

ANNEXES – Flip Chart Paper Notes

Annex I

WBA Farmer’s Roundtable Kathmandu, Nepal (7/8 November 2019)

The notes in this Annex refer to the direct discussion points made during each session. The language reflects the original points raised and has not been modified by WBA. The numbers in brackets refer to the number of votes given to each issue by the roundtable participants.

Day 1: Farmers’ perspective

How can farmers contribute to the three dimensions of food system transformation?

Nutrition <i>Grow more healthy food</i>	Environment <i>Reduce environmental impact</i>	Social <i>Improve livelihoods of farmers</i>
<p>Indigenous & nutritious crops</p> <ul style="list-style-type: none"> Increased production of traditional crops (7) Encourage more farmers to produce nutritious foods (2) Introduction of alternative crops (not just rice); market-orientated production (1) <p>Markets</p> <ul style="list-style-type: none"> Economies of markets; organic products are available but expensive, so often overlooked for cheaper products (4) <p>Farmer status and training</p> <ul style="list-style-type: none"> Encourage agriculture as a profession; increased status of farmers -> increased opportunities -> increased social and nutritional impact (4) Training of farmers to brand and package their own organic products (companies are currently benefiting but the farmers are not) (2) Increase technical awareness among farmers (1) <p>Inputs</p> <ul style="list-style-type: none"> Increase quality of seeds (biofortification and adapted to climate change) (3) Hard to produce organic food due to pests – need measures to control including resistant seeds <p>Consumers</p>	<p>Capacity building</p> <ul style="list-style-type: none"> Training on good agricultural practices (9) <p>R&D</p> <ul style="list-style-type: none"> R&D, focused specifically on smallholder farmers, to improve quality of seeds (7) <p>Access to markets</p> <ul style="list-style-type: none"> Reduced cost of organic farming/better prices and market access for farmers (6) Farmers can often produce more than they can sell, so they need better marketing and access to markets (6) <p>Soil health</p> <ul style="list-style-type: none"> Soil testing/soil health (5) <p>Inputs</p> <ul style="list-style-type: none"> Using green (safe) pesticides (plant immune modulator) and biofertilizer (4) Importance of quality-assessed fertilizers (can be regulated by government or companies) (3) Balanced used of fertilizers and pesticides Making organic compost from forest and livestock products; using by-products to be more sustainable Better understanding of micronutrients to be used in the field Use hybrid seeds for higher levels of production 	<p>Government</p> <ul style="list-style-type: none"> Governments should implement policies to greater reward farmers and recognize their status, and provide subsidies (33) Creating planning laws on land, water and forests in which farmers can participate Proper and equal distribution of resources <p>Farmer organisations</p> <ul style="list-style-type: none"> Establish and develop further farmers organisations. There should be an interesting agriculture system that can attract the younger generations (high benefits, innovative technologies, high productivity, precision agriculture) (10) <p>Pricing</p> <ul style="list-style-type: none"> Fairer price system; price agreements with the industry, fair trade, free markets, clear and defined minimum support prices for farmers and products, more input from farmers on minimum pricing, greater value chain integration (7) <p>Gender</p> <ul style="list-style-type: none"> More gender equality within farmer organisations (3)

<ul style="list-style-type: none"> • Increase consumer awareness (2); <ul style="list-style-type: none"> ○ Through the promotion of wellness (linking health and diet) ○ Less commercials promoting unhealthy food ○ Increase awareness among youth in particular (e.g.: junk food consumption is high) ○ Promotion of organic and high protein food <p>Agroforestry</p> <ul style="list-style-type: none"> • Improve agroforestry systems 	<ul style="list-style-type: none"> • Improved quality of local crops for more seed diversification <p>Machinery</p> <ul style="list-style-type: none"> • More affordable machinery <p>Farming practices</p> <ul style="list-style-type: none"> • Improve irrigation; simple technology which farmers can use to utilise surface water (controlled irrigation at lower costs) (1) • Crop rotation with legumes <p>Cooperation</p> <ul style="list-style-type: none"> • Agrovets need better knowledge of the products that they sell • More cooperation between companies and farmers • Need more technical expertise to identify problems and find solutions 	
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What do farmers need from companies across the value chain?

