

Living at The Agriculture Option

(The Young Ranchers Agricultural Cluster Development Programme)

White Paper

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Programme Name:

Young Ranchers Agricultural Cluster Development Programme (YRACDP): Integrated Agricultural Development System. *A foundational development model that supports young people in agriculture focused tertiary institutions to engage in agriculture as a viable economic option through production, processing, marketing and distribution in a connected ecosystem, that will support the foundation of Nigeria's agricultural transformation.*

Implementation Location: Nigeria.

Areas:

Youth in agriculture
Tertiary institutions in agriculture
Agricultural finance
Agricultural production
Year-round farming
Irrigation
Agrotech
Financial inclusion
Mechanization
Mediumholder agriculture
Contract production
Marketing
Distribution
Business
Skill development
Research

REF	Programme	Young Ranchers Agricultural Cluster Development Programme.
1	Summary	<p>Living at The Agricultural Option-The Young Ranchers Agricultural Cluster Development Programme (YRACDP) is the command and physical expression of The Agriculture Option (TAO), that is developing connected and thriving agricultural production and processing communities that integrates young people in agricultural faculties of tertiary institutions across Nigeria, and its host communities into its circular economic activities.</p> <p>Living at TAO will build a system of connected communities that are close and linked to existing tertiary institutions across Nigeria and will:</p> <ol style="list-style-type: none"> a. Engage students of agriculture in tertiary institution for commercially viable contract agriculture as part of their education and appreciation of a career in agriculture after school. b. Deliver year-round cultivation of contiguous land using irrigation, mechanization, and precision agriculture. c. Establish low complexity input manufacturing and produce processing facilities on the farm locations to deliver robust training and commercial appreciation, cost efficiency and reduction in post-harvest losses. d. Support inclusion of the host communities in economic activities-with a focus on turning by-products of farming and processing into profitable businesses (from cottage industries) for the people of the communities. e. d. Integrate young people in a skill development fellowship, that will support the creation of a pool of well-trained skills for employment In Nigeria’s commercial agriculture. . <p>Thereby providing the benefits of:</p> <ol style="list-style-type: none"> a. A strategic and tactical tool for ensuring food security, youth employment and agricultural exports. b. An intentionally curated circular agricultural economy that includes the host communities through the value chain. c. Education and upskilling of young people to appreciate and engage in viable commercial agriculture in low-risk spaces, with competitive financial and economic benefits. d. Financial inclusion. e. A beautiful, functional, and sustainable environment. <p>At inception, this effort seeks to deliver six clusters, each of 5 thousand hectares, a processing mill, a small town of 1000 students, fellows and small businesses drawn from the student and lecturer bodies of the adjacent tertiary institutions, and inclusion of</p>

		<p>additional 5 thousand locals in an out-grower primary agricultural production and circular economy scheme per hub.</p> <p>System wide, it will directly deliver 144 thousand hectares of high precision multi-cycle cultivated land, over 7.2 million metric tons of agricultural produce per annum; 144 integrated agricultural processing facilities; 144 thousand well trained students, fellows and small businesses per annual cycle; that will add up to 400 thousand hectares of high precision cultivated land per year; 720 thousand jobs provided within host communities and direct productivity of over 5.6 trillion Naira, whereas over 50% can be strategically or tactically purposed for either food security or foreign exchange earnings as demanded by the fiscal requirement of the country per time.</p> <p>The Young Ranchers Agricultural Cluster Development Programme will be the first integrated agricultural system that utilizes the abundant opportunity provided by the over 300 thousand students studying agricultural majors in Nigeria’s tertiary institutions at any point it time, and the established university and host communities.</p> <p>As a highly curated command programme within a wider agricultural ecosystem of TAO, the YRACDP presents the advantage of being the tip of the spear for Nigeria’s effort at fighting food insecurity, youth unemployment and non-diversified foreign exchange outlook. It is potentially a legacy play not only in Nigeria, but possibly all of Africa.</p>
<p>2</p>	<p>The problem</p>	<p>At the current rate of population growth and agricultural production, Nigeria’s food importation bill may rise to over US\$5 Billion by 2030, as food imports continues to increase and substitute local production. During the same period, over 25 million educated Nigerian youths may not finds jobs. The present and quick win jobs and businesses of Nigeria’s young people are in agriculture and home-grown food production that will bring home most of its food consumption that is imported. However, this will not be achieved without improving productivity from the current levels seen especially in primary agricultural production.</p> <p>Nigeria’s agricultural productivity situation is such that about 37% of its arable land is cultivated, and less than 30% of its cultivated land production capacity is realized-because of single cycle rain fed cropping that is a result of inadequate and assessable irrigation. To put this in context, Nigeria only irrigates about 290.4 thousand hectares, which is about 0.9% of its cultivated land. To further compound this problem, this inefficient cropping effort does not integrate into processing at farm site for efficient value addition, nor does it support a deliberate system of incremental improvement or skill development for improved productivity or participant profile-leading into a case of triple jeopardy, where a lot of value is left on the table and unrealized.</p> <p>Going by its current population growth rate, from 2022, Nigeria will add the population of Ghana to its population every four years-or if you like, every presidential term. As we look to agriculture to feed and employ this growing population, it is time for new thinking and bold ambitions in such undertakings as the Young Ranchers Agricultural Cluster Development Programme.</p>

