-	-	-	
Clinical Treatment	8	80	63	0	0	0	0	807.00
Total	94	353	423	0	0	1	0	2,724.50
Activity	Cattle	Sheep	Goats	Pigs	Poultry	Dogs	Others	Revenue

								(GHC)
Local movement	153	225	227	0	0	0	0	1,699.00
Local slaughter	26	51	92	0	0	0	0	212.00
Deworming	14	73	50	0	0	0	0	745.00
Castration	0	0	36	0	0	2	0	113.50
Dipping/Spraying				-	-	-	-	-
Clinical/ field Treatment	16	81	68	0	0	0	0	1,339.00
Total	209	430	473	0	0	2	0	4,108.50
Activity	Cattle	Sheep	Goats	Pigs	Poultry	Dogs	Others	Revenue (GHC)
Local movement	89	109	388	0	0	0	0	1,479.00
Local slaughter	28	46	87	0	0	0	0	223.00
Deworming	36	132	97	8	0	0	0	1,610.00
Castration			66	0	0	2	0	212.50
Dipping/Spraying					-	-	-	-
Clinical field Treatment	19	93	79	0	0	0	0	3,766.00
Total	172	380	717	8	0	2	0	7,290.50

Source: Veterinary services unit, Karaga, annual report, 2022

Analysis: forty-three (43) cattle, two hundred and fifty four (154) sheep and two hundred and ten 210 goats were successfully treated of various diseases and conditions during the year under review.

2.5 Crop Production

There was a general increase in the area of production of the major crops including cereals, legumes in the year. There were however, no corresponding increase in the level of yields due to bad climatic factors that occurred and the inability of farmers to access subsidized fertilizer. At the beginning of the season this year, the rains actually came early though with some three weeks drought which affected early planted crops. The heavy rains in the third copy did not actually flood farmlands as compared to 2021.

2.5.1 Enhanced utilisation of Agricultural Inputs (Fertilizer & Seed)

There are a number of outlet agro-inputs dealers in the District; these input dealers sold the inputs to the farmers at the agreed prices under the approved 2022 PFJ modalities. All waybills per the arrangement this year (2022) were to be inspected and endorsed by the DCE and the DDA or the assigned DAO (PFJ desk officer) upon inspection of same in the district before any claims could be made on the said inputs. This was strictly followed or complied with by both dealers and the department. At the 2022 District RELC session, The DDA and the PFJ desk officer also made field visits to monitor the activities of the input dealers on unannounced days to weed out any unscrupulous dealers from the system. During their visits, they admonished both dealers and farmers not to be selling or buying expired inputs.

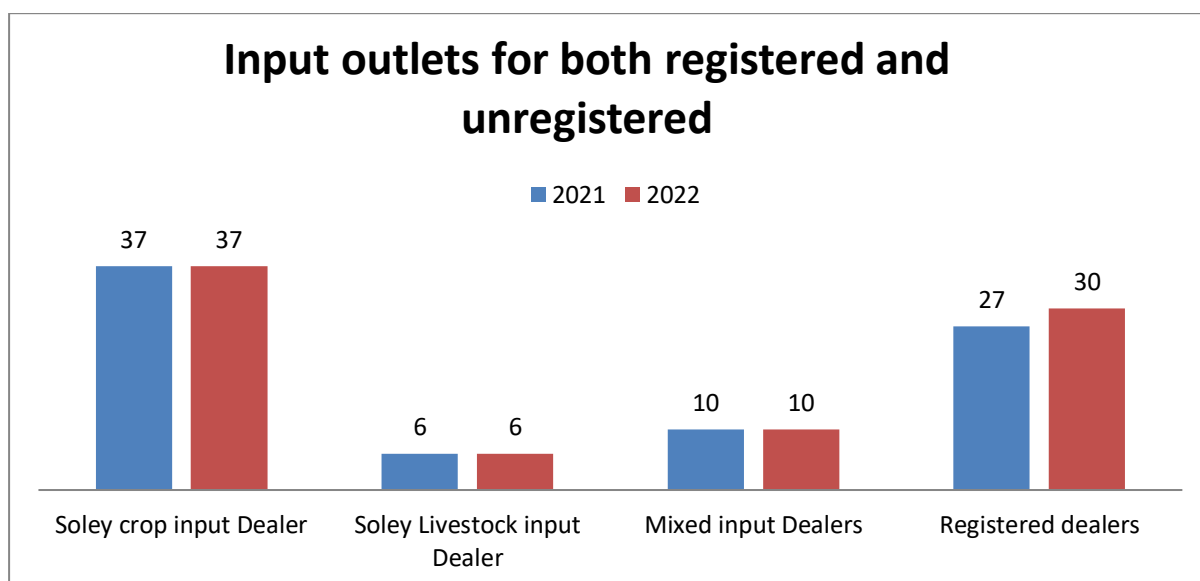
2.5.2 Number of Agro-input outlets in the district