Input providers <i>Seeds, fertilizer, agrochemicals</i>	Machinery <i>Farming equipment</i>	Off-takers <i>Processors, retail, restaurants</i>
<ul style="list-style-type: none"> • Assurance System Developed for supply of quality seed (11) • Trainings/orientations on appropriate use of fertilisers and pesticides at grass-root level (9) • Formulate insurance policy for non-productive seed (1) • Production of more efficient fertilizers (1) • Production of more environmentally friendly / organic fertilizers and pesticides (1) • Timely availability of seed & other inputs 	<ul style="list-style-type: none"> • Machine uses a renewable source of energy (9) • Small/portable machinery that can be brought to highland with transportation (e.g.: Harvester for potato; tilling) (5) • Low price of initial investment (5) • Machine with less impact to environment (air pollution. Noise pollution) (2) • Transfer skill of machinery from company to farmer so can be used locally (1) • Drone to spread seeds, foliar & fertilizer • Machine should be easily used and maintained by farmer (practical)/workers safety • Low price of maintenance/spare parts for broken devices and protection of environment 	<ul style="list-style-type: none"> • Restaurants should buy and collect produce directly from farmers (avoid the middle men) (7) • Fair pricing and fixed amount from buyers (Implementation is good in India – include farmer in price negotiation) (1) • Payment at point of sale (pay at the right time) (1) • Companies need to honour contracts with farmers (which does not always happen) (1) • Farmers cannot brand and package their own products – solve this through public-private partnerships (1) • Lower productivity in sub-tropics – companies say they will turn to import rather than pay higher price, causing a lower bargaining position for farmer (1)

	<p>Machines used for processing should be clean enough (sanitation)</p>	<ul style="list-style-type: none"> • Buy-back agreements in place between farmer and buyer (1) • Buyers/processors should maintain nutritious quality and freshness of the products that they buy (product does not deteriorate from trader -- > consumer) & product should be handled carefully so there is less contamination and unnecessary hazards • Buyers should give preference/prioritise local and nutritious products • Competition can impact prices for farmers (alternate – monopoly can also be damaging) • Negotiation: company should be transparent about production cost
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Day 2: Farmer & Company Dialogue

How can farmers and companies work together across the three dimensions of food system transformation?

Nutrition <i>Grow more healthy food</i>	Environment <i>Reduce environmental impact</i>	Social <i>Improve livelihoods of farmers</i>
<ul style="list-style-type: none"> • Increased production, availability and affordability of biofortified seed • Pricing strategy to be competitive • Cultivation and harvest at right time, for which the company can provide training • Better technology to reduce loss of nutrients • Consumer education and awareness (labelling, packaging and certification) • Post-harvest techniques (can be done in farmer level) • Multi cropping / crop rotation • Durability and storability of product 	<ul style="list-style-type: none"> • Integrated farming (egg shell as feed, manures for bio-gas food and organic fertilizers) • Incorporation of Nitrogen fixing plants • Selection of crops with multiple benefits (e.g. legumes) – soil, nutrition... • Climate Smart Agriculture – Early warning system (rain, drought...) • Waste management – re-use should be done through companies • Foliar application of fertilizers (not to soil) • Need to develop bio-pesticides (effective), or seeds resistant to diseases 	<ul style="list-style-type: none"> • Respect of farmers from companies (from everyone); <ul style="list-style-type: none"> ○ education gap means farmers need more assistance from technical representatives of companies ○ Companies don't always follow terms of contract (e.g. delay payment) ○ Attitude of officials is not appropriate, not a balanced relationship and unfair bargaining position

<ul style="list-style-type: none"> • Consistent and high-quality product • Contract farming (for nutritious food) to secure • Raise the awareness of farmers about waiting period and residue • Standardisation of seed (handling of seed, harvesting of seed) • Product diversification to feed farmer family • Raise awareness and educate farmers about nutrition • Faster returns of investment • Shared values for value chain actors • Cooperation among farmers • Promotion of local products and variations 	<ul style="list-style-type: none"> • Use of affordable environmentally friendly inputs (fertilizers/pesticides) – but those should be readily available and should not be expensive • Use of alternative energy sources (solar, wind) • Proper disposal of plastic wastes • Enabling environment could be created through credit, subsidies to help farmers use environmentally friendly inputs and contract farming • Production of organic inputs at local-level • Awareness among farmers for appropriate use of inputs (water, fertilisers) – through companies and involvement of government • Companies should invest in R&D for the development of climate resistant varieties • Utilisation of surface water efficiently • Development of micro-irrigation • Use of balanced fertiliser and judicious application of pesticides through trainings and R&D • Development of eco-friendly machineries by companies • Partnerships among stakeholders • Availability & Affordability of digital platforms 	<ul style="list-style-type: none"> • High dependence on companies with few alternative options • Improvements after joining/forming a cooperative (collective bargaining is important, higher choice when cooperative) • Crops like coffee (with standards) have minimum price guarantee – need this for all crops, farmers want to sell more • Issue of middle men: in India, company says its from market yard (government mandate): middle men is logistical, not price. For basmati rice, whoever pays high price gets product. For speciality rice, incentivise for producing; farmer family training • Contract not personal to farmer; based on 1 standard contact and don't benefit all farmers. Need for pricing. • Legal protections not in place in Nepal (dealers play a very big role and hide cost of production. Want to have direct relationship can be difficult with smallholder farmer (lots of monitoring and technical assistance) • Often no negotiation over price, just given a fixed price (with company often having option to input into sub-tropics (Indonesia)) • Other issues in pricing; high input costs, low production • Gender; particularly difficult for women to negotiate prices and bargain; capacity building needed in skill
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		<p>development and negotiation) In Nepal men often work away (migration)</p> <ul style="list-style-type: none"> • Coop. representatives deal with negotiations; training for delegate • Company perspective; can be issues of quality with farmer buy-back. Increased awareness of quality = better price, Farmer: needs check and control from company • Field staff can't control everything for SMEs • Post-harvest storage could help with quality control • Market issues, how to encourage farmers to actively negotiate fair representation, price, standard of living and scholarship • Digital infrastructure/inclusion is crucial e.g. SMS, training, better access to information (accelerated development) • Shared economy; farmers can liaise together per input on machinery (cooperatives can increase pricing) • Youth: how is farming and other livelihoods perceived? Youth want to leave rural areas because of lack of infrastructure and electricity and choose to move to urban areas; farming has to mechanise (manual labour is hard) • State of art training makes farming attractive – not just agronomic training from parents' Certifications/reward for training leads to empowerment of farmers, not necessarily
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		<p>heavy: young people are well tech-adjusted; fast innovation = fast impact</p> <ul style="list-style-type: none"> • Farming is a profession not just a job. Needs to be aspirational; farm management can be complex • Transparent/fair pricing: packaging and labelling - one aspect is quality control, or self-monitoring through coops – important role of government in regulating • Companies should breed/produce local crops to guide better price to farmers • Access to finance (soft loans) • High value crops • After sales service in trouble shooting • Landholding issues
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Annex II

