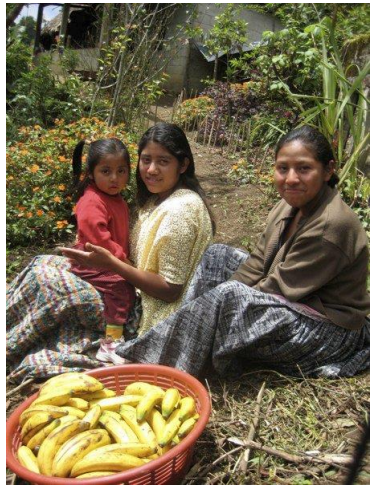
VISION FOR ADAPTED CROPS AND SOILS

Global Soil Partnership
12th Plenary Assembly
3-5 June 2024

The Vision for Adapted Crops and Soils (VACS)



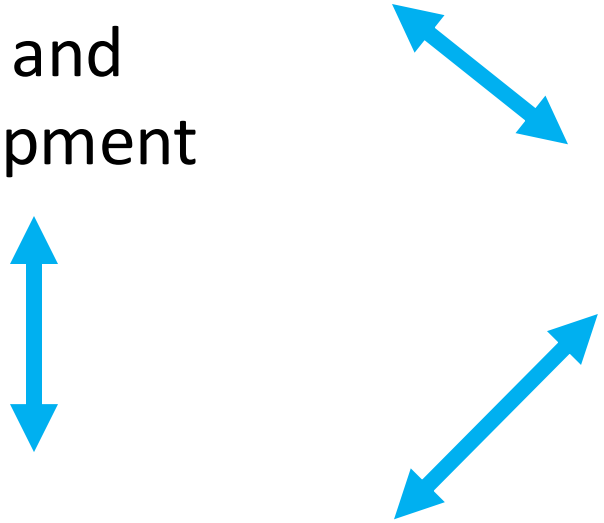
A global *movement* to achieve a *resilient food system* grounded in *diverse, nutritious,* and *climate-adapted crops* grown in *healthy soils*.

Vision for Adapted Crops and Soils (VACS): improving human nutrition for current and future generations

Unhealthy **diets** are undermining health and development

Soils are depleted and highly reliant on inputs

Climate change is and will continue to affect crop production



- Insufficient/ ineffective soil and land management, and mismatch between land potential and land use
- Insufficient generation and utilization, including due to behaviour, social and economic constraints, of soil information and data limits decision-making for soil, crop and water management
- Insufficient systems to leverage that data for decision making at all levels
- Future land suitability for crops based on climate change indicates positive and negative changes in the land potential which should be accounted for
- Absence of formulating and implementing integrated land use planning to optimize the use and management of land resources