There about 30 registered agro input dealers that the department is aware of and doing business with across the six area councils of the district. There are however, a number of the unregistered ones also operating in the district. An agro-input dealer must have been licensed by PPRSD and EPA for fertilizer and certified seeds which is under the supervision and regulatory authority of PPRSD while agro-chemicals are supervised and regulated by the EPA. The farmers are also sensitized on the need to deal with the registered agro input dealers in the district and report unscrupulous ones to the department for action.

Table 16: Number of Agro-input retail outlets in the regions

District	Number of registered input dealers		Number of unregistered input dealers		Total		Number of input outlets and sale points of which both registered and unregistered							
	2021	2022	2021	2022	2021	2022	Solely Crop input		Solely Livestock input		Solely Fisheries input		Mixed Input Outlet	
							2021	2022	2021	2022	2021	2022	2021	2022
Karaga	27	30	26	23	53	53	37	37	6	6	0	0	10	10

Source: KARAGA DAD, 2022



Number of input outlets and sale points of which both registered and unregistered

Analysis: About 56% of the input dealers for 2022 farming season were registered, which is a marginal increase as compared to 51% registered dealers in 2021. This implies that the department in collaboration PPRSD and EPA are making gains in the registration and need to strengthen their collaboration to ensure that every dealer in the District is duly registered.

2.5.3 Enhanced Farmers' Access to Improved Technology

A number of new technologies were adopted as part of the climate smart agricultural practices through the adoption of conservation agriculture following its introduction to farmers in the

district. This in no doubt helped the farmers to get increased yields in their crop production in the year 2022. Notable technologies the farmers adopted this year included the use of the manual Planter, Nursing and subsequently Transplanting rice seedlings instead of direct sowing on the fields. Again, AEAs through their visits have continuously taught and encouraged farmers to adopt the principles of conservation agriculture and climate smart agriculture to improve on their crop production in the face of the effects of climate change. They have therefore created space for new knowledge on some of the techniques they need to adopt to improve their production.

2.5.3.1 Access to Improved Agriculture Technology and Extension Services

AEAs over the year continued to disseminate improved agricultural technologies to farmers through group meetings, demonstrations, and radio discussions. Some of the technologies include timely harvesting of produce, ensuring clean produce by heaping on tarpaulins and proper winnowing, drying of grains to required moisture contents before storage, storing produce in recommended sacks to prevent insect pests from attacking produce, storing produce on pallets to prevent direct contact with the ground, as well as create fire belts around their farmlands. As a measure to reduce the effects of climate change farmers were introduced to Conservation Agriculture (ploughing back crop residue for improved soil structure), for adoption.

Table 17: Access to Agriculture Technology and Extension Services

Indicator		Target	2021	2022
1.Number of improved Technology demonstrated to farmers:	Livestock		24	32
	Crop		5	-
	Extension		4	32
	WIAD		6	4
	Engineering		3	-
Area (acres) under improved Technology demonstrated to farmers:	Crop		10	8
	Livestock		0	10
2.Extension Agent-farmer ratio			1:1508	1:2034
3.Total number of farmers participating in demonstrations	Male		250	338
	Female		195	217
4.Number of FBOs trained in extension services delivery			10	23

Source: KARAGA DADU, 2022

Analysis: There was improvement on the number of technologies demonstrated in 2022 as against 2021 despite the cut of the department's budget. These achievements were as the results of effective collaborations with other organizations/institutions working with the department and also AEAs access to MAG motor bikes contributed enormously in this regards as officers could move to their operational areas with less challenges. Though a bit of successes had been chalked in the 2022 farming season, more is still needed to be done especially AEA-to-farmers ratio.