WBA Farmer’s Roundtable Nairobi, Kenya (26.-27.11.2019)

The notes in this Annex refer to the direct discussion points made during each session. The language reflects the original points raised and has not been modified by WBA. The numbers in brackets refer to the number of votes given to each issue by the roundtable participants.

Day 1: Farmers’ perspective

Morning

Table 1: How can farmers contribute to the three dimensions of food system transformation?

Nutrition <i>Grow more healthy food</i>	Environment <i>Reduce environmental impact</i>	Social <i>Improve livelihoods of farmers</i>
<p>Indigenous & nutritious crops</p> <ul style="list-style-type: none"> • Plant quality seeds from tested soil (7) • Encourage multiplications of indigenous crops (2) • Grow indigenous foods • Growing more nutritious crops, e.g.: beans <p>Capacity building & techniques</p> <ul style="list-style-type: none"> • Fortification & blending during processing (3) 	<p>Farming and other techniques</p> <ul style="list-style-type: none"> • Adoption of biodigester NH4 – Biogas (Circular) (6) • Organic fertilisers and pesticides (4) • Using compost manure (2) • Use of pit latrine (2) • Crop cultivation techniques (2) <ul style="list-style-type: none"> ○ Water life ○ Reforestation 	<p>Economic development</p> <ul style="list-style-type: none"> • Infrastructure development (4) <ul style="list-style-type: none"> ○ Housing (2) ○ Education (2) ○ Health • Food Security (2) • Reduce rural to urban migration (1) • Political stability (1) • Jobs creation

Nutrition <i>Grow more healthy food</i>	Environment <i>Reduce environmental impact</i>	Social <i>Improve livelihoods of farmers</i>
<ul style="list-style-type: none"> Organic ways and products: more healthy, more nutritious (2) Quality seeds & deploy crop rotation (2) Right storage techniques to avoid aflatoxins and micro toxins (2) Planting certified seed (2) Capacity building on stereotypes (local, nutritious) (1) Practice & adhere to GAP (Good Agricultural Practices) (1) Use pest and disease control (1) Reduce chemicals: right fertilizers & knowledge about impact (1) Capacity building: train the farmers who will pass their knowledge on Integrate crop and animal farming to close loops – coexistence Combine manure and fertilizers Good feed – good products (dairy, meat) Enlarge shelf-lives, drying Producing according to standards Testing and quality control Adhere to animal vaccination time tables and spraying time tables – observing window period before selling <p>Sensitize communities</p> <ul style="list-style-type: none"> Sensitize communities what nutritious food is (4) Education / knowledge on nutritious food (4) Knowledge about nutritious quality of food (3) Sensitization – passing info from farmers to consumers (1) Demonstration and field days to engage communities (1) <p>Other</p>	<ul style="list-style-type: none"> ○ Villager protection zones (1) Using the decomposed leftover of crops for manure (1) Conservation agriculture: zero tillage (1) Cover crops to conserve soil (1) Drought resistant crops <p>Water</p> <ul style="list-style-type: none"> Adopting farming techniques that use less water (4) Adopting water harvesting technologies Using the keyhole plot technique (water conservation mechanism) Diversification of low ground water using dykes Construction of dams RWH technologies – H2O <p>Energy and emissions</p> <ul style="list-style-type: none"> Recalling of electric goods – emission of gas (1) Use of biogas instead of firewood (renewable energy) Optimize transportation to reduce carbon emissions <p>Protecting Forests and Nature</p> <ul style="list-style-type: none"> Agroforestry – integrate crops with other crops and avoid encroachment (3) Sustainable harvesting of tree species to balance ecosystem (1) Planting bamboo nursery's (they use a lot of carbon) instead of cutting trees Reducing cutting trees <p>Climate Smart Agriculture</p> <ul style="list-style-type: none"> Climate Smart Agriculture technologies – minimum tillage, terracing, windbreaks (conservation agriculture) (2) Embracing Climate Smart Agricultural practices / precision farming (1) <p>Waste</p> <ul style="list-style-type: none"> Reusing plastics instead of burning (1) 	<ul style="list-style-type: none"> Conflict resolution and cohesion among communities <p>Cooperatives</p> <ul style="list-style-type: none"> Formation of primary cooperative (5) Capacity building of cooperative (5) <p>Women and youth</p> <ul style="list-style-type: none"> Ensure inclusive land rights for women (3) / Women Empowerment (5) / Equal opportunities in access & control of production resources by gender (1) = (9) Inclusion of youth in agriculture (5) Farmers living with disability should not be discriminated <p>Financial services</p> <ul style="list-style-type: none"> Innovative farming systems like e.g.: offering post-harvest loans (5) Financial inclusivity of Farmers; having innovative financial models/customized financial models (1) Insurance: crops/livestock/health Structured trading <p>Policy</p> <ul style="list-style-type: none"> Value addition of farmers produce (1) Inclusion in policy formulation processes (1) Inclusion of farmers on policy dialogues (1) <p>Mixed</p> <ul style="list-style-type: none"> Inclusion of community leaders for buy-in of farmer targeted projects (2) Aggregation/bulking of farmers produce (1) Market survey to enable farmer to demand driven production Changing farming perception – not treated as a last resort Stringent certification processes and awareness creation on regulations in some value chains e.g. export

