



Introducing the African Chicken Genetic Gains project

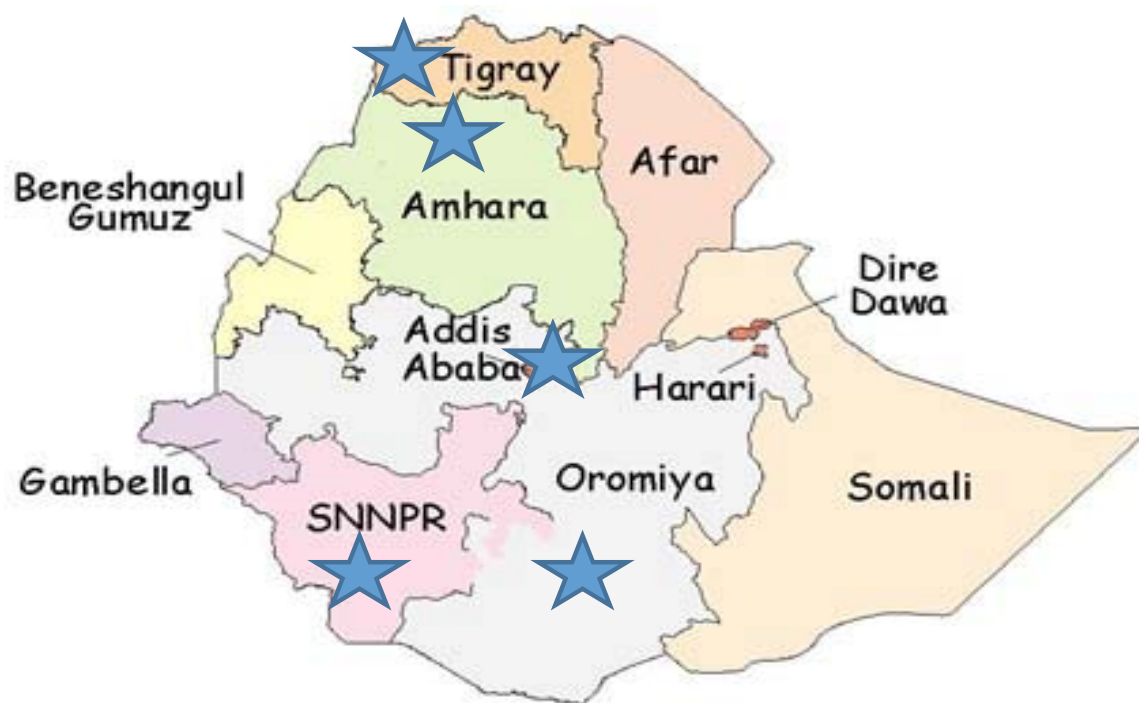
A Platform for Testing, Delivering, and Continuously Improving Tropically-Adapted Chickens for Productivity Growth in Sub-Saharan Africa

Tekelyohannes Berhanu
South Agricultural Research Institute

First ACGG Ethiopia Innovation Platform Meeting
Addis Ababa, Ethiopia, 3-4 August 2015



Selection of Regions (sub-nationals)