2.5.3.2 Farmer Based Organizations

Table 18: Farmer Based Organizations

Type of FBOs	2021		2022	
	Male	Female	Male	Female
Crop	443	382	443	382
Livestock	132	67	132	67

Source: KARAGA DAD, 2022

Analysis: The participation of women in FBOs in crops is higher than women in livestock FBOs. This is due to cultural practices that hindered women participation in animal rearing.

2.5.3.3 Beneficiaries of Technologies Demonstrated

The climatic conditions of the District are ideal for any form of demonstrations provided that the extreme of floods or drought do not occur.

Table 19: Beneficiaries of crop technologies demonstrated

No	List of technology by type	Target		Males		Females		Total		% female
		2021	2022	2021	2022	2021	2022	2021	2022	
1.	Seed germination test.	360	408	178	308	182	95	360	403	89
2.	fertilizers application.	60	60	40	49	20	11	60	60	100
3.	How to apply inoculant to soybean seed using the right dosage.	-	80	.	41	-	39	-	80	-
4.	Training on timely rogueing and timely harvesting of rice.	60	60	40	43	20	17	60	60	85

Source: KARAGA DAD, 2022

Analysis: Farmers are embracing the technologies being introduced to them. They have witnessed the correlations between the technologies and yields. This implies that farmers who practice the technologies earn more yields. From the table, it shows that beneficiaries to the demonstrated technologies are on the increase from 2021 to 2022 farming seasons.

2.5.4 Agricultural Extension Service Performance

Table 20: Availability of Agricultural Extension Services

	2021			2022		
	Male	Female	Total	Male	Female	Total
Number of AEAs required	22	10	32	30	9	39
Number of AEAs at post	13	0	13	21	1	22
% AEAs at post compared to required	59.1	0	40.6	70	11	56
% of female AEAs at post	-	-	-	-	-	2.6
Number of farmers	33220	19205	52425	33220	25780	59,000
Ratio of farmer to AEAs at post	1:2555	1:19205		1:2076	1:25780	1:2681

Source: KARAGA DAD, 2022

Analysis: The District has a deficit of about 60 per cent AEAs at post and this has effects on extension delivery as it widens extension agent – farmer ration. The AEAs at post for 2022 has appreciated marginally though there has not been any improvement in the ratio due to the end of service of the NABCO personnel who augmented the vast vacancy.

2.5.5 Demonstrations conducted

Field demonstrations are established for training of farmers through field schools to increase the adoption of improved agricultural technologies. In the year at various quarters, there were only 8 demonstrations established across the district which is due to resource constraint.

Table 21: Number and types of demonstration conducted

District	No. of Demonstrations conducted		Type of demonstration		Beneficiaries				Total	
	2021	2022	2021	2022	Male		Female		2021	2022
Karaga	11	8	Result based demonstration (rice).	Result based demonstration	3452	1655	1234	675	4686	2330

			Soybean	(rice).						
Karaga	3	2	conducting of demonstration on Aflatoxic control on grains	Conducting demonstration on timely harvesting on crops	300	250	700	400	1000	650
Totals	14	10			3752	1905	1934	1075	5686	2980

Source KARAGA DADU-2022

Analysis: The department had limited approved MAG funds with the delay in the release of the funds, hence the less number of demonstrations as compared to 2022. Most of the demonstrations carried out were collaborations with SSPING, RING II, etc.

2.5.6 Improved Technologies Adopted by Farmers

Table 22: Farmers adopting improved technologies

No.	Type of Technology adopted		Male		Female	
	2021	2022	2021	2022	2021	2022
1.	Training on timely roguing and timely harvesting	Training on timely roguing and timely harvesting	420	580	120	320
2.	Training farmers on value addition of farm produce.	Training farmers on value addition of farm produce.	150	240	60	350
3.	How to apply inoculant to soybean seed using the right dosage.	How to apply inoculant to soybean seed using the right dosage.	785	800	695	700
4.	Timely fertilizer application in rice cultivation	Timely fertilizer application in rice cultivation	135	200	170	180

Source: Karaga DADU, 2022

Analysis: The table above shows more farmers are adapting to technologies. This was as result of the timely planning of the trainings and more efforts by the agricultural department and our development partners.

2.5.7 Research-Extension-Farmer Linkages Committees (RELCs)

RELC meeting at the zonal level has been conducted and the district level planning too was conducted.