3	Peer comparison	<table border="1"> <thead> <tr> <th>Attribute</th> <th>Nigeria</th> <th>Vietnam</th> <th>Thailand</th> <th>Year</th> </tr> </thead> <tbody> <tr> <td>Population</td> <td>204,015,978</td> <td>96,983,231</td> <td>69,729,612</td> <td>2020</td> </tr> <tr> <td>GDP Per Capita</td> <td>\$2,134.08</td> <td>\$2,590.00</td> <td>\$7,627.94</td> <td>2018</td> </tr> <tr> <td>Cultivated Land (Hectares)</td> <td>34,000,000</td> <td>6,998,000</td> <td>16,810,000</td> <td>2016</td> </tr> <tr> <td>Arable Land (% of Land Area)</td> <td>37.33%</td> <td>22.57%</td> <td>32.90%</td> <td>2016</td> </tr> <tr> <td>Irrigation (Hectares)</td> <td>293,000</td> <td>4,600,000</td> <td>6,415,000</td> <td>2017</td> </tr> <tr> <td>irrigation (% of Arable land)</td> <td>0.9</td> <td>66</td> <td>38</td> <td>2017</td> </tr> <tr> <td>Yield/Hectare(tons) (Rice)</td> <td>2</td> <td>5.5476</td> <td>3.145</td> <td>2017</td> </tr> <tr> <td>Annual Production Cycles</td> <td>1</td> <td>3</td> <td>3</td> <td>2017</td> </tr> <tr> <td>National Production (Ton)</td> <td>9,864,277</td> <td>42,763,682</td> <td>33,383,382</td> <td>2017</td> </tr> </tbody> </table>	Attribute	Nigeria	Vietnam	Thailand	Year	Population	204,015,978	96,983,231	69,729,612	2020	GDP Per Capita	\$2,134.08	\$2,590.00	\$7,627.94	2018	Cultivated Land (Hectares)	34,000,000	6,998,000	16,810,000	2016	Arable Land (% of Land Area)	37.33%	22.57%	32.90%	2016	Irrigation (Hectares)	293,000	4,600,000	6,415,000	2017	irrigation (% of Arable land)	0.9	66	38	2017	Yield/Hectare(tons) (Rice)	2	5.5476	3.145	2017	Annual Production Cycles	1	3	3	2017	National Production (Ton)	9,864,277	42,763,682	33,383,382	2017
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4	A new opportunity	Young Ranchers Agricultural Cluster Development Programme-An integrated Agricultural Development System.																																																		
4a	The Young Ranchers Agricultural Cluster Development Programme	<p>The Young Ranchers Agricultural Cluster Development Programme seeks to create thriving and connected agricultural production, processing and circular economy clusters; and integrate them into a system that supports irrigation, and technology aided optimal businesses. YRACDP is focused on students of agricultural tertiary institution for early appreciation and skills for commercial agriculture, incentivized through fair and commensurate economic participation in ventures.</p> <p>Primary production will be integrated with onsite processing for efficiency and loss reduction, while making sure that the host communities are fully included and catered for economically and socially.</p> <p>Furthermore, it will train agricultural students to become professionals in some or all areas of an integrated agricultural business-thus preparing them early for well fulfilling jobs or entrepreneurship in commercial agriculture.</p> <p>It will catalyze the necessary and urgent drive to improve the profile of the average Nigerian farmer from a 51-year-old uneducated male, in subsistence agriculture; to a 25–30-year-old educated male and female, in tune with modern and precision agricultural practices and engaged in commercial agriculture of up to 50 hectares in land holding, and earning more than 50 million Naira per annum.</p>																																																		
5	Components	The Young Ranchers Agricultural Cluster Development Programme is structured around components that are designed to ensure full integration and sustainability. All components will be deployed in each cluster.																																																		
5a	Primary Production	Commercial agricultural considerations with modern and most impactful practices will be at the center of each Young Ranchers cluster and the full complement of the Young Ranchers System. Clusters will produce in agricultural areas and value chains of their comparative advantage after considering such factors as the adjacent tertiary institution, vegetation, production advantage, strategic and tactical consideration for food and export, markets and access to other factors of production.																																																		

5b	Engineering	<p>To adapt technology and localize agricultural engineering and machinery solutions, YRACDP will engage the agricultural engineering students available in host tertiary institutions to situate engineering capabilities to the peculiarity of each cluster. The engineering outlook will consider elements such as soil and water properties and conservation, crop processing and storage, and farm power requirements in machine design and fabrication. Engineering at YRACDP will catalyze a home-grown agricultural machinery industry in all clusters and Nigeria.</p>
5b	Infrastructure	<p>For crop production, each cluster will include at least 5 thousand hectares of fully irrigated land to guarantee 2-3 cycles of grain crop farming and 4-6 metric tons of grain yield per hectare per cycle, making 12-18 tons per hectare per year. This is against 1 cycles of production and 1.5 metric tons of grain yield per hectare obtainable in Nigeria today.</p> <p>Animal husbandry and aquaculture will also see the same levels of improvement and efficiency. A small town of between 250-1 thousand unit accommodation units and amenities will be built to house the youth skill development fellows, circular economy businesses in incubation and the essential staff in each cluster.</p>
5c	Input manufacturing and produce processing	<p>Each cluster will include its low complexity input manufacturing-such as poultry feed, fish fingerling and crop manure; produce processing, packaging, storage, and outbound supply chain origination, on site. This will make for efficiency and total cost reduction, post-harvest loss reduction, and value addition for improved economic outcomes.</p> <p>More importantly it will provide students and fellows a platform for learning and appreciation of the practical requirements, processes, procedure and business of integrated production and processing in the value chains of focus. These skills and hands on experiences are expected to translate to TAO supported integrated commercial agriculture undertakings of fellows when they exit the programme.</p>
5d	Community inclusion and development	<p>The student and fellow communities will be fully integrated into the clusters. For primary production, 1 thousand students and fellows will each be given 5 hectares of land within the available 5 thousand hectares of land per cluster, to farm and process in a contract production model, using cluster utilities and resources. These will include mechanization, irrigation, processing, funding, and other capabilities presented by TAO.</p> <p>Furthermore, community members will support areas such as processing, small town management, logistic and administration. The skill development fellowship programme for young people will also be integrated into the production activities of the cluster to aid diversity and improve economic activities in the host community. To provide ample incentives, financial benefits of up to 50% of value across the value chain will accrue to students and fellows, with each student making up to 10 million Naira per annum at optimal performance.</p>
5e	Education	<p>The Young Ranchers Agricultural Cluster Development Programme will deliberately approach improvement in the science, business, and social aspects of its deployment for individual cluster, total system, and Nigeria’s agriculture. The Young Ranchers institute will drive a home grown educational and research component of its productivity improvement and sustainability outlooks, while incorporating its fellowship for skill development of it</p>

