

Agricultural Science-based International Development Cooperation of Rural Development Administration

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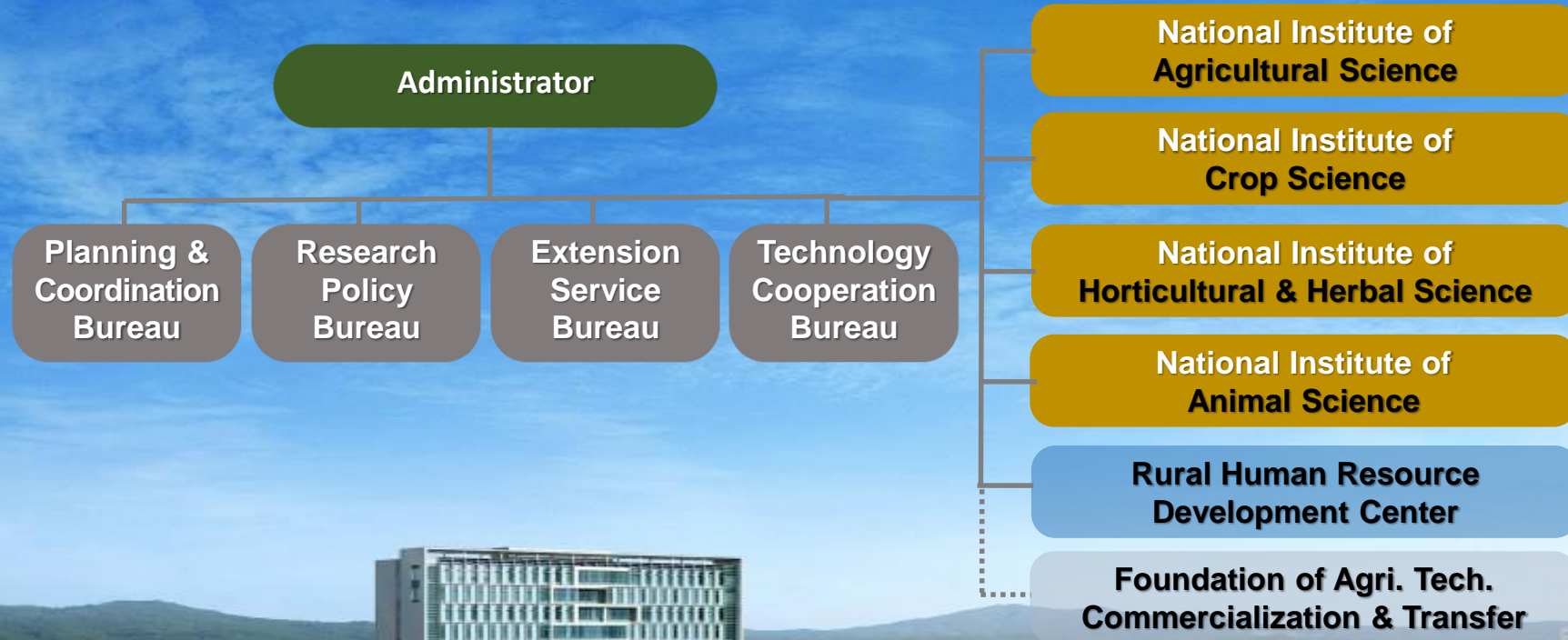
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Rural Development Administration



2023 Research Strategies of RDA

1



Agriculture as a
Future Growth Industry

Expand and Advance Smart Agriculture

- Data & Platform, Intelligence & Automation, Field Equipment, Facility/Field Smart Agriculture

Convergence of Green Bio

- Genetic Resources, Digital Breeding, New Material Development Food Tech, Microbiome, Insect resources

2



Realizing a Sustainable
Agricultural Future

Securing Food Sovereignty

- Floury Rice, Wheat, Soybeans, Field Crops, Horticultural Specialties Animal Welfare

Climate Action / Carbon Neutrality

- Climate Action(Prediction/Adaptation/Response), Carbon Neutrality Green/Organic Agriculture