Table 23: RELC meetings conducted at District level

RELC		2021		2022		% Change
		Male	Female	Male	Female	
Number of participants	Researchers	26	3	30	3	13.7
	Farmers	4	50	3	45	-11.1
	Processors	7	0	8	0	14.3
	Input dealers	11	0	10	0	-9
	Technical staff	26	3	30	3	13.7

Source: KARAGA DAD, 2022

Analysis: The table indicates percentage change in the actors in RECLC organized in the third quarter. There were some positive changes and the negative changes are as a result of financial challenges.

RELC ISSUES

Table 24: Research Technologies available being demonstrated to farmers

	2021	2022
Number of Research Extension Linkage Planning meetings held	1	1
Number of gender sensitive recommendations implemented under RELC	4	5
List 3 key problems recommended for research during the planning session	Poor soil fertility, poor planting methods, High input cost	Poor road network, High cost of inputs, Poor soil fertility
List 3 key problems researched and completed	High input cost, poor soil fertility, high livestock mortality	High input cost, poor soil fertility, high livestock mortality
Number of problems being researched into	6	3

Source: KARAGA DAD, 2022

Analysis: From the RELC session, the issues raised ranged from crop production to animal rearing. The issues of great concerns were untimely supply and high cost of inputs, high

livestock mortality and bad road network. For each of these issues raised, if not well addressed could threaten food security in the District.

2.5.8 Extension home and farm visit

The purpose of the visits by AEAs were mainly to ascertain how clients are faring with their families, nutrition issues, conditions of stored produce and if there is any remedy, farmers are advised to inspect grains periodically to prevent deterioration of grains in store postharvest technology to improve food, whether there has been any infestations and if there is any remedy, technologies dissemination to livestock farmers, vaccination of small ruminants and local poultry using the I² vaccine, Farmers also express their concerns on issues bothering them concerning their farming activities, AEAs send these problems to their superiors for feedback or raise it during RELC meeting for solutions.

Table 25: Number of extension home and farm visits conducted during, 2022.

District	2021			2022		
	Total number of farmers visited	Male	Female	Total number of farmers visited	Male	Female
Karaga	7765	5120	2645	12,359	7,880	4,479

Source: KARAGA DADU, 2022

Analysis: The number of farmers visited by the officers increased considerably from 2021 to 2022. Because the department wants to increase the participation of women in agricultural activities, most activities were designed to encourage women in farming activities. In that regard, the number of women visited in this year was about 36% as against 34% last year (2021).

2.5.5 Reduced Post-Harvest losses (survey)

Table: Status of Post-Harvest losses (post-harvest losses survey to be conducted bi-annually)

Indicator	Baseline	2021	2022	Percentage change
Percentage Change in Post-Harvest Losses		-	-	-
Maize	10	11	8	-27.27
Rice	15	14	9	-35.35
Millet	9	5	4	-20
Sorghum	10	5	5	-16.6
Cowpea	12	8	3	-62.5
Soya bean	10	10	5	-50
Groundnut	13	12	5	-58.3
Yam	2	2	3	50
Cassava	2	1	1	0
Cocoyam		-	-	-
Plantain		-	-	-

Source: KARAGA DADU, 2022

Analysis: The table indicates the reduction of post-harvest losses in the 2022 season as compared to 2021 where percentage losses of produce were high, and this could be as a result of the interventions like training and technologies given to farmers.

2.5.9 Major Crop Performance in the District (Non PFJ)

Table 26: Improved Major crop Performance (Non PFJ)

No	Crops	Productivity (Mt/Ha)	Area of production (Ha)	Production (Mt)
1	Maize	1.4	7,814	10,939
2	Rice	2.5	4,798	11,995
3	Soybean	1.5	8,486	12,729
4	Groundnut	2.5	3241	8,102.5
5	Millet	1.0	1693	1,751.8
5	sorghum	1.1	1468	1591.2
6	Cowpea	1.8	1389	2,518.5
7	Yam	9.4	2858	26,948.6
	cassava	11.3	1,383	15,593.2

Source: KARAGA DADU, 2022

Analysis: maize and soybean yields were affected due to farmers recycling their old seeds in the district; also yields were affected due to long spell out (3 weeks set in of drought in July). For the 2022 season farmers in the district cultivated soybean more than last year 2021 because of the high cost of fertilizers..