		students, fellows and interested young graduates as part of faculty, cluster technical staff and participants, with considerations for the peculiarities of individual clusters and aggregate system.
5f	Technology	Precision technology, information technology, digital productivity tools and digital financial services are some of the vehicles that will aid the delivery of Young Ranchers’ exponential improvements in farming cycles, yield, cost efficiency, loss reduction, financial inclusion, and market access. Young Ranchers will deploy these technologies across its clusters as it seeks to further use them to enable connectivity of the entire system to achieve platform effects. A central command center will provide situational awareness, early warning, and early issue resolution capabilities for individual clusters and the entire Young Ranchers system.
5g	Financial inclusion of young people and agriculture	<p>With about 5.6 trillion Naira in direct production value and a potential 12 trillion Naira in transaction value moving within the Young Ranchers Cluster Development system per year, there is great opportunity to create its own financial system that will focus on financial inclusion of its stakeholders, especially students, fellows, and beginner farmers. This financial services and inclusion outlook is designed to primarily support production, thus creating great opportunity for exponential expansion.</p> <p>Boat-a TAO component and fully digital microfinance bank supported by a network of agricultural retail agents will be deployed for the Young Ranchers Agricultural Cluster Development Programme to ease financial inclusion of its participants. The bank will provide seamless services such as data driven, few questions asked and integrated credit for fellows, students, out growers and incubated small companies in the circular economy. Furthermore, payments, insurance, and cash management for about 144 thousand direct participants and about 720 thousand indirect participants sourced from the host communities.</p> <p>A microfinance bank layered on Young Ranchers can generate as much as 100 billion Naira in revenues per annum, which will be available for plough back for further investment in youth focused agriculture, and will be among the top microfinance institutions in Africa.</p>
5h	Youth and gender inclusion	As their population increases and opportunities for economic inclusion diminishes, young people should be at the front and center of all development effort in Nigeria today. Therefore, 90% of participation in the Young Ranchers Agricultural Cluster Development Programme will be focused on and reserved for young people in a 50:50 gender split. 100% of the skill development fellowship and beginner farmer component will be reserved for young people. Young people in fellowship will further strengthen the technical staff pool available to clusters and the entire system in such areas as agricultural extension, research, engineering, business, processing supervision and cluster administration, thus increasing the job creation outlook of the Programme.
6	Operations	Operations of the Young Ranchers Agricultural Cluster Development Programme will be both centralized and decentralized across components to provide for the most efficiency and effectiveness gains.

6a	Deployment	<p>Young Ranchers clusters will be deployed adjacent to each of the earmarked 144 tertiary institutions with agriculture faculties across the 6 geopolitical zones of Nigeria. Young Ranchers will approach State Governments and landowners for irrigable land and will take title ownership of the land to afford it the leverage for long term financing and development of assets on the land.</p>
6b	Model	<p>The Young Ranchers Agricultural Cluster Development Programme will operate in a PPP-P model (Public, Private Partnership-with People) The last P standing for People (student and fellows that will be integral partners with economic benefits) intensive development that includes the people of the host community. Capable commercial agricultural operators will be invited to manage land, irrigation, processing and utility components of the clusters. A performance bond may be required from commercial operators to demonstrate capacity and full interest.</p>
6c	Technology	<p>For standardization, uniformity, data to wisdom, quality management, and traceability; technology will be deployed centrally through the Young Ranchers Cluster Development system and provided to individual clusters in a subscription model. Efficiency, security, and performance improving technology resources such as enterprise resource planning (ERP), monitoring and evaluation sensors, situational awareness capabilities, reporting, learning and community platforms, digital market place and precision agriculture capabilities will be provided across the system.</p> <p>A centrally structured technology deployment will afford the Young Ranchers Agricultural Cluster Development Programme visibility of its aggregate investments and their performance in real time across clusters, and in individual clusters. The technology outlook will create performance measurement and comparison matrix and a considerable savings in deployment cost.</p>
6d	Mechanization	<p>It is also important that mechanization is approached with standardization, uniformity, cost, and quality management in mind. Mechanization will be deployed centrally through the Young Ranchers system; and provided to clusters in a subscription model. Efficiency and performance equipment such as irrigation, tractors, sprayers, ploughs, harrows, planters, and drones will be provided across the system.</p> <p>A centrally structured mechanization deployment that is provided to clusters in a subscription model will improve asset utilization, reduce capital expenditure outlay at cluster level, and equipment maintenance encumbrances of the clusters, which will avail clusters and total system the opportunity of focusing on low cost and high impact production.</p>
6e	Education	<p>All areas of research, knowledge and skill development will be deployed centrally. Research and development frameworks, knowledge mainstreaming, fellowship curriculum development and enhancement, participant selection criteria, onboarding, assessment and total system research, knowledge and skill development delivery will be managed centrally for standardization, uniformity, and quality management.</p>