Nutrition <i>Grow more healthy food</i>	Environment <i>Reduce environmental impact</i>	Social <i>Improve livelihoods of farmers</i>
<ul style="list-style-type: none"> • Nutritious quality of food on food labelling (1) • Market nutritious food at right price Food loss and waste • Water scarcity / water harvesting techniques; combat frost > avoid post-harvest loss and undernutrition (1) • Food waste management (1) Technology • R&D of new technology within companies (1) • Technology transfer Cooperatives • Grow nutritious food & join with others to reach scale: sustainability of the business Together with companies • Advocate for good policies – protect seed variety, protect farming community (4) • Exchange programs and dialogue (2) • Information sharing among farmers and extension officers • More sectoral- and partnership models in enhancing production Value-chain • Value-addition for our products – processing, marketing (8) 	<ul style="list-style-type: none"> • Reducing wastages especially during post-harvest (1) Other • Legal frameworks and policies to build awareness of farmers around environmental issues (5) • Reducing farmers on early warnings (1) 	<ul style="list-style-type: none"> regulations (you are required to get more than do certificates) • One-stop-shop for information concerning certain value chains • Farmers need to know requirement for export, regulations, certifications Capacity building & knowledge sharing • Capacity building / awareness creation / sensitization / Training (5) • Sharing among farmers / exchange programs (5) • Platforms of experience (1) • Peer to peer learning/exchange learning (1) • Platforms for information access (1)

Most prevalent issues

Table 2: How can farmers contribute to the three dimensions of food system transformation? Most prevalent issues

Nutrition <i>Grow more healthy food</i>	Environment <i>Reduce environmental impact</i>	Social <i>Improve livelihoods of farmers</i>
<ol style="list-style-type: none"> 1. Sensitize communities what nutritious food is 2. Plant quality seeds 3. Value addition for products (growing nutritious food should be profitable) 	<ol style="list-style-type: none"> 1. Adoption of biodigesters/biogas: reuse residues (circular agriculture) 2. Organic fertilizer /agriculture 3. Promote legal frameworks and awareness among farmers around environment 	<ol style="list-style-type: none"> 1. Capacity building farmers 2. Women and youth empowerment 3. Formation / capacity building cooperatives

Afternoon:

Table 3: What do farmers need from companies across the value chain?