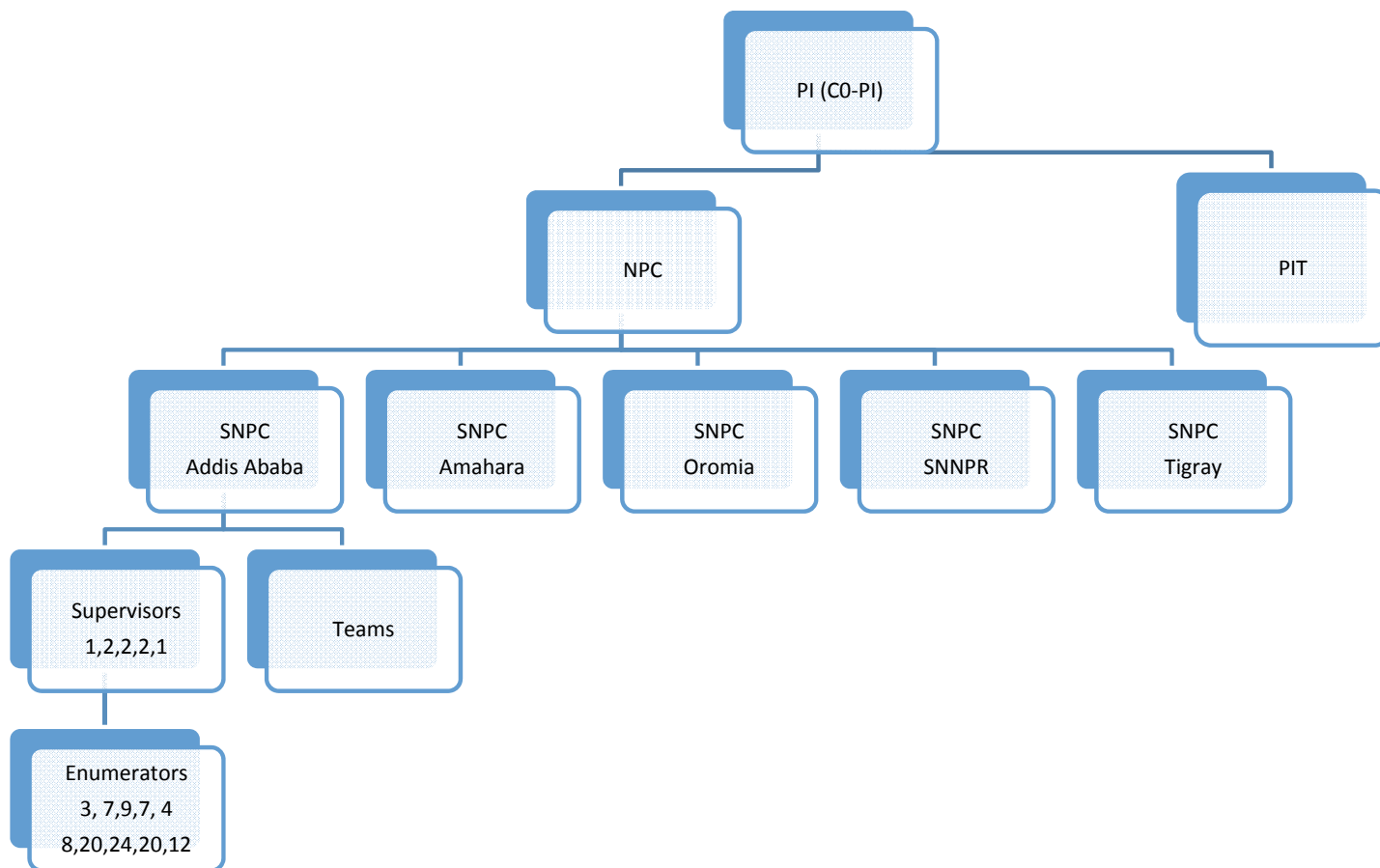


Chicken population of Ethiopia in , 000 (CSA-2010/11)

Region	Populations			
	local	Hybrid	Exotic	Total
Tigray	3998	282	28	4308
Afar	66.28	?	?	67.32
Amhara	13587	390	71	14048
Oromia	18347	176	38	18762
Somalia	106	-	-	106
B.Gumuz	1144	4		1149
SNNR	10276	87	45	10408
Gambela	303	-	-	303
Harari	52	2	-	54
Dire Dawa	74	3	4	81
Addis Ababa	-	-	-	-
Total	47953	944	186	49286
	97.3%			100%



Ethiopia: Structure





Project Implementation Team (PIT)



Principal Investigator	Dr Getnet Assefa
Co-Principal Investigator	Dr Solomon Abegaz
National Project Coordinator	Dr Wondomeneh Esatu???
Member, Animal Nutrition	Dr Etalem Tesfaye
Member, Animal Health	Dr Meskerem Adamu
Member, Animal Health	Dr Tadeos Habte
Member, Animal Production	Mr. Dawud Ibrahim
Member, Sociologist	Mr. Alemayehu Amare
Member, Socio- economics	Mr. Abera Gemechu
Member, Animal production	Mr. Misbah Alewi
Member, Representative of MoA livestock Extension	-
Member, representative of MoA Livestock Regulatory directorate	-
Member, Animal Production	Dr Emebet Moreda
Member, representative of second on station site	-