6f	Financial inclusion	<p>A Microfinance Bank will be incorporated to support the last mile financial services requirement of the Young Ranchers Agricultural Cluster Development Programme, having a central head office administration that will cater to management components such as strategy, product development, risk management, policies, processes, procedures, and treasury management.</p> <p>Branches and agencies will be deployed at each cluster for operations and last mile service delivery.</p>
6g	Brand development, marketing and distribution	<p>Primary agricultural production and processing across the system will be deployed in a contract production model with students and fellows as the primary contractors and beneficiaries. Clusters will feed their produce into a central brand. Brand development, marketing and distribution will be managed centrally under a master brand and sub brands to cater for individual categories, segments and cluster identification-where necessary. This will allow for consistent brand messaging and quality, while reaping the benefits of economies of scale in cost, brand equity and brand premium.</p>
6h	Participant management	<p>Agriculture focused tertiary institutions provide an ample pool of potential participants. The choice of agriculture majors in tertiary institutions stems from their ongoing interaction with agriculture as they study, and their possible appreciation of the opportunities available therein.</p> <p>YRACDP is positioned as a prestigious programme therefore eligibility criteria are stringent and include good academic standing at CGPA of not less than 3.5 points and school attendance of above 90%. These criteria are indicators of strong character, diligence, responsibility, and self-leadership which are necessary for success in the programme.</p> <p>Participant performance on the YRACDP will be on a continuous assessment basis with parameters including effectiveness on production, processes, community, and business, using data drawn from their usage of TAO components such as Discover, YR, Boat, Telagri and Farm Tinder.</p> <p>Activity data from Telagri ERP will form the fulcrum of assessment, while venture performance will form basis for retention in the programme.</p>
6i	Curriculum development	<p>The YRACDP seeks to equip young students, fellows, and community members with the requisite skills necessary to perform optimally in all and specific operational areas of an integrated agriculture effort (from cultivation through processing to distribution), or as agricultural entrepreneurs, that will provide services in one or more areas of agricultural value chains.</p> <p>The curricular framework of YRACDP’s effort considers and caters to the knowledge, skills, and hands-on experience requirement for effective participation in an integrated agriculture effort and circular economy. It includes areas such as technical, business, leadership, community relations and the demonstration of knowledge and skills in a practical setup.</p> <p>Table: General Curricular Framework for YRACDP Education</p>

	Area	Description
	General Agriculture and Agribusiness	Introduction to general concept of crop production and animal husbandry within an agribusiness context.
	Crop Production	General concepts of the practice of crop production including all necessary knowledge areas-drill down into specific crops-YRACDP will advise on crops of focus on an ongoing basis.
	Animal Husbandry/Livestock Management	General concepts of the practice of animal husbandry and livestock management. Consideration for all necessary knowledge areas; including drill down into specific livestock types-YRACDP will advise on livestock of focus on an ongoing basis.
	Aquaculture	General concepts of the practice of aquaculture and all necessary knowledge areas; including drill down into specific aquaculture practice areas-YRACDP will advise on practices of focus on an ongoing basis.
	Irrigation Development	General concepts of commercial irrigation management-with focus on design, engineering, operations, maintenance, management, and commercial considerations-and all necessary knowledge areas.
	Mechanization and Precision Agriculture	General concepts of mechanization and precision agriculture: the role and deployment of farm machinery and equipment, digital and information technology, drones, and sensors, (Hardware and software) integrated agriculture ERP -with focus on design, engineering, operations, maintenance, management, and all necessary knowledge areas.
	Supply Chain Management for Agriculture	General concepts of primary (inbound) and secondary (outbound) agriculture supply chain management with keen focus on logistics- micro and macro transportation and warehouse management and all necessary knowledge areas.
	Processing and Storage	Technical, operational and management knowledge of agricultural produce processing-with consideration for machinery, process identification and optimization, operations, milling, optimal storage and all necessary knowledge areas of processing with possible specialization in particular value chains.
	Quality Management	Quality management in product, service and process dimensions and all necessary knowledge areas in quality management.

		Business of Agriculture	Business management with focus on product, process, marketing, distribution, finance, design thinking and human centered design, project management and all other necessary knowledge areas in business management.
		Leadership	Manage self, manage others and manage managers in organizational contexts. Leadership dimensions of stakeholder management and other necessary knowledge areas in leadership.
		Community Inclusion	General concepts, strategies, and planning for community inclusion to support cordial relationship with host communities, and as part of larger business, operations, impact, and security strategy considerations.
		Sociology of Rural and Farm Communities	General concepts of the sociology of rural and farming communities to deliver positive perception of commercial farming enterprises by rural and farming communities; behavioral change for out grower to support the adaption and use of best practices in agricultural primary production. Add every other necessary knowledge area to support the delivery of knowledge of the sociology of rural and farming communities for positive engagement in commercial agriculture.
		Capstone Project	Project t to demonstrate understanding of the theory and practice of all knowledge areas.
		<p>The intended outcome of the YRACDP education curriculum is to enable the demonstration and use of the understanding of the general theory and practices of the knowledge areas, that will culminate in productive actions in the following dimensions:</p> <ol style="list-style-type: none"> a. Ability to practice and carry out operations in the knowledge areas. b. Ability to consume information for advisory and decision-making purposes in the knowledge areas. c. Ability to lead and manage a small to medium commercial agricultural or agribusiness enterprise. d. An appreciation of agriculture and agribusiness as a viable career option and a path towards nation building in economic and social dimensions. 	
7	Production and benefits	The Young Ranchers Agricultural Cluster Development Programme promises great commercial, economic, and social benefits-with first set of benefits accruable and visible in as little as 6 months from concept approval and funding. At full system compliment it will produce:	