Input providers <i>Seeds, fertilizer, agrochemicals</i>	Machinery <i>Farming equipment</i>	Off-takers <i>Processors, retail, restaurants</i>
<p>Affordable and quality inputs</p> <ul style="list-style-type: none"> • Risk sharing (to facilitate access to finance; reduce burden of post-harvest losses) (6) • Affordable inputs/low-cost pesticides (5) • Multiple indigenous & natural (non GMO) seeds; good quality and affordable foundation seeds (3) • Support R&D on good quality seeds (enough land) for cereals and legumes – observe growth cycle (1) • Affordable fertilizers: innovative financing model (loan basis) • Subsidized prices for fertilizers: lower prices for farmers • Quality seeds: Companies should not sell low germination seeds • Superior/disease resistant seeds at low prices <p>Access to finance</p> <ul style="list-style-type: none"> • Credit facility (affordable with low interest) (3) • Insurance companies: access to credit • Check-off system: input credit acquisition <p>Products</p> <ul style="list-style-type: none"> • Companies to provide inputs with less environmental impact • Companies to research for crops like mushrooms (2) • Products designed to allow easy use • Labelling – clear labels <p>Services</p> <ul style="list-style-type: none"> • Trust and honesty (4) • Knowledge transfer from companies: demonstrations; follow-up (2) 	<ul style="list-style-type: none"> • Source of power (3) • Subsidized credit to the farmer (2) – farmer friendly repayment schedule (3) • Technical knowledge to operate (2) • Size-portability (2) • User friendly and environmentally friendly (1) • Customization of machine-affordability – ease of acquiring spare parts (1) • Organized cooperation by farmers – ease credits (1) • Financial expenditure • Farms structure • Protective gear on operation • Servicing plan/maintenance • Information on durability/efficiency • Means of transport • Credit guarantee scheme – AGF (African Guarantee fund) / group guarantee • Capital expenditure vs. cost of produce/output • Lease plan from company • Insurance 	<p>Price</p> <ul style="list-style-type: none"> • Buy in cash/prompt payment/short period of time (e.g.: 2 weeks max) (7) • Offer fair price (6) • Timely payment (2) • Late payment mitigation e.g.: invoice discounting • Price negotiation between the two parties • Formula for price calculation should be shared with farmers <p>Quality</p> <ul style="list-style-type: none"> • Ensure quality at the source (7) • Use of associated weighing scales • Realistic quality control measures/parameters • Offer capacity to farmers on quality control • Buy genuine produce directly from farmers which is of good quality • Uniform standardization mechanisms e.g.: for determining grades <p>Other</p> <ul style="list-style-type: none"> • Give forward contracts and stick to the contract (1) • Follow negotiations/laws • Control wastages • Supply chain with cooling mechanisms • Have a system of storing the surplus and agree to off-take the following seasons • Collect produce from farmers' stores • Labelling for traceability

Input providers <i>Seeds, fertilizer, agrochemicals</i>	Machinery <i>Farming equipment</i>	Off-takers <i>Processors, retail, restaurants</i>
<ul style="list-style-type: none"> • Price consistency from companies (1) • Extension officers/services to provide right man power • Support on-farm research • Improved distribution network and shops include what farmers need, on-time and in sufficient variety and secure supply through high stocks • Demonstration (knowledge transfer) and use of their own agronomists • Communication from companies on analysis to optimize pesticide/fertilizer use • Promote market places • Accept and collect farmers feedback <p>Other</p> <ul style="list-style-type: none"> • Government policies to reduce taxes to be able to provide affordable inputs (low prices) • Zoning: growing of different products at different distances 		

Most prevalent issues

Table 4: What do farmers need from companies across the value chain? Most prevalent issues

Input providers <i>Seeds, fertilizer, agrochemicals</i>	Machinery <i>Farming equipment</i>	Off-takers <i>Processors, retail, restaurants</i>
<ul style="list-style-type: none"> • Affordability of inputs • Risk sharing / credit facilitation / insurance 	<ul style="list-style-type: none"> • Farmer-friendly repayment schedule (affordability) • Renewable energy/ecofriendly source of power 	<ul style="list-style-type: none"> • Offer fair prices and pay in time (treat farmers as entrepreneurs) • Ensure quality at the source/farm sale to avoid rejection at later stage

Day 2: Farmer & Company Dialogue

Morning

Table 5: How can farmers and companies work together across the three dimensions of food system transformation?