2.5.10 Major Crop performance (PFJ)

Table 27: Improved Major crop Performance (PFJ)

No	Crops	Productivity/Yield (Mt/Ha)	Area of production (Ha)	Production (Mt)
1	Maize	2.3	213.75	491.6
2	Rice	2.6	67.5	175.5
3	Soybean	2.2	385	847
4				

Source: KARAGA DADU, 2022

Analysis: Although there were long spell out of drought for 3 weeks, some farmers who purchased improved seeds and fertilizers had appreciable increase in yields due to the improve and quality of the seed.

2.6 Livestock Production

2.6.1 Planned Activities carried out to enhanced Livestock Production and Development

Table 28: Planned Activities carried out in , 2022 under Animal Production Unit

Planned activities	Output	Outcome	Participants		
			Male	Female	Total
Monitoring and Supervising implemented activities and evaluate performance of AEAs	6 visits made to 10 communities	70% of farmers reached have put in strategies to implement new technologies taught by AEAs in this year's farming season and 2 AEAs field performance have been evaluated.	84	32	116
Train Poultry farmers on Good husbandry practices	35 farmers trained.	Knowledge of poultry farmers boosted on Good husbandry practices resulting minimized deaths in the pen and production volumes increased.	27	8	35
Create awareness on rearing for food and jobs programmes and register farmers.	1,800(1,300 males and 500 females) farmers sensitized on RFJ, and 600 farmers registered.	Register for farmers for RFJ programme documented.	1300	500	1,800
Effect of HIV/AIDS on agricultural productivity	500 farmers knowledge enhance on HIV/AIDS effects	More healthier farmers for increase crop productivity and reduced medical expenses	299	201	500
Train FBOs on Group dynamics, group constitution drafting and conflict resolution management.	75 members from six FBOs have been trained.	Group dynamism improved, Group constitution drafted by the six FBOs and conflict resolution mechanism enshrined in the Group constitution.	48	27	75
Train FBOs/FBOs leaders on leadership skills development and Gender equality and Gender issues	50 members from five (5) FBOs have been trained.	Women members have equal roles as their Men, and thus occupied equally important positions like men in the group.	30	20	50
Train Butchers on meat hygiene and safe handling of	20 (Males) butchers were trained.	Meat and meat products are handled properly and hygiene level at the	20	0	20

meat and meat products.		slaughter house improved.			
Farmer linkages activity	20 FBOs have been linked with outside market. Contract however yet to be signed	Increase farmer income for enhanced agricultural productivity	220	114	334

Source: KARAGA DADU, 2022

CHAPTER THREE: AGRIBUSINESS DEVELOPMENT

3.0 Increased Internal Agriculture Trade

Actions being taken to Improve Agribusiness trade (Eg. Link up with District Assemblies to improve internal trade, Food Safety, Packaging, and Labelling etc). There are a large number of farmers including women who are into vegetable production in the district. Farmers in the district have produced appreciable quantity of Soya bean this year with good price for the produce.

3.1 Production of Non-Traditional Agricultural commodities.

Many cashew farms were established in the previous years due to Planting for Export and Rural Development programme under the Modernizing of Agriculture in Ghana (MAG) Programme, but for 2021 the District could not establish a single cashew farm. Already, soya beans production is quite substantial in the district in most parts of district and with some support they can export these fruits to earn foreign income. In addition to these bee keeping is also gaining ground with the support of WORLD VISION GHANA.

The production of pepper, tomatoes, okro, lettuce and cabbage are not doing bad except in the case of tomatoes and pepper that have faced some challenges with the incidence of pests like the tomatoe leaf miner (*Tuta absoluta*) and the pepper dieback disease are affecting their production. Again the low price for these commodities is also hindering their production as they are perishable and there are no storage facilities to store these commodities for long to get good markets for them.

Table 29: Production of Non-Traditional Agricultural commodities.

Vegetable	Quantity Produced (MT)		%Change
	2021	2022	
Pepper	810	800	-1.2
Tomatoes	8	8.2	2.5
Okro	115	117	1.7
Lettuce	18	18	-
Cabbage	26	26	-
Honey	155galls	156galls	0.6

Source: KARAGA DADU, 2022



Demonstration on backyard gardening and vegetable production

CHAPTER FOUR: SUSTIANABLE MANAGEMENT OF LAND AND ENVIRONMENT

4.0 Enhanced Land and Environment Management

It is now clear that the increase in the number of people and increased competition for space for building houses is now on the increase in the entire district. It therefore requires that proper management of the land available would be of immediate importance.