7a	Locations and spread	144 clusters in 6 geopolitical zones across Nigeria.
7b	Categories	Food and export crop production, animal husbandry and aquaculture. Processing.
7c	Annual primary production	7.2 million metric tons across categories.
7d	Annual secondary production	4.1 million metric tons across all categories.
7e	Annual direct productivity value	5.6 trillion Naira.
7f	Indirect GDP contribution	Up to 12 trillion Naira (factoring in all production, trade, and services exchange In the Young Ranchers Cluster Development System).
7g	Jobs	720 thousand across categories.
7h	Annual participation	144 thousand across students and fellows.
7i	New modern towns	144.
7j	Housing and amenities	36,000 in 144 clusters.
7k	Logistics	144 silo and warehouses storage clusters,1250 transportation assets, 2500 tractor and equipment bundles.
7l	Irrigable land under cultivation	720 thousand hectares per annum.
8	Evolution, expansion and sustainability	The Young Ranchers Agricultural Cluster Development Programme through its PPP-P model is designed for sustainable growth and transformation. (10-year outlook).
8a	Clusters	Up to 1000 clusters as conditions permit.
8b	Skill development fellowship	Up to 500 thousand young agricultural skill development fellows per year, with each fellow going on either to set up a commercial agriculture enterprise (financed by Boat Microfinance Bank) or work in commercial agriculture.
8c	Economic	Up to 30 trillion Naira in direct GDP contribution per annum and supporting over 2 million jobs.
9	Financial model	The Young Ranchers Agricultural Cluster Development Programme promises a strong financial outlook underscored by conservative assumption derived from Nigeria's current realities.
9a	Cost	Average of 10 billion Naira per cluster.
9b	Revenue	Average of 40 billion Naira per cluster and 7 trillion Naira per system of 144 clusters per annum at full complement.
9c	Profit	Up to 35% net profit margin at 95% capacity utilization and full deployment of efficiency and effectiveness drivers-such as young people's fellowship and technology.

10	Investment and ownership model	Ownership model creates opportunity for private sector participation-which will drive efficient business management, competitiveness, and inclusive development.																																																												
10a	Finance	Equity and project finance, with individual cluster standing alone within a YRACDP Special Purpose Vehicle. TAO will provide 30% equity per cluster and across the system, with the balance funded by 3 rd party private cluster developers using a combination of equity and debt financing.																																																												
10b	Components operators	Cluster utilities, technology, mechanization, financial inclusion, and education component operators will be aggregated and managed by YRACDP through TAO, within its remit as an equity contributor.																																																												
10c	Ownership	The Young Ranchers Agricultural Cluster Development Programme will own 30% of each cluster and all centrally deployed capabilities such as technology, mechanization, and education. 70% will be owned by 3 rd party private investors, vetted and managed by Young Ranchers.																																																												
10d	Governance	Board membership of each component investment will be reflective of equity ownership. Board decisions will be made through consensus.																																																												
10e	Revolving fund	Up to 50% of YRACDP's profit will be ploughed back into a Venture Capital Fund for further investment in new clusters and entrepreneurial efforts of graduates of the fellowship and circular economy incubator. Young Ranchers will be self-sufficient in its operations and expansion funding by year 3-5 of its deployment.																																																												
11	Outcomes	As a foundational deployment for Nigeria's agricultural transformation, In 10 years to 2034, The Young Ranchers Agricultural Cluster Development Programme will produce strong quantitative and qualitative results, with transformational effects on Nigeria agricultural sector and the total economy delivering food security and an agricultural export led economy.																																																												
11a	Quantitative (per student/fellow)	<table border="1"> <thead> <tr> <th>Ref</th> <th>Area</th> <th>Size (Ha)</th> <th>Cost (NGN)</th> <th>Yield (Ton/Bags)</th> <th>Revenue (NGN)</th> <th>Profit (NGN)</th> <th>Profit Share (%)</th> <th>Profit Value (NGN)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Farming</td> <td>5</td> <td>5,000,000.00</td> <td>25</td> <td>17,500,000.00</td> <td>7,500,000.00</td> <td>50%</td> <td>7,500,000.00</td> </tr> <tr> <td>2</td> <td>Processing</td> <td>5</td> <td>12,000,000.00</td> <td>300</td> <td>30,000,000.00</td> <td>6,000,000.00</td> <td>50%</td> <td>6,000,000.00</td> </tr> <tr> <td>3</td> <td>Total</td> <td>5</td> <td>17,000,000.00</td> <td>25/300</td> <td>47,500,000.00</td> <td>13,500,000.00</td> <td>50%</td> <td>13,500,000.00</td> </tr> </tbody> </table>	Ref	Area	Size (Ha)	Cost (NGN)	Yield (Ton/Bags)	Revenue (NGN)	Profit (NGN)	Profit Share (%)	Profit Value (NGN)	1	Farming	5	5,000,000.00	25	17,500,000.00	7,500,000.00	50%	7,500,000.00	2	Processing	5	12,000,000.00	300	30,000,000.00	6,000,000.00	50%	6,000,000.00	3	Total	5	17,000,000.00	25/300	47,500,000.00	13,500,000.00	50%	13,500,000.00																								
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2	Processing	5	12,000,000.00	300	30,000,000.00	6,000,000.00	50%	6,000,000.00																																																						
3	Total	5	17,000,000.00	25/300	47,500,000.00	13,500,000.00	50%	13,500,000.00																																																						
11b	Quantitative (per cluster)	<table border="1"> <thead> <tr> <th>Area</th> <th>Frequency</th> <th>Universe</th> <th>Direct jobs</th> <th>Business</th> <th>Cultivation (Ha)</th> <th>Production (MT)</th> <th>Farm gate value (N)</th> <th>End of chain value (N)</th> <th>Note</th> </tr> </thead> <tbody> <tr> <td>Fellowship</td> <td>Annual</td> <td>1,000.00</td> <td>100.00</td> <td>1,000.00</td> <td>5,000.00</td> <td>40,000.00</td> <td>20,000,000,000.00</td> <td>40,000,000,000.00</td> <td>Each fellow will be a contract producer using the land and processing facilities to produce and process in 2 production cycles per annum.</td> </tr> <tr> <td>Incubation</td> <td>Annual</td> <td>100.00</td> <td>50.00</td> <td>100.00</td> <td>NA</td> <td>12,000.00</td> <td>NA</td> <td>6,000,000,000.00</td> <td>Incubated businesses will either provided services to YRP or convert YRP by-products to valuable commercial products.</td> </tr> <tr> <td>Community labour</td> <td>Annual</td> <td>5,000.00</td> <td>5,000.00</td> <td>NA</td> <td>5,000.00</td> <td>40,000.00</td> <td>NA</td> <td>6,000,000,000.00</td> <td>5 community members will employed and managed by each fellow at an average salary of 100 thousand Naira per month.</td> </tr> <tr> <td>YRP direct jobs</td> <td>Annual</td> <td>NA</td> <td>5,150.00</td> <td>NA</td> <td>NA</td> <td>NA</td> <td>NA</td> <td>NA</td> <td></td> </tr> <tr> <td>Total annual</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>52,000,000,000.00</td> <td></td> </tr> </tbody> </table>	Area	Frequency	Universe	Direct jobs	Business	Cultivation (Ha)	Production (MT)	Farm gate value (N)	End of chain value (N)	Note	Fellowship	Annual	1,000.00	100.00	1,000.00	5,000.00	40,000.00	20,000,000,000.00	40,000,000,000.00	Each fellow will be a contract producer using the land and processing facilities to produce and process in 2 production cycles per annum.	Incubation	Annual	100.00	50.00	100.00	NA	12,000.00	NA	6,000,000,000.00	Incubated businesses will either provided services to YRP or convert YRP by-products to valuable commercial products.	Community labour	Annual	5,000.00	5,000.00	NA	5,000.00	40,000.00	NA	6,000,000,000.00	5 community members will employed and managed by each fellow at an average salary of 100 thousand Naira per month.	YRP direct jobs	Annual	NA	5,150.00	NA	NA	NA	NA	NA		Total annual								52,000,000,000.00	
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11b	Qualitative	The Young Ranchers Agricultural Cluster Development Programme is a sustainable foundational programme that will produce well trained young people deployable as the elite force to fight food insecurity and the future agricultural business leaders to catalyze Nigeria’s agricultural transformation. It further creates a strong pipeline of talent, out growers and general support system that will guarantee innovation, productivity, the reinvention and sustainability of the system and Nigeria’s agriculture.
11	Presentation	A 2 minute multimedia production is provided.
12	TAO: www.tao.com.ng	The Agricultural Option (TAO) is the primary promoter of the Young Ranchers Agricultural Cluster Development Programme. It will support as much as 2 million young people to take agriculture as a viable economic option, where they are able to earn up to 50 million Naira per annum.