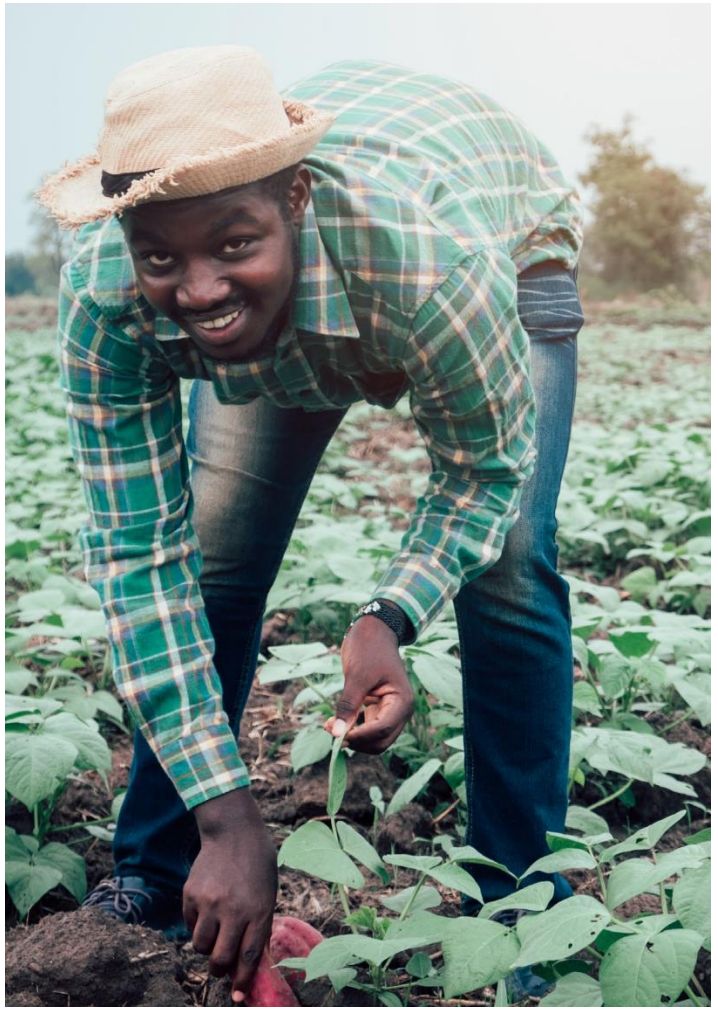
Crops and Soils

Why Crops and Soils?

Soils and crops are co-dependent.

VACS provides a **framework** for making the best choices about where and what to plant, what management system to employ, and how to apply that system in a particular location and time.

VACS promotes both ***institutionalization*** and ***financing*** of this integrated approach by working with project donors, implementers, and national governments.



VACS and the UN Conventions

By pairing land use decisions with climate-adapted crops that nourish people *and* soils, VACS addresses *land degradation*, *drought resilience*, *biodiversity conservation*, and food and nutrition security for *current and future generations* in the context of *climate change*.

VACS Impacts (from Theory of Change)

The impact of climate change and land degradation on land suitability and crop systems mitigated now and in the future

More diverse and adequate diets contribute to improved nutrition and related health outcomes for all now and in the future

VACS Mission and Goals

Catalyze a movement to boost agricultural productivity, nutrition, and farmer livelihoods through diverse, climate-adapted crops grown in healthy soils

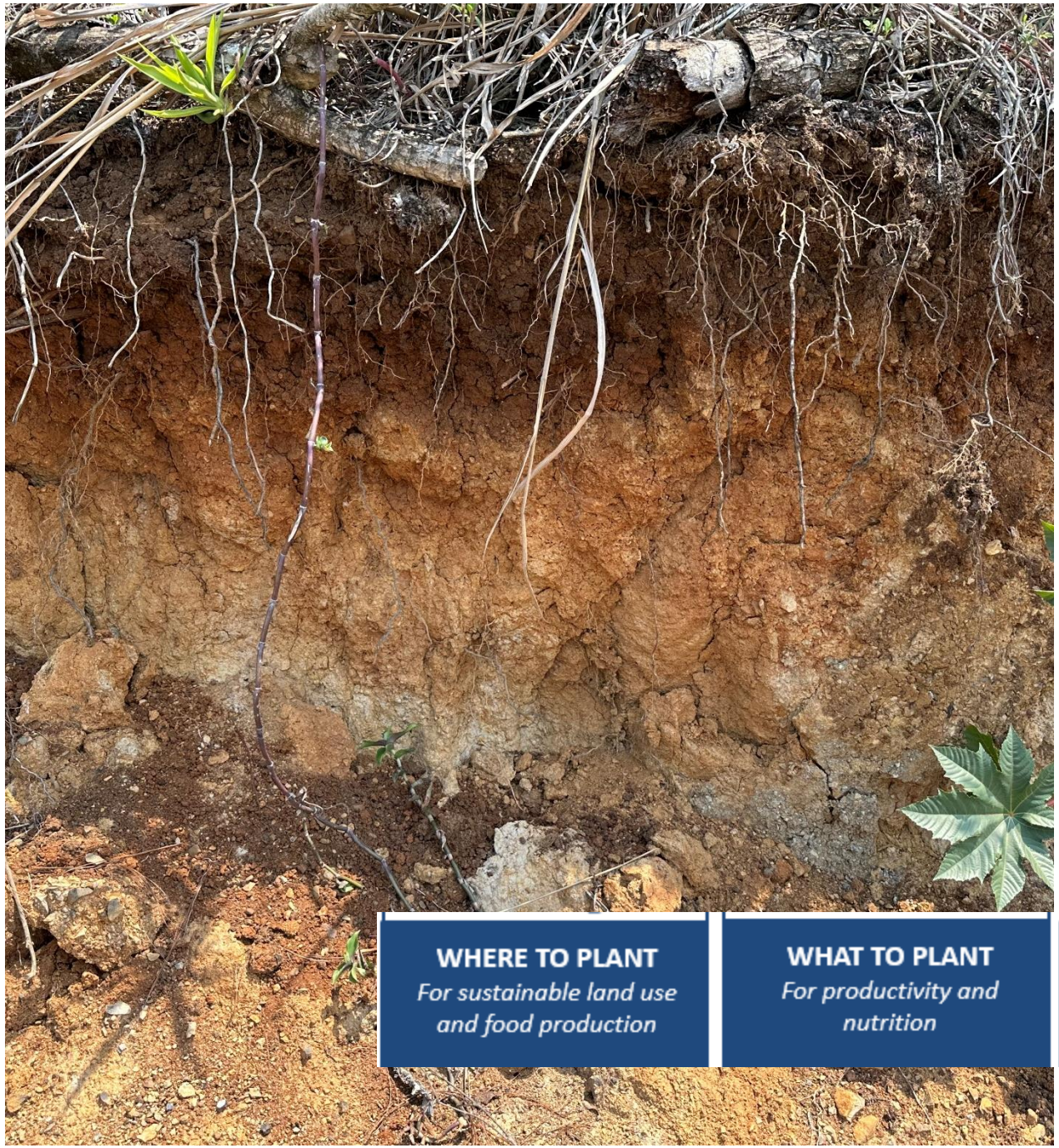
Build Supply and Demand for a Diverse Range of Crops