4.1 Climate change awareness and sensitization

The weather conditions within the year were not as expected. The weather was characterized by heavy but erratic rainfall submerging farmlands with water. Most rice fields have been flooded and total loss of crops is anticipated for most of the fields especially those over sea communities. The production of crops has therefore been hindered greatly and farmers are uncertain about the future as there are no clear signs of the rains ceasing anytime soon.

The farmers were sensitized on the need to create bunds for their rice fields and to create drains when there are floods so most of them did that for easy flow of the water out of the fields.

Table 30: Climate Change Awareness/Sensitization Training

Activities	Number of Trainings	Beneficiaries		Total
		Male	Female	
*Catchment areas protection schemes (e.g. reclamation of arable land, re-afforestation, etc.)	0	0	0	0
Bush fire mitigation awareness/trainings	10	177	94	271
Overgrazing awareness and training sessions	3	300	200	300
Cropping management (e.g. Crop rotation, cover cropping etc.)	4	111	59	170
Water use management (e.g. bunding in rice fields, Drainage construction in flooded fields, Irrigation etc.)	2	200	100	300
Perennial fruits and fodder plantation against soil erosion	0	0	0	0
Integrated Pest Management (IPM)	0	0	0	0
Others ...postharvest management	4	400	600	1000
TOTAL	23	1188	1053	2041

Source: KARAGA DADU, 2022

There were a number of trainings organized on the farmers' fields by the various AEAs, supervised by DAOs, in their operational areas in the district. The outcomes were encouraging as most of them have heeded to the advice of their respective AEAs on their fields in the year 2022, this we are convinced they would continue to practice in many years to come as they have seen the benefits associated with the implementation of the principles taught them. It shows from the table that women were actively involved in all the activities earmarked for climate change awareness.

4.2 Conservation Agriculture (CA)

The CA activities are on-going in the District in all the demonstration fields. The practices demonstrated on these fields are minimal soil disturbance, incorporating crop residue into the soil, use of high breed seeds, crop rotation, cover cropping, relay planting, burying of fertilizer during its application, use of live fence among others. These practices are replicated on the individual fields of these farmers and awards scheme is organized for them to honour the outstanding farmers and group in the following or implementation of these CSA and CA principles.

Table 31: Crops under conservation Agriculture

Crops	Total Cropped Area (ha)	Area under conservation Agriculture	% under conservation Agriculture	Yield (mt/ha)	
				Conservation	Non-conservation
Maize	3400	340	10	1.3	1.25
Soya	2543	1112	43.7	2.6	2.32
Groundnut	1732	534	30.8	2.6	1.4
Yam	1670	610	36.5	12.0	10
Rice	2032	950	46.8	2.7	2.5

Source: KARAGA DADU, 2022

Analysis: The above table indicates most crops performed poorly for both conservation and conventional Agriculture. This could be due to the poor rains. However, the yield for each crop under the conservative performed pretty well than the non-conservation agriculture. This implies that with good rains and other necessary conditions in place, conservation agriculture will always give desired yield per area of crop than the other practice.

4.3 Conservation Agriculture Demonstrations

Farmers have been educated on zero tillage, prevention of bush fires on their field to leave the fields intact, the need to leave the field covered with leftover debris and agro by- products such as maize stalk, maize husk soya bean chaff, rice straw etc....

Table 32: Conservation Agriculture demonstration

Conservation System	Target Number of Demonstrations	Actual Number of demonstrations	Beneficiaries		
			Total	Male	Female
Mulching	12	6	160	98	62
Cover cropping	25	6	125	90	35
Intercropping	20	6	120	71	49
Crop rotation	10	6	130	85	45

NB: Examples of conservation systems are crop rotation, mulching, zero tillage, cover cropping, intercropping etc.

Source: KARAGA DADU, 2022

***Analysis:** for each activity, both men and women farmers actively took part. Farmers now saw the need to engage in farming activities that have the tendencies to rejuvenate their poor soils. In this way, the trauma of getting inorganic fertilizers in high cost and sometimes not even available to buy will be reduced.*

4.4 Adoption of Conservation farming Systems

Table 33: Conservation Systems Adopted

Systems	Types of Crops	Beneficiaries		Total	Number Adopted		Total	Percentage Adoption%
		Male	Female		Male	Female		
Crop rotation	Maize	180	90	270	133	73	206	76
Mulching	Maize	345	546	891	320	530	850	95
Cover cropping	Soya	456	264	720	450	260	710	98.6
Zero tillage	Soybean	430	340	770	450	300	750	97
Others								

Source: DADU-Karaga, 2022

Analysis: The above table indicates the level of increase in technology adoption among farmers. This goes to suggest that the trainings organised by the department for the farmers are going down well with the farmers.