Conclusion

There is no such time as important at this to create a lasting impact and legacy in improving Nigeria’s agricultural productivity, as the 2 pronged and interdependent challenges of food insecurity and youth unemployment facing us, that agriculture can solve require bold ideas and innovation. The opportunity that a mix of educated young people, finance, technology, irrigable land mechanization will provide for exponential leaps in agriculture will leave a legacy that will last for decades.

A new inclusive model for land, skill, finance, irrigation, and mechanization that democratizes access for student and young people, provides an opportunity to change for the better, how things are done in Nigeria and potentially the whole of Africa.



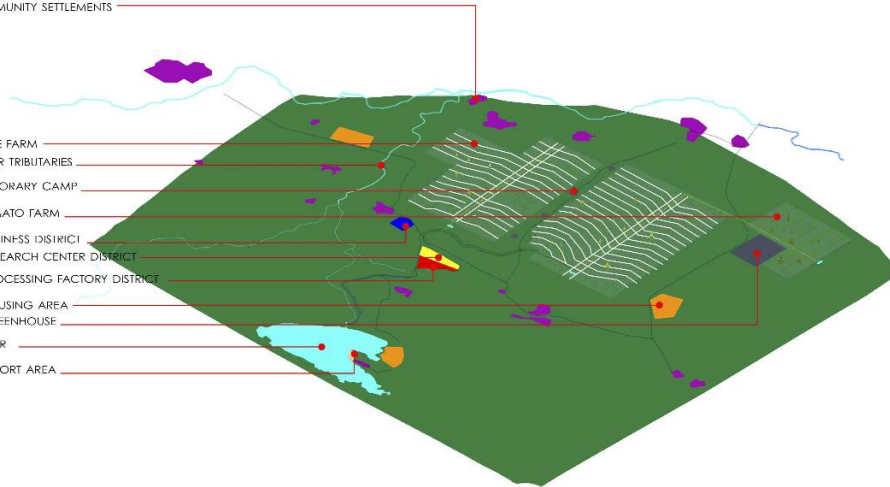
Young Ranchers Cluster Layout

SITE STRUCTURE

OVERALL SITE LAYOUT

LEGEND

- EXISTING COMMUNITY SETTLEMENTS
- IRRIGATED RICE FARM
- EXISTING WATER TRIBUTARIES
- FARMERS TEMPORARY CAMP
- IRRIGATED TOMATO FARM
- PROPOSED BUSINESS DISTRICT
- PROPOSED RESEARCH CENTER DISTRICT
- PROPOSED PROCESSING FACTORY DISTRICT
- PROPOSED HOUSING AREA
- PROPOSED GREENHOUSE
- BALANGA RIVER
- PROPOSED RESORT AREA



Proposed Young Ranchers Agricultural Cluster Development Programme-Cluster site development prototype; Each impression will be organized in a cluster of farms, processing units, small business accommodation, education facilities and living areas. There are provisions for good quality living, energy efficiency and circular economy activities with little waste.



Figure 10: Overview of the Young Ranchers-Site Development Prototype; Each impression will be organized in a cluster of farms, processing units, small business accommodation, education facilities and living areas.



Proposed rice and tomato farms showing delineation of students and fellows managed out-grower contract lots and phased development for crop rotation. Efficient out-grower production for effective agricultural production is at the center of the YRACDP outlook, therefore, farms are designed to support proper out-grower management.