The Global Spread of Agricultural Technology

- International Cooperation, ODA(KOPIA, 3FACI), K-Rice Belt, Export Agriculture

3



Enabling a vibrant rural

Local Agriculture Revitalization/Rural Regeneration

- Cultivation of Local Specialty Crops, Rural Convergence Collaboration/Cooperation System, Utilization of Local Agricultural Products
- Rural Space (Data/Planning), Rural Regeneration Model, Agriculture/Rural Values

Fostering Young Farmers

- Stabilization, Technology-Based Farming/Entrepreneurship, Empowerment

4



Making people happy

Promote Healing Farming

- Anchor Institutions, Professional Training, Business Model Diffusion, Pets

Farmworker Safety & Well-Being

- Farmer Disaster, Farmer Welfare, Women Farmers

International Development Cooperation of RDA



Philosophy

- Contributing to the **achieve SDG 1 (No Poverty) and SDG 2 (Zero Hunger)** by sharing knowledge and experience in **agricultural sector** with the world

* SDGs: Sustainable Development Goals

Goals

1. To supply **Korea's Top 100 agricultural technologies** to **one million farmers** in 52 partner countries

2. Improvement food self-sufficiency through the **development and dissemination of customized technologies** by country

Principles

Relevance

- aligns with the **policies and national interests** of partner countries