<p style="text-align: center;">Nutrition</p> <p style="text-align: center;"><i>support a shift towards consumption of healthier food?</i></p>	<p style="text-align: center;">Environment</p> <p style="text-align: center;"><i>reduce the environmental impact of agriculture?</i></p>	<p style="text-align: center;">Social</p> <p style="text-align: center;"><i>create a socially inclusive food system - that is good for farmers and their communities</i></p>
<p>Raising awareness and production of nutritious food</p> <ul style="list-style-type: none"> • Awareness on soil nutrition – acidity, alkalinity, adaptability, soil testing advice (11) • Companies should educate families on diet programs (9) • Partner with research communities to generate evidence supporting advantages of consuming high nutritious food (8) • Companies should research on what is nutritious and needed by the market, then form farmer organizations to promote production (8) • Farmer and consumer awareness on healthy foods (private sector and government) (4) • Promotion of products of nutritious foods and production of the same (3) • School feeding programs should encourage use of nutritious foods (2) • Research evidence for demand of nutritious food (2) • Farmer awareness on crop production, nutritional advice/awareness (2) • Promotion and sensitization on health benefits • Consumer awareness <p>Capacity building & techniques</p> <ul style="list-style-type: none"> • Companies should invest in farmer training on technology application – can do research and absorb tech faster (10) • Agrochemical companies should train farmers on safe use of chemicals (6) • Encourage organic production of food (5) • Post-harvest advice (4) 	<p>Capacity building & knowledge transfer</p> <ul style="list-style-type: none"> • Building capacity of farmers to be aware of environmental impact (11) • Sensitization of farmers - awareness on impact of climate change (7) • Knowledge & training – also on conventional farming (1) <p>Measures & Techniques</p> <ul style="list-style-type: none"> • Use of renewable sources of energy like solar power, biogas digesters and wind (10) • Weather forecast information; reliable water supply (9) • Proper use of net in lakes and oceans to avoid catching young fish (5) • Investment in value addition of agricultural wastes holistically (4) • Support production of organic fertilizers through crop residues and manure (composting) (3) • Good agricultural practices by farmers for soil and water conservation (3) <ul style="list-style-type: none"> ○ Proper waste and soil management – companies should invest ○ Management of water run-offs / water harvest for use in dry periods • Integration of ISO 14.001:2015 (Environmental Management System) to companies’ systems (3) • Recycling biodegradable waste to be reused by both farmers and companies (2) • In-situ fertilization to be promoted (2) 	<p>Capacity building</p> <ul style="list-style-type: none"> • Capacity building to be two way dialogue (7) • Provide farmers access to dialogue opportunities – policy & regulations (3) • Companies to enlighten farmers on new innovation (2) • Companies to bring in an all inclusive value chain approach to provide systems for extension services (capacity building) (1) • Train farmers into mixed farming practices • Companies to provide P.P.E farmers & donations • Extension services • GIS mapping • GPS <p>Contracts</p> <ul style="list-style-type: none"> • Contract farming (25) • Education & training or GAP • How to access inputs & compensation • How to get finance from the farmers side of the contract • Work together through the value chain – high production, high prices • Contractual agreements (3) • Companies – fix price and deadlines and committee to fix prices, inputs to be facilitated by companies to farmers, quality (3) • Mutual contract within farmers (1) <p>Communication</p> <ul style="list-style-type: none"> • Sensitisation – leaflets, e.g.: Agra 2015 (4) • Tournaments, shows (1) • Set demonstrations • Award winning ceremonies <p>Cooperatives</p>

<p style="text-align: center;">Nutrition</p> <p style="text-align: center;"><i>support a shift towards consumption of healthier food?</i></p>	<p style="text-align: center;">Environment</p> <p style="text-align: center;"><i>reduce the environmental impact of agriculture?</i></p>	<p style="text-align: center;">Social</p> <p style="text-align: center;"><i>create a socially inclusive food system - that is good for farmers and their communities</i></p>
<ul style="list-style-type: none"> • Capacity building/targeted training (e.g.: kitchen gardening) • Companies should advise farmers to meet market requirements of good, nutritious food <p>Needs from companies</p> <ul style="list-style-type: none"> • Quality standards assurance (9) • Companies should increase research on more nutritious crops (5) • Companies should provide the nutritional value of their varieties and work with farmer organisations to further translate this to farmers (3) • Adherence to policies of improving nutritional value of processed foods e.g.: fortification in flour (3) • More farmer-company interaction on what farmers need (2) • Companies should produce commercialized and higher nutritional value seeds (2) • Agro input companies should diversity on farm inputs to increase accessibility for the farmers (1) • Varied pricing for farmers with good quality attributes – soybean (1) • Subsidise inputs <p>Technology</p> <ul style="list-style-type: none"> • Innovative farming technologies – hybrid seeds, organic inputs (fertilizers/pesticides) (2) <p>Value chain</p> <ul style="list-style-type: none"> • Value addition - appropriate and affordable equipment to farmers (4) • Companies should help farmers with high quality 	<ul style="list-style-type: none"> • Integrated pest management (IPM) (2) • Integrated crop management (ICM) • Both famers and companies should participate in climate-smart agriculture technologies (1) • Use of organic fertilizer (investment should be both by companies and farmers) (1) • Avoid deforestation; encourage afforestation – Agroecology (1) • Soil testing support and analysis to find the right crops and fertilisers; supply of self-soil testing kits at affordable cost (1) • Both companies and farmers should minimize the transportation time to avoid carbon emissions • Agroforestry – planting fruits with quality seed(lings) • Provide equipment and advise on methods of farming to prevent erosion; efficient irrigation methods; water harvesting and storage; construction of water pumps; agricultural waste management technologies > knowledge <p>Products</p> <ul style="list-style-type: none"> • Companies be accountable to all negative impacts created by their products (4) • Making small portions of products available to smallholders (accessibility) • Bans on fertilizers should be communicated to and known by farmers immediately • Companies to communicate about environmental impact of their products (make it simple in Safety Data Sheets 	<ul style="list-style-type: none"> • Strengthen activities of cluster farming (cooperatives etc.) (15) • Understand the business model of cooperatives/companies (7) • Farmer groups should organized themselves (6) <p>Communities</p> <ul style="list-style-type: none"> • Companies link to farmers & communities to supporting institutions (2) • Training (youth & women), information dissemination (1) • Understanding the needs of a community before setting up a company (1) • Aggregation of farmers & communities • Local agents in the villages • Shared responsibility between the farmers & companies, should be feasible for easier uptake of the community <p>Women and youth</p> <ul style="list-style-type: none"> • Have special programs for women & youth (9) • Exposer through shows and trade fairs • Benchmarking (1) • Local value addition • Include cooking methods that preserve nutritious value of a product • Leaflets • Program radio, TV etc. • Involvement in nutritious programs <p>Other</p> <ul style="list-style-type: none"> • Farmers to group themselves, it's easier to handle groups than individuals (7) • Paradigm shift – transformation of mindset to work together as farmers & companies – set a middle ground (6)