Proposed processing plant zone with strong consideration for integration, resource sharing and efficiency. YRACDP will process agricultural produce on-site, to gain logistics efficiency, cost reduction and community engagement. Its processing plants are designed using modern techniques and considerations that guarantees the best use of resources and adherence to circular economy models.



Small businesses accommodation cluster for such elements as storage and logistics fulfillment. Small businesses will play an important role in supporting YRACDP components of out grower agriculture, processing, circular economy management and community development. YRACDP will provide conducive accommodation and services for them to operate efficiently in the community.



Housing and recreation zone. Architectural design takes influence from the traditional design elements of host locations. YRACDP is building small towns that will accommodate its fellows, small businesses workers and other critical stakeholders. YRACDP believes that high quality living spaces with modern designs that provides for elements such as efficient transportation, efficient resource usage, waste reduction and usage and proper management are key to achieving its vision of a circular economy.

Young Ranchers Clusters-Host Candidates

Ref	Institution	City	State	Designation
1	Abubakar Tafawa Balewa University	Bauchi	Bauchi	Federal University
2	Ahmadu Bello University	Zaria	Zaria	Federal University
3	Bayero University	Kano	Kano	Federal University
4	Federal University of Technology	Akure	Ondo	Federal University
5	Federal University of Technology	Minna	Niger	Federal University
6	Federal University of Technology	Owerri	Imo	Federal University
7	Federal University	Dutse	Jigawa	Federal University
8	Federal University	Dutsin-Ma	Katsina	Federal University
9	Federal University	Kashere	Gombe	Federal University
10	Alex Ekwueme University	Ndufu-Alike	Ebonyi	Federal University
11	Federal University	Oye-Ekiti	Ekiti	Federal University
12	Federal University	Wukari	Taraba	Federal University
13	Federal University	Birnin Kebbi	Kebbi	Federal University
14	Michael Okpara University of Agricultural	Umudike	Abia	Federal University
15	Modibbo Adama University of Technology	Yola	Adamawa	Federal University
16	National Open University of Nigeria	Abuja	Abuja	Federal University
17	Nnamdi Azikiwe University	Awka	Anambra	Federal University
18	Obafemi Awolowo University	Ile-Ife	Osun	Federal University
19	University of Abuja	Gwagwalada	Abuja	Federal University
20	Federal University of Agriculture	Abeokuta	Ogun	Federal University
21	Joseph Sarwuan Tarka University	Makurdi	Benue	Federal University
22	University of Benin	Benin City	Edo	Federal University
23	University of Calabar	Calabar	Cross River	Federal University
24	University of Ibadan	Ibadan	Oyo	Federal University
25	University of Ilorin	Ilorin	Kwara	Federal University
26	University of Jos	Jos	Plateau	Federal University
27	University of Maiduguri	Maiduguri	Borno	Federal University
28	University of Nigeria	Nsukka	Enugu	Federal University
29	University of Port-Harcourt	Port Harcourt	Rivers	Federal University

30	University of Uyo	Uyo	Akwa Ibom	Federal University
31	Usumanu Danfodiyo University	Sokoto	Sokoto	Federal University
32	Federal University of Agriculture	Zuru	Kebbi	Federal University
33	Akperan Orshi College of Agriculture	Yandev	Benue	College of Agriculture
34	Audu Bako College of Agriculture	Danbatta	Kano	College of Agriculture
35	Bauchi State College of Agriculture	Bauchi	Bauchi	College of Agriculture
36	College of Agriculture and Animal Health	Bakura	Zamfara	College of Agriculture
37	College of Agriculture and Animal Science, DAC	Kaduna	Kaduna	College of Agriculture
38	College of Agriculture,	Jalingo	Taraba	College of Agriculture
39	College of Agriculture, DAC	Kabba	Kogi	College of Agriculture
40	College of Agriculture	Zuru	Kebbi	College of Agriculture
41	Edo State College of Agriculture	Iguoriakhi	Edo	College of Agriculture
42	Federal College of Agricultural Produce	Kano	Kano	College of Agriculture
43	Federal College of Agriculture	Akure	Ondo	College of Agriculture
44	Federal College of Agriculture, Moor Plantation	Ibadan	Oyo	College of Agriculture
45	Federal College of Agriculture	Ishiagu	Ebonyi	College of Agriculture
46	Federal College of Animal Health & Production Technology	Ibadan	Oyo	College of Agriculture
47	Federal College of Animal Health & Production Technology	Vom	Plateau	College of Agriculture
48	Federal College of Fisheries & Marine Technology	Victoria Island	Lagos	College of Agriculture
49	Federal College of Forestry	Ibadan	Oyo	College of Agriculture
50	Federal College of Forestry	Jos	Plateau	College of Agriculture
51	Federal College of Forestry Mechanisation	Afaka	Kaduna	College of Agriculture
52	Federal College of Freshwater Fisheries Technology	Baga	Borno	College of Agriculture
53	Oyo State College of Agriculture and Technology	Igo Ora	Oyo	College of Agriculture
54	Federal College of Freshwater Fisheries Technology	New Bussa	Niger	College of Agriculture