4.5 Environmental Management

Farmers have been sensitized on the safe use and proper disposal of waste materials in a way not to pollute water bodies which serve as sources of drinking water for humans and livestock and also trained them on the effects of deforestation.

Table 34: Awareness/Sensitization on Environmental Management

Item	Target	Number of trainings	Beneficiaries		Total
			Male	Female	
Train farmers on the proper use of agro chemicals.	260	14	287	173	460
Pollution(water)	400	2	120	85	205
Deforestation	320	5	210	95	305

Source: DADU, Karaga 2022

Analysis: The table shows that both men and women were actively involved in this exercise for the quarter. Water management in the District is a key factor because there is no pipe born water in all the communities except the District capital. The inhabitants source their water for

the domestic purposes from the dams, rivers, etc. participant's knowledge was enhanced and they now know how to use agro chemicals at the right doses.

4.6 Agricultural Mechanization

Table 35: Table Availability of Agricultural mechanization

Indicator		2021			2022	
			Target	Actual	Target	Actual
1. Number of functional agricultural mechanisation service centres	New		42	39	30	25
	Existing		489	472	450	410
			605	588	480	435
	Number of farmers having access to mechanised services	M	4890	4089	5877	5786
		F	6846	4637	6988	5996
2. Area ploughed			14342	11434	35865	26418
3. Total number of trainees in the proper use and handling of farm machinery	tractor owners, operators, mechanics trained	543		549	565	556
4. List of agro processors trainees	Rice processors, yam processors, meat, groundnut, soya and gari		782	168	600	428

Source: DADU, Karaga 2022

Analysis: The above table indicates the increase in tractor stock, trainees, and processors in 2022 as compared to low numbers in 2021 and this could be due to the increase in farm size and could also be that, a lot of individuals were involved in farming or farmer income level is on an increase.

Table 36: Combined Harvesters access

Total rice Area cropped (HA)	Area harvested (HA)	No. of famers who had access	Source of combine harvester / Quantity	
			Stationed	Non-stationed
4,730	534	123	5	4

Source: DADU, Karaga 2022

Analysis: The situation of rice farmers' access to combined harvesters in the District is a great threat to the development of rice farming in the area. Out of 4,730ha under cultivation of rice in 2022, about 11.3% hectares had been harvested with the 5 stationed and 4 migrant combined harvesters available. The rest of the area were harvested manually, in this form post-harvest losses in the fields would be high and some of the fields would be burnt through bush fires.

Table 37: Common storage structures for farm produce

Type of storage structure	Produce type	Quantity (mt)
Silo	Maize	7.2
Warehouse	Rice	122
Warehouse	Soybean	84

Source: DADU, Karaga 2022

Analysis: Unfortunately Karaga District has not benefited from the one- District- one – warehouse initiative. However, farmers in the District store their farm produce in different forms including store rooms in homes, Silos, and ware houses which are built by organizations(MIDA, OICs) and private individuals. Large quantities of Grains especially maize, rice and soya are stored in structures like silos(thatch and clay) and warehouses.



Samples of thatched Silo (left), warehouse (middle) and clay 'Buli' for storage of farm produce

4.7 Formal and Informal Irrigation

There are no serious irrigation activities going on in the District. Due to lack of proper dams, few farmers are farming along rivers or water drawing from boreholes by the use of machines through the intervention of WORLD VISION. The government of Ghana initiative to construct one-village-dam in the northern parts of the country was good news to the District. However, the type of 6 dams, which in actual sense are dugouts, constructed cannot serve the purposes of irrigation.