Where ACGG project will work in Ethiopia



Regions	Zones	Districts
Addis Ababa(2)	Kolfe, Nefas silk	Kolfe W.13, Nefas silk W11.
Amhara(5)	West Gojjam, Awi, North Gonder, South Wollo	WG: South Achefer, Mecha Awi:Banja, Fagta Lekoma NG: Gonder Zuria SW: Kalu
Oromia (6)	East Shoa, West Shoa, East Hararhge, West Hararghe	ES: Adamitulu-Gido Kombplcha, Dugda, Lume, WS:Bako Tibe, Illu gelan, Dano, EH: Haramaya; WH: Darolabu
SNNPR(5)	Sidama, Wolita, Gurage, Silti, Kembata Alaba Tembaro, Gamogofa	S:Dara; W:Boloso sore; G:Mekan, Sil: Khulbarek, KAT:Doyo gena Gg:Arbaminch zuria
Tigray(3)	Eastern Tigray, South Eastern Tigray, Central Tigray	ET: Klite Awlalo, SET: Saharti samre CT: Tahitay Maichew, Mereb Leke



CGG PROJECT IMPLEMENTATION PLAN-Ethiopia



Criteria used to select regions, districts and villages

- Large number of poultry
- High number of smallholders rearing poultry
- Percent contribution of poultry to household income/nutrition
- Percent market share captured by smallholders
- Availability of feed resources for a growing for a growing poultry industry
- Diversity across zones for the interest of testing strains in a number of production



BASELINE SURVEY



OBJECTIVE

To define and characterize current smallholder chicken production systems, chicken ecotypes, current realized productivity, husbandry practices, and the socio-economic status of poor smallholder farmers

METHODOLOGY

- A baseline survey will be carried out in 5 regions: Addis Ababa, Amhara, Oromia, SNNPR and Tigray
- Sampling areas will be selected by the Project Implementation Team in conjunction with Regional Research Centers and Extension Officers
- A total of 1575 (AA-150, Amhara-375, Oromia-450, SNNPR-375, Tigray-225) households will be selected randomly using ACGG Framework Testing Protocol including conformity with ethical guidelines.
- A total of 63 Villages (AA-6, Amhara-15, Oromia-18, SNNPR-15, Tigray-9) shall be sampled with 25 hh per village.



BASELINE SURVEY



DATA COLLECTION

- A total of 30 enumerators and 8 supervisors and 5 SNCs will be involved in data collection in the 5 regions
- Before data collection all enumerators and sub national coordinators will be trained on data collection methodology and tools (ODK kit).
- Training of enumerators and SNCs will be 31st August-9th September 2015 including pre-testing of questionnaire.
- Baseline data collection will be 1 Oct.-Nov. 15, 2015
- Subnational coordinators will supervise data collection with support from supervisors.



ON FARM PERFORMANCE TESTING OF SELECTED CHICKEN STRAINS



Objective is to assess the genetic potential of selected chicken strains under low input production systems

NUMBER OF HOUSEHOLDS AND CHICKENS STRAINS (4 STRAINS)

Zone	No. of Districts	No. of Villages	No. of HHDS	No. of Chickens	No. of fertile eggs (50% H, 25% M)
Addis Ababa	2	8	240	6000	16000
Amhara	5	20	600	15000	40000
Oromia	6	24	720	18000	48000
SNNPR	5	20	600	15000	40000
Tigray	3	12	360	9000	24000
TOTAL	21	84	2520	63000	168000



ON FARM PERFORMANCE TESTING OF SELECTED CHICKEN STRAINS



METHODOLOGY

- Fertile eggs will be imported from Uganda or India for Kuroiler strains, for Fauyomi strain, South Africa for Koe Koek, France for Sasso strain.
- ILRI's business development team and the national partners will negotiate material transfer and IPR agreements regarding these lines.
- The eggs will be hatched, vaccinated and those for on farm will be transferred to farms where they will be brooded for three weeks while those for on station testing will be kept at the two stations.
- Testing of these lines will be accomplished alongside the local ecotypes available on farm in each zone.
- ILRI will work with the national teams to establish bio-security protocols and quarantine facilities.