Effectiveness

- develops **technologies customized** to partner countries

Efficiency

- cooperates with **international organizations/institutions**

Impact

- strengthens cooperation with **public & private sectors**

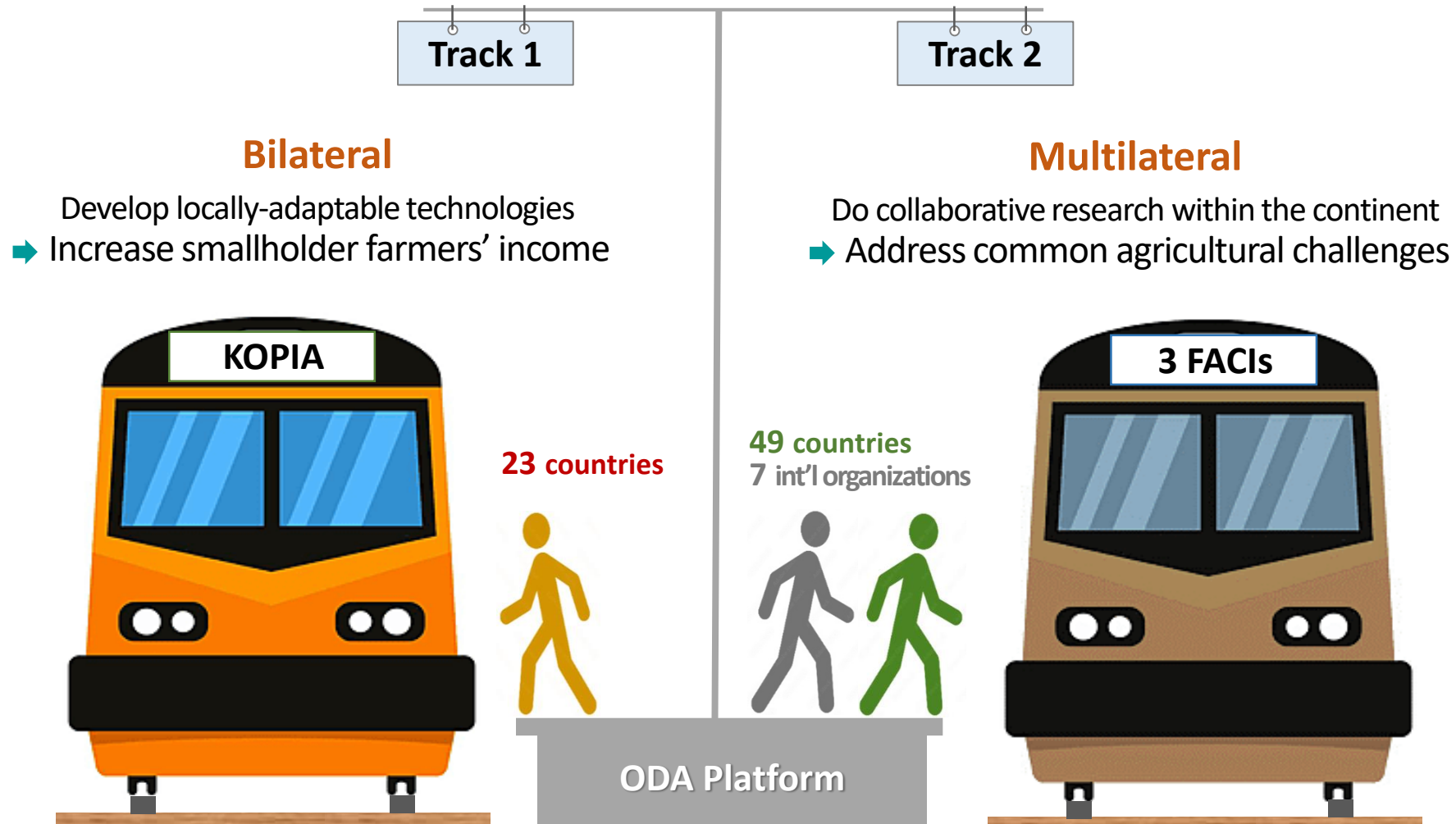
Sustainability

- provides **capacity-building training** on agricultural technologies

ODA Platform of RDA

- RDA operates **two tracks** of development cooperation through an innovative ODA Platform: **KOPIA & 3 FACIs**

* KOPIA: KOrea Partnership for Innovation of Agriculture, FACI: Food & Agriculture Cooperation Initiative



(Bilateral) Key Achievement of KOPIA



- **KOPIA and Cambodia developed a high-yielding & disease-resistant corn 'CHM01', the first F1 hybrid in Cambodia**



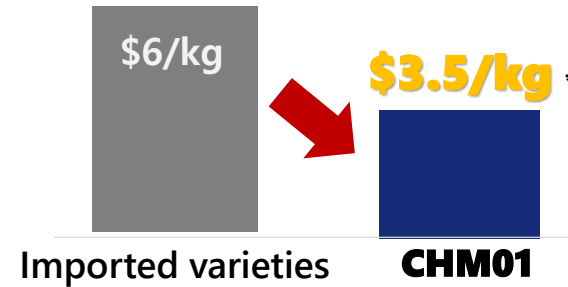
KOPIA+Cambodia
- Crop breeding
- Cultural practices

F1 Hybrid Corn 'CHM01'

- High-yielding
- Short growth period
- Resistant to downy mildew



- ✓ Seed costs reduced by **40%** when compared to imported varieties



* Production cost \$3 + distribution cost \$0.5

- ✓ Replacing **50%** of cultivated areas with CHM01 is expected to reduce costs by 1.5 billion USD

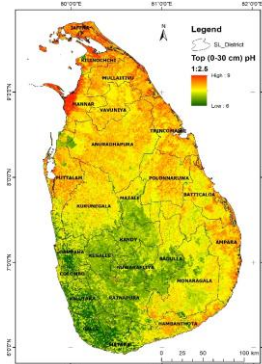
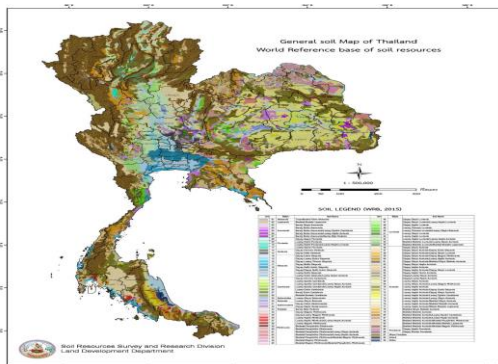
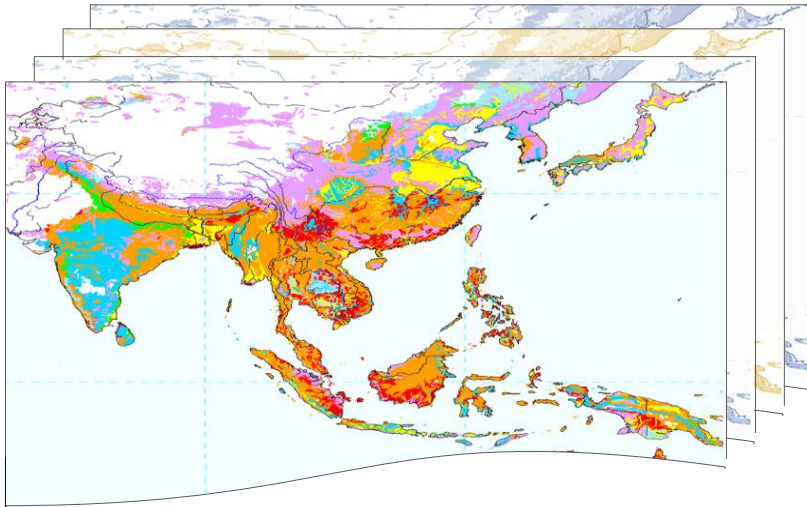