Promote Sustainable Land Use and Management with Opportunity Crops*

*A crop with great unrealized potential to improve food and nutrition security in a **particular place** in the context of **climate change** and **increasingly degraded soils**.

The VACS Investment Framework: Illustrative Interventions

	WHERE TO PLANT *For sustainable land use and food production*	WHAT TO PLANT *For productivity and nutrition*	WHAT CROP MANAGEMENT SYSTEMS *For efficiency & productivity*	HOW TO APPLY TO DIVERSE CROPS *For each crop and conditions in a given year*
GLOBAL	*Develop tools to inform land use planning, including by integrating soil and crop information.*	*Enable plant breeding programs; increase awareness about benefits of opportunity crops.*	*Develop knowledge systems to accelerate innovation and sharing globally of successful practices.*	*Develop novel fertilizers and formulations that will support increased production of opportunity crops.*
NATIONAL + SUBNATIONAL	*Share technical advice and research to inform land use and agricultural subsidy policies.*	*Build R&D capacity; Build value chains for new varieties to deliver them to markets and consumers.*	*Expand agricultural curricula and extension services to focus on nutrition, sustainability, and diverse crop management.*	*Invest in crop management Decision Support Tools for pest and nutrient management for opportunity crops.*
LANDSCAPE	*Strengthen land use planning and extension services.*	*Expand access to crop suitability information to identify crop options for specific landscapes.*	*Develop systems to analyze the impacts of different management systems on nutritious diets and sustainability.*	*Support learning collaboratives that accelerate real-time knowledge sharing and reduce adoption risk for farmers.*
FARM	*Enable hyper-local recommendations by integrating farmer inputs into soil information systems.*	*Expand access to more crop options, allowing farmers to diversify and improve income, nutrition, and soil health.*	*Develop and provide access to app-based, locally-tailored Decision-Support Tools and local training and education.*	*Provide access to mobile and remote consultation services and local demonstrations of best practices.*
FIELD	*Develop low-cost tools to help small farmers deploy precision farming techniques.*	*Expand access to crop suitability information to identify crop options for specific fields.*	*Expand access to knowledge on how to successfully manage traditional and indigenous crops.*	*See Farm and Landscape.*