SELECTION OF HOUSEHOLDS



- A total 2,520 households will be selected (30 hhd per village) based on baseline survey results and made in consultation with extension officers and community leaders, interest and willingness to participate in the project.
- Each household receive 25 chicks (3 to 6 weeks of age) of 1 strain.
- In each district three villages out of four would receive three of the genotypes (Fa, Sa, Ku:Fa,Sa.Ko: Fa, Ku, Ka: Sa, Ku, Ka)

HATCHING, BROODING AND DISTRIBUTION OF CHICKS

- Hatching of eggs will take place at DebreZeit Research Center
- Brooding will be done under contractual agreements or on available public owned poultry facilities
- For each region/zone brooding centres will be identified within 3 hours of driving time from the furthest farm to avoid transit mortality and stress.
- Distribution of day old chicks duly vaccinated with Newcastle, and other important diseases.



Chicken breeds/strains selected for test



Fayoumi



Kuroiler



Koekoek



Sasso



Horro

- Improved Horro-Control
- Kuroiler-tropically adapted and tested
- Fayoumi- tropically adapted
- Koekoek-tropically adapted (need to sort out accessibility)
- Sasso – pilot testing required



SUGGESTED LOCATIONS FOR BROODING UNITS



Region	No: of Unit	Place	Total
Addis Ababa		Lege Tafo poultry multiplication center; Cooperatives; microenterprises	
Amhara		Andassa livestock research center; Gerado ; Cooperatives; microenterprises	
Oromia		Adele; Ambo; Fiche; Cooperatives; microenterprises	
SNNPR		Gubre ; Hawassa; Cooperatives; microenterprises	
Tigray		Axum; Ethio-chick ; Cooperatives; microenterprises	



ON STATION TESTING



- The on-station testing will be conducted at DebreZeit and **Andassa/Komobolcha/Haramaya/Jimma university**
 - 10*30m house for brooding
 - 12-15 pens for testing (four/five strains each with 3 replications) 5m*3.3m = 16.5m²*6*2 houses
 - Start with about 700 chicks per strain/breed
 - Sexes grown together till 6 weeks of age on adlib feeding
 - The females transferred to the experimental pens.
 - The males kept in the brooding house
 - Females managed following breeders' recommendation.
 - Standard vaccination programs of DZRC will be followed



Stakeholder engagement



- National Innovative platforms of stakeholders will be organized periodically to inculcate public-private partnership along the value chain from the outset of the project
- Village level innovation platforms will be organized to engage stakeholders working at grass root level
- Working with project Partners
 - Capacity building
 - Development of sustainable breeding program



Village Innovation platform meetings



- Who to invite?
 - Livestock Agency/urban agriculture office
 - local administration/district, village
 - Private (vet. drug, feed, stock, comm. farmers)
 - Research centers -Cooperatives -Micro-finances
 - Civil Societies (women assoc., youth assoc.) -NGOs
 - Participant Farmer representatives -Market actors
 - District trade and industry office -Rural Employment agency
- How to facilitate?
 - FTC as venue
 - To be conducted at district level (four villages in one meeting)

Timelines

Activity	Period	Responsible
Placement of SNC	April to end of May, 2015	Sub national Research coordinators and PI
Evaluate the facilities at Andassa, Kombolcha Hawassa Haramaya and identify needs	End of May to end of August, 2015	NPC, PI and CO-PI
Training of NPC and SNC	June 9-12, 2015	PICO and ACGG project team
Finalize selection of districts and villages	June to August, 2015	Sub national Research coordinators and PI
Recruitment of enumerators	July and Aug., 2015	NPC, SNPC
Ethiopian Innovation platform and Launch	Aug. 3-5, 2015	PICO, ACGG team, PIT
Training of enumerators	31 st Aug. to 9 th Sept. , 2015	ILRI, ACGG
Recruitment of MSc and PhD students	Aug. to Sept., 2015	ACGG project team, PI and co-PI
Baseline survey	Oct. to Nov., 2015	Country PIT, NPC,SNPC and enumerators
Procurement of eggs of test genotypes	Jan. to Feb, 2015	Country PIT, NPC
On-station testing	March 2016-June. 2017	PIT and NPC
On-Farm testing	Feb. 2016-May. 2017	PIT, NPC, SNPC, Supervisors, Enumerators