(Multilateral) Key Achievement of AFACI

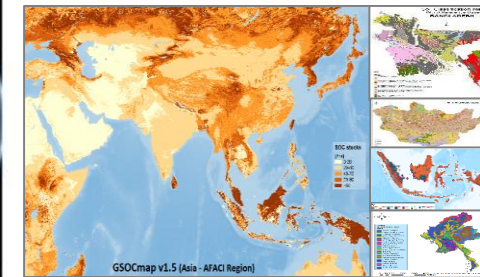
- **RDA, AFACI** and **FAO** will establish the 「**Soil Atlas of Asia**」 with soil information of 15 Asian countries for climate-smart agriculture



Soil Atlas of Asia
(in publishing)



Asian Soil Organic Carbon Map v.1.5



Asian Soil Information System (in 2023)



(Digital) Cases of cooperation with WB



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- Capacity building programs

- * The study tour of the Ministry of Agriculture of Uzbekistan (2022)
 - Digital soil management tech. for Uzbekistan

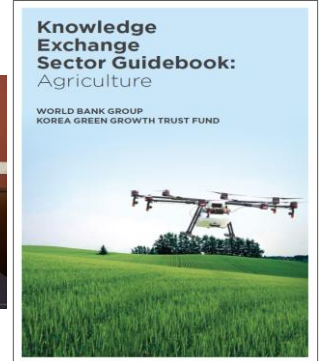


- * The study tour of Smart-farming tech. for Mexico (2022)



- Knowledge sharing

- * 'Open Learning Campus'



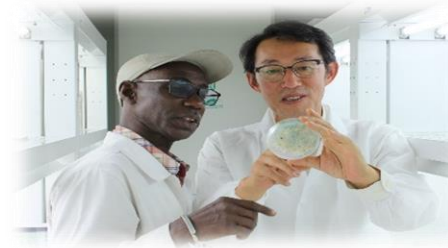
(Multilateral) Key Achievement of KAFACI

- **RDA, KAFACI and AfricaRice** developed **high-yielding rice varieties** for food security in Africa

* AfricaRice: Africa Rice Center

Rice varieties developed by cooperation

* 11 varieties in 5 countries during 2017~2022

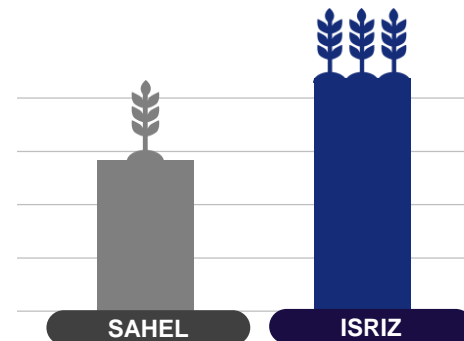


Country	Variety	Yield (ton/ha)
Senegal	ISRIZ-6	7.2
	ISRIZ-7	7.5
Mali	KAFACI 1	7.0
	KAFACI 2	5~6
	KAFACI 3	6~7
Malawi	MAKAFACI	6.9
	WCHANGU	6.8
Tanzania	TARI-RIC3	7.5
Rwanda	KATETA 21-1	7.3
	KATETA 21-2	7.6
	KATETA 21-3	6.5