<p style="text-align: center;">Nutrition</p> <p style="text-align: center;"><i>support a shift towards consumption of healthier food?</i></p>	<p style="text-align: center;">Environment</p> <p style="text-align: center;"><i>reduce the environmental impact of agriculture?</i></p>	<p style="text-align: center;">Social</p> <p style="text-align: center;"><i>create a socially inclusive food system - that is good for farmers and their communities</i></p>
<p>seed for local and international markets</p> <ul style="list-style-type: none"> • SMEs to develop models for markets and prompt payment which can encourage farmers to invest in nutritious foods <p>Mixed</p> <ul style="list-style-type: none"> • Farmers involved in lobbying of nutritional products (5) • Guiding principles on company compliance frameworks (1) • Consumer organisation to dictate requirements • Government should promote production of high value crops e.g.: high iron beans at East African Seed • Companies to invest more in CSR (Corporate Social Responsibility) • Companies and farmers should work together in adhering to GAP and SPS • Safe storage of cereals 	<p>SDS) – including demonstrations that inform about the seeds</p> <p>Services</p> <ul style="list-style-type: none"> • Embrace organic farming (incl. training and capacity building and linkages to companies which produce organic products) (16) • Partnership between the farmer organizations and companies on issues related to mitigation measures (15) • Participation of both farmers and companies on policy framework on environmental conservation (7) • Companies offering extension services to farmers on proper use of pesticides and fertilizers (5) • Budget allocation on environmental protection by technicians – Environmentalists (5) • Agrodealers should be in the loop and informed about farmer needs (1) • Companies equipping farmers with skills and knowledge on proper use and safety measures on chemicals • Farmers should be rewarded for high quality and safe products • Monitoring mechanism and record keeping – samples and analysis. > Benefits both farmers and business • Feed-back system – sharing lessons learned <p>Other</p> <ul style="list-style-type: none"> • Environmental impact framework that guides companies and penalizes non-compliance (6) • Lobby and advocate for proper governance of environmental issues (2) 	<ul style="list-style-type: none"> • CSR – health, infrastructure, affordable homes (4) • Companies to give priorities to marginalized/disadvantaged groups i.e. women, youth (3) • Have permanent markets of the produce (3) • Regular meetings between farmers & companies (3) • Access finance (2) • Include the SDGs (1) • Quality specified by companies to the farmers (1) • Both companies and farmers participate in public processes, i.e. policy making, regulation • Harmonized methods to be imported to farmers • Shift from subsistence production to agribusiness and create employment • Common shared and accessible • Partnership • Database to be shared by both farmers & companies – contact, crops, hectares and location – it will attract others i.e. insurance, financiers, extension services (3) Networking between farmers & companies • Agricultural credit facility • M&E of impact of livelihood of the farmers

<p>Nutrition</p> <p><i>support a shift towards consumption of healthier food?</i></p>	<p>Environment</p> <p><i>reduce the environmental impact of agriculture?</i></p>	<p>Social</p> <p><i>create a socially inclusive food system - that is good for farmers and their communities</i></p>
	<ul style="list-style-type: none"> • Solve packaging problem / alternative packaging to plastics • Companies to inform environmental government policies <p>Cooperatives</p> <ul style="list-style-type: none"> • Farmers need to get organized in cooperatives to approach company for information/training/education as well as subsidized soil testing (1) 	

Most prevalent issues

Table 6: How can farmers and companies work together across the three dimensions of food system transformation? Most prevalent issues

<p>Nutrition</p> <p>Grow more healthy food</p>	<p>Environment</p> <p>Reduce environmental impact</p>	<p>Social</p> <p>Improve livelihoods of farmers</p>
<ol style="list-style-type: none"> 1. Promote production of nutritious food throughout the value chain: companies should do research on what nutritious food is and inform farmers/cooperatives to promote production of healthy food 2. Raise awareness on relevance of soil nutrition and soil testing 3. Companies should invest in farmer training on technology application of quality inputs for safe use and faster absorption 4. Companies should educate families on healthy dietary patterns 5. Quality standards assurance for products 	<ol style="list-style-type: none"> 1. Embrace organic farming, train farmers and build market linkages for organic products 2. Partnership between companies and farmer organizations on measures to mitigate effects of climate change 3. Promote renewable sources of energy like solar power, biogas and wind 4. Building the capacity of farmers to prevent environmental degradation effects of agriculture 5. Promote climate change resilience through technologies: weather data, water supply and irrigation 	<ol style="list-style-type: none"> 1. Strengthen collaboration companies and cooperatives, strengthen farmer groups, understand each others business model 2. Secure off taking through contract farming, with agreements on prices, quantity, quality, training 3. Special programs for women and youth 4. Companies to develop CSR programs focused on health, housing, infrastructure 5. Sensitization on social inclusion through leaflets, tournaments, shows

Afternoon:

What are the priority issues for company and farmer collaboration?