WHERE TO PLANT
For sustainable land use and food production

WHAT TO PLANT
For productivity and nutrition

WHAT CROP MANAGEMENT SYSTEMS
For efficiency & productivity

HOW TO APPLY TO DIVERSE CROPS
For each crop and conditions in a given year

WHERE TO PLANT
For sustainable land use and food production

WHAT TO PLANT
For productivity and nutrition

WHAT CROP MANAGEMENT SYSTEMS
For efficiency & productivity

HOW TO APPLY TO DIVERSE CROPS
For each crop and conditions in a given year

Tilled, residues removed

No-till, residues retained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WHAT CROP MANAGEMENT SYSTEMS
For efficiency & productivity
HOW TO APPLY TO DIVERSE CROPS
For each crop and conditions in a given year

Current Donors

Germany
Japan
Netherlands
Norway
United Kingdom
United States
ADM
Cargill

Three Multi-Donor Funding Mechanisms coordinated via an Implementer's Group

IFAD

CGIAR

FAO

Current Institutional Supporters

African Union

Food and Agriculture Organization of the United Nations

IICA

IFAD

CGIAR

AGRA

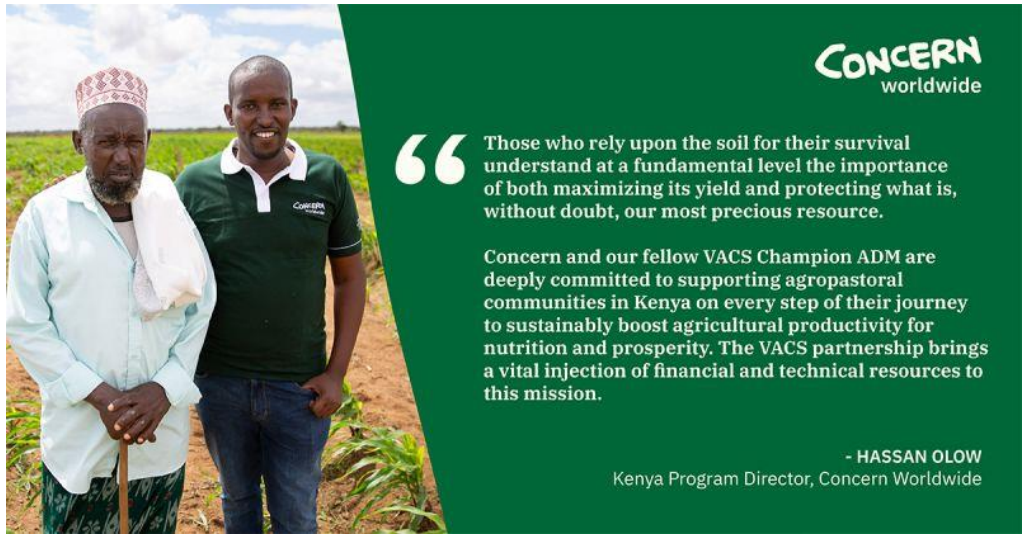
FEED THE FUTURE
The U.S. Government's Global Hunger & Food Security Initiative

African Development Bank

FARA
Forum for Agricultural Research in Africa

Current VACS Champions include:

Private sector organizations that have committed at a leadership level to increase investment in diverse, climate-adapted crops grown in healthy soils.



CRS CATHOLIC RELIEF SERVICES faith. action. results.

ROOTS of PEACE

BAYER

ONE ACRE FUND

ADM

CROP TRUST

IBM

QuinoaHub

environment services

CONCERN worldwide

HELEN KELLER INTL

GROW FURTHER

Connecting people and ideas for a food-secure future

ESOMCHI FOUNDATION

Vision for Adapted Crops and Soils: Opportunities for the GSP and its partners

- ***Consider*** the **VACS Theory of Change** and **Decision Framework** as you develop new projects and initiatives
- ***Prioritize*** development of soil information where it will have the **greatest impact** on the most decision(s)*.
- ***Collaborate*** with **plant breeders** to ensure that crops are bred for the *type* and *health* of soil where they will be grown, and that the impact of the crop on soil health is a breeding criterion
- ***Participate*** in SoilFer activities in Zambia, Guatemala, Honduras, (supported by $30m contribution to FAO from the US Government)

*See JSWC 2023: *Practical guidance for deciding whether to account for soil variability when managing for land health, agricultural production, and climate resilience*