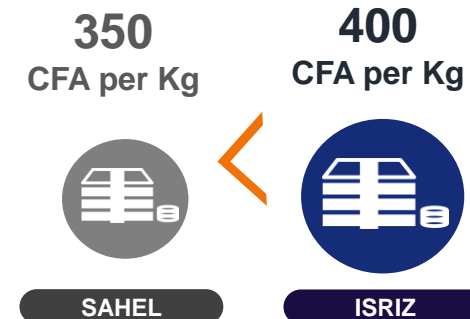
ISRIZ-6 and ISRIZ-7 in Senegal



Yield



Sales Price



(Food Security) Cases of cooperation with WB



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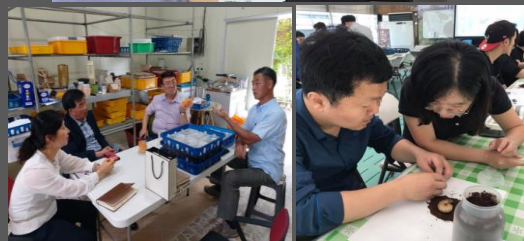
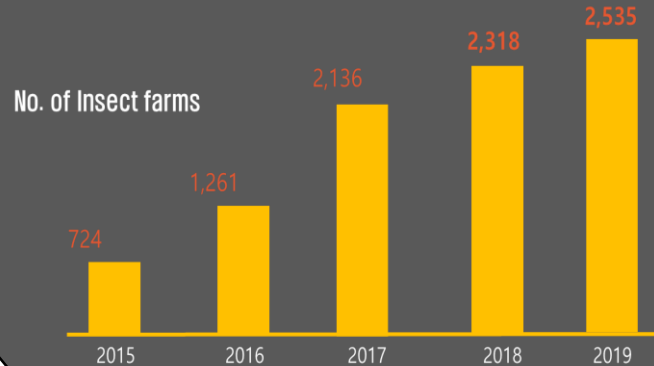
- Future Alternative Food Research

* Edible insect research in RDA

Registered Edible Insect



Current Status of Insect-Rearing Farms



- Capacity building programs

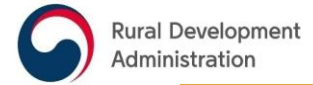
* Co-field trip with WB for understanding the Zimbabwe's situation (2023)



(Multilateral) Key Achievement of KoLFACI

- **RDA, KoLFACI and CIAT developed drought-tolerant Frijol lines for food security against climate change**

* CIAT: Centro Internacional de Agricultura Tropical



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Activities for development of drought-tolerant frijol varieties



Country	Number of lines (evaluated/selected)	Capacity building (Number of farmers/technicians)
Colombia	344 / 25	538
Nicaragua	216 / 30	160
Costa Rica	201 / 56	663
Bolivia	235 / 28	70
El Salvador	800 / 62	780
Guatemala	290 / 17	326
Honduras	160 / 64	296

Frijol research in Colombia



Field screening

344
lines tested



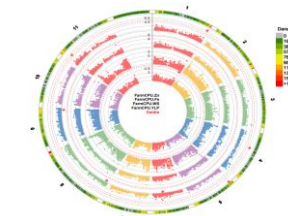
Greenhouse evaluation

25
lines selected



Laboratory works

- Physiology
- Rhizobium
- Genetic analysis



- Work in line with SDG framework focusing on **No Poverty & Zero Hunger**
 - Focus on **agricultural technologies** to improve **global food security** and mitigate **climate change**
 - ✓ Abiotic stress-tolerant crop varieties and cultural practices to improve productivity
 - ✓ Technologies to mitigate climate change in agricultural sector
 - ✓ Technologies for digital agriculture
- (Replication)** The developed technology is diffused to other regions within a country or countries with similar environmental conditions or policies
- Strengthen **triangular cooperation** with **international organizations**
 - ✓ Knowledge-sharing and capacity-building for sustainability
 - ✓ Production and sharing of global big data in agricultural sector

Thank you for your attention!

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