Table 1

Promote **nutritious food throughout the value chain** (from research to production and consumption) **(24)**

- Soil testing companies facilitate and advise farmers
- Identification of suitable inputs through research
- Enhancement of access to suitable inputs and technology – seeds, fertilizers, pesticides
- Value addition – affordable machinery
- Packaged/tailored program to bring together all key players handling foods
- Post-harvest aggregation e.g.: maize and peanuts – aflatoxin
- Active regulatory framework for farm inputs to meet required standards
- Companies engaging qualified persons to handle production
- Companies to emphasize on both production and nutritious aspects (adoption of mixed cropping and fortification)
- Companies to engage in nutrition awareness (food fairs)
- Companies produce products based on nutritious aspect

Table 2

Raise awareness on relevance of **soil quality, soil nutrition and soil testing** **(14)**

- Company communication through various platforms on advantages of rich soils to proper cropping e.g. radio campaigns, social media platforms
- The input suppliers should map out areas with different soil types suitable for specific crops. Then trickle this down to inform farmers through farmer organizations
- Maintenance of soil quality for maximum crop production
- Companies provide soil testing kits
- Enterprises/companies to advise farmers on the type of plant to give the soil proper nutrient
- Preservation of soil by using appropriate techniques, through farmer training

Table 3

Embrace organic farming, train farmers and build market linkages for organic products **(16)**

- Use natural farm inputs (minimum use of synthetic/artificial farm inputs)
- Use of organic manure (farm yard manure; composite manure)
- Promote use of organic pesticides
- Use of bio slurry fertilizers (biogas) – farmers embracing the use; Financing/funding biogas construction; offer credit to farmers
- Proper use of decomposable / domestic wastes
- Avoid genetic modified seeds
- Production / innovation for example Permaculture
- Extension services on production, use of organic pesticides
- Embrace the use of integrated pest management (IMP)
- Good agronomic practices (crop rotation, mixed farming, terraces)
- Sensitization, awareness on use of organic farming
- Promote FFBS (Famer Field Business) and FTC on organic farming, demonstration in schools, gardens

Table 4

Partnership between companies and farmer organizations **mitigate effects of climate change (10)**

- Define climate change
- Indicators of impact (temperature, drought, floods, pest (like FCM), erosion)
- Causes (GHG emissions – CO₂, CO₄, NO_x; deforestation/land conversion; land degradation; sand abstraction)
- Mitigation:
 - Green energy (machinery e.g.: solar driers, storage, cooking, biodigester)
 - Afforestation – agroforestry, shadow providing trees
 - Practice zero tillage
 - Protect forest frontier & river water front (natural habitats)
- **Adaptation/resilience**
 - Deploy temperature sensors – awareness leads to preparedness
 - Harvesting rainwater & store reservoirs
 - Plant drought resistant crops
 - Crop rotation programs – preventive rather than curative
- **Mitigation and adaptation**
 - Crop types – smart crop farming combinations
 - Reuse of products (plastics)
 - Increase quality soil (harvest residues); fallow crops

Table 5

Strengthen **collaboration companies and cooperatives** (understand each other's business model) **(23)**

- Have consultative meetings with each other (update on progress and strengthen bond)
- Co-understand importance of cooperatives in enhancing their business & make deliberate effort to connect cooperatives (farmer organisations)
- Create awareness on product. Co-introduce, follow up by set demos
- Make product available
- Rewards best performing farmer
 - Money to farmers for holistic farm management (crop rotation, water management, etc.)
- Farmers to be trained: pay members, buy shares
- Companies & cooperatives sign memorandum of understanding
- Have a forum for discussion
- Form partnership – stakeholders across value chain (researchers, government, insurances, development partners etc.)
- Lobby for better conditions & regulations

Table 6

Secure off taking through **contract farming**, with agreements on prices, quantity, quality, training **(16)**

- Work with a range – low & high both companies & farmers
- Work as a joint venture
- Legitimate business clusters
- Partnership along the whole value chain
- In cooperation of the quality required in the contract, i.e. specifications
- Quantity – should be stated in the contract
- If any aspects of quality & quantity production is needed then the type of skills & training required should be well stipulated in the contract
- Eligibility criteria:
 - Legal binding contracts
 - Trust is key - honesty