55	Federal College of Horticultural Technology	Dadin Kowa	Gombe	College of Agriculture
56	Federal College of Land Resources Technology	Jos	Plateau	College of Agriculture
57	Federal College of Land Resources Technology	Owerri	Imo	College of Agriculture
58	Federal College of Wildlife Management	New Bussa	Niger	College of Agriculture
59	Mohammed Lawan College of Agriculture	Maiduguri	Borno	College of Agriculture
60	Niger State College of Agriculture	Mokwa	Niger	College of Agriculture
61	Plateau State College of Agriculture	Garkawa	Plateau	College of Agriculture
62	Samaru College of Agriculture, DAC	Zaria	Kaduna	College of Agriculture
63	Yobe State College of Agriculture	Gujba	Yobe	College of Agriculture
64	Abia State University	Uturu	Abia	State University
65	Adamawa state University	Mubi	Adamawa	State University
66	Adekunle Ajasin University	Akungba	Ondo	State University
67	Akwa Ibom State University	Ikot Akpaden	Akwa	State University
68	Ambrose Alli University	Ekpoma	Edo	State University
69	Cross River State University of Technology	Calabar	Cross River	State University
70	Delta State University	Abraka	Delta	State University
71	Ebonyi State University	Abakaliki	Ebonyi	State University
72	Ekiti State University	Ado Ekiti	Ekiti	State University
73	Enugu State University of Science and Technology	Enugu	Enugu	State University
74	Ibrahim Badamasi Babangida University	Lapai	Niger	State University
75	Ignatius Ajuru University of Education	Port Harcourt	Rivers	State University
76	Sule Lamido University	Kafin Hausa	Jigawa	State University
77	Kaduna State University	Kaduna	Kaduna	State University
78	Kwara State University	Ilorin	Kwara	State University
79	Prince Abubakar Audu University	Anyigba	Kogi	State University
80	Ladoke Akintola University of Technology	Ogbomoso	Oyo	State University
81	Ondo State University of Science and Technology	Okitipupa	Ondo	State University
82	Rivers State University	Port Harcourt	Rivers	State University
83	Olabisi Onabanjo University	Ago Iwoye	Ogun	State University

84	Lagos State University	Ojo	Lagos	State University
85	Niger Delta University	Yenagoa	Bayelsa	State University
86	Nasarawa State University	Keffi	Nasarawa	State University
87	Plateau State University	Bokkos	Plateau	State University
88	Osun State University	Osogbo	Osun	State University
89	Taraba State University	Jalingo	Taraba	State University
90	First Technical University	Ibadan	Oyo	State University
91	University of Africa	Toru Orua	Bayelsa	State University
92	Bornu State University	Maiduguri	Borno	State University
93	University of Agriculture and Environmental Sciences	Umuagwo	Imo	State University
94	Delta University of Science and Technology	Ozoro	Delta	State University
95	Dennis Osadebe University	Asaba	Delta	State University
96	Lagos State University of Science and Technology	Ikorodu	Lagos	State University
97	Shehu Shagari University of Education	Sokoto	Sokoto	State University
98	Emanuel Alayande University of Education	Ibadan	Oyo	State University
99	Sa'adatu Rimi University of Education	Kano	Kano	State University
100	Kogi State University	Kabba	Kogi	State University
101	AbdulKadir Kure University	Minna	Niger	State University
102	Bamidele Olumilua University of Science and Technology	Ikere	Ekiti	State University
103	Lagos State University of Education	Ijanikin	Lagos	State University
104	Bauchi State University	Gadua	Bauchi	State University
105	University of Ilesa	Ilesa	Osun	State University
106	Kaduna Polytechnic	Kaduna	Kaduna	Polytechnic
107	Auchi Polytechnic	Auchi	Edo	Polytechnic
108	Delta State Polytechnic	Otefe-Oghara	Delta	Polytechnic
109	Federal Polytechnic	Ado Ekiti	Ekiti	Polytechnic
110	Federal Polytechnic	Bida	Niger	Polytechnic
111	Federal Polytechnic	Bauchi	Bauchi	Polytechnic
112	Federal Polytechnic	Mubi	Adamawa	Polytechnic
113	Federal Polytechnic	Owerri	Imo	Polytechnic
114	Federal Polytechnic	Oko	Anambra	Polytechnic
115	Kwara State Polytechnic	Ilorin	Kwara	Polytechnic

116	Lagos State Polytechnic	Ikorodu	Lagos	Polytechnic
117	Nuhu Bamalli Polytechnic	Zaria	Zaria	Polytechnic
118	Ramat Polytechnic	Maiduguri	Borno	Polytechnic
119	Rufus Giwa Polytechnic	Owo	Ondo	Polytechnic
120	The Polytechnic	Ibadan	Oyo	Polytechnic
121	Imo State Polytechnic	Owerri	Imo	Polytechnic
122	Hassan Usman Katsina Polytechnic	Katsina	Katsina	Polytechnic
123	Nasarawa State Polytechnic	Lafia	Nasarawa	Polytechnic
124	Plateau State Polytechnic	Barkin Ladi	Plateau	Polytechnic
125	Waziri Umaru Polytechnic	Birnin Kebbi	Kebbi	Polytechnic
126	Landmark University	Omu-Aran	Kwara	Private Univesity
127	Bells University of Technology	Ota	Ogun	Private Univesity
128	Afe Babalola University	Ado-Ekiti	Ekiti	Private Univesity
129	Ajayi crowther University	Ibadan	Oyo	Private Univesity
130	Al-Hakim Univerisity	Ilorin	Kwara	Private Univesity
131	Babcock University	Ilishan-Remo	Ogun	Private Univesity
132	Benson Idahosa University	Benin City	Edo	Private Univesity
133	Bowen University	Iwo	Osun	Private Univesity
134	Claretian University	Imeko	Ogun	Private Univesity
135	Crawford University	Igbesa	Ogun	Private Univesity
136	Edwin Clark University	Kaiama	Bayelsa	Private Univesity
137	Gregory University	Uturu	Abia	Private Univesity
138	Wesley University	Ondo City	Ondo	Private Univesity
139	Adeleke University	Ede	Osun	Private Univesity
140	Joseph Ayo Babalola University	Ikeji-Arakeji	Osun	Private Univesity
141	Atiba University	Oyo Town	Oyo	Private Univesity
142	Hensard University	Toru-Orua	Bayelsa	Private Univesity
143	Phoenix University, Agwada	Agwada	Nasarawa	Private Univesity
144	Hillside University of Science and Technology	Okemesi	Ekiti	Private Univesity

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