Table 38: Crops under irrigation

Annual – 2022										
	Area under cultivation (ha)	Area per crop (ha)			Yield (ton/ha)			Production (MT)		
		1st Cycle	2nd Cycle	3rd Cycle	1st Cycle	2nd Cycle	3rd Cycle	1st Cycle	2nd Cycle	3rd Cycle
Vegetables										
Ayoyo	0.50	0.50	0.50	0.50	0.2	0.3	0.2	0.2	0.4	0.1
pepper	6	6	6	6	0.5	0.2	0.2	0.8	0.5	0.3
Okro	5	5	5	5	0.24	0.22	0.16	1.2	1.1	0.8
Cabbage	0.8	0.2	0.3	0.2	0.2	0.3	0.15	0.5	0.7	0.4
Subtotal	12.3	11.7	11.7	11.7	1.14	1.02	0.71	2.7	2.7	1.6
Cereals										
Maize	2	2	2	2	500	-	-	0.5	-	-
Subtotal										
Fruits										

Source: DADU, Karaga 2022

Analysis: The table indicates informal irrigation is not predominant in the zone, and this could be due to scarcity of water to boost the practice in the zone.



Dry season vegetable garden inspection at Karaga

4.8 Any other relevant information

The farmers in the district are embracing the preparation and use of compost on their farms which is worth reporting on because it is not only a means of maintaining environmental hygiene in their communities but an effective way of protecting the farmlands and also reduction in the cost of production.

CHAPTER FIVE: CHALLENGES AND RECOMMENDATIONS

The report identified some of the few challenges and the proposed recommendations to address them in the table below.

No	Challenge	Recommendation
1.	The delay in release of MAG funds from the District Assembly hinders extension activities in district.	Subsequent projects funds should be paid into DAD accounts to fast track activities.
2.	Poor road networks	Reconstruction and rehabilitation of road networks in the District is needed to increase production and reduce post-harvest losses.
3.	Lack of female extension agents in the district	There is the need to consciously recruit female extension agents to improve female farmers' access to agricultural extension services.
4	Low pests and diseases surveillance in the District leading low reportage of pests and diseases on the ground	PPRS unit need to collaborate effectively with other units in the department to intensify scouting and monitoring, and the use of appropriate chemicals to control FAW and other pests and diseases
5	In adequate infrastructure and other working equipment for staff to do field work	A modern office complex for the department is necessary for efficiency in service delivery and timely provision of equipment like laptops, printers etc to reduce drudgery of work
6	Inadequate in-service trainings for staffs	VSD/MAG should organize in-service training for Veterinary staff on basic laboratory techniques and provide them with protocols for submitting specimen of suspected cases on Notifiable/schedule diseases to the laboratory

APPENDICES

Appendix 1: MAG financial Transfers

No	RAD/DAD	Date funds reflected in District Sub CF account (dd/mm/yy)		Date funds was transferred to DDA's account (dd/mm/yy)		Duration for funds Transfer (days)		Reason for delays
		1 st release	2 nd release	1 st release	2 nd release	1 st release	2 nd release	
1	Karaga DAD	30-04-2022	30-09-2022	20-10-2022	24-12-2022	129	53	Bureaucratic procedures involved in accessing funds from the District assembly.
2								

Source: DADU, Karaga 2022

¹ Calculation of the number of days it took District assembly to transfer MAG Funds from to Sub-CF Account to DAD account should consider only working days (Monday to Friday) and exclude Saturdays and Sundays.

SUCCESS STORIES/OUTCOMES WITH RELEVANT PICTURES

ADOPTION OF LINE PLANTING TECHNOLOGY –A CATALYST TO INCREASING CROP YIELD A STORY OF BABA FROM MONKULA (0541496504)

I used to broadcast, or just planted the seeds anyhow in the fields. These planting methods I was using were giving me series of challenges. Among the challenges include seeds (grains) were either overused or under applied and this had effects on the optimum plant population per given area, weeding, fertilizer application, spraying the fields were all difficult to perform. At the end, I always get low yields

With the adoption of row planting in recommended spacing, the challenges I enumerated, that's difficulty in applying recommended seed rates, weeding difficulties, and many others become a thing of a past culminating into higher yields. Before I accepted this planting technique, I was obtaining at most 5 bags of maize per acre of sole maize farm. but with the adoption of this technique, last year for instance, I was able to realize 15 bags of maize from my one acre maize farm.



Baba's Maize farm planted in rows, 2022 cropping season



A SUCCESSFUL ORGANIZATION OF 2022 FARMERS' DAY CELEBRATION AT KARAGA ASTRO TURF, KARAGA



ANNUAL REPORT PRESENTATION AT DISTRICT MANAGEMENT MEETING



DONATION OF 2 MOTOR BIKES BY DCE/DCD ON BEHALF OF MP FOR KARAGA