WORLD COFFEE RESEARCH™

Replanting Arabica coffee farms: practical tools for your supply chain

How to deploy World Coffee Research's work in your supply chain project

About this guide

This guide is intended to support supply chain professionals in deploying WCR's open-access tools in the field to reduce risk associated with renovation investments and power long-term sustainability.

Background

Climate change is reshaping the world's coffee production landscape. It is altering land suitability, shifting disease pressures, and raising real business risks for companies and producers that depend on stable supply.

Replanting projects can help the coffee sector adapt. World Coffee Research (WCR) offers several resources to drive informed decision-making about the selection of planting materials in supply chain projects and de-risk renovation investment. Replanting climate-adapted, improved varieties is a key component of a comprehensive Regenerative Agriculture approach to addressing soil health, water, biodiversity and climate resilience challenges at the farm level.

All tools and resources that appear in this guide are available in English and Spanish* and aggregated at worldcoffeeresearch.org/resources.

1 Variety selection

Choose a variety or varieties that will offer maximum performance (e.g., resiliency, yield, disease resistance, cup quality) within your specific production environment.

Evaluate unique factors to your location such as elevation, soil conditions, sun exposure, temperature, precipitation patterns, etc. and the presence of diseases such as coffee leaf rust, coffee berry disease, or coffee wilt disease in your area. If disease is present, you can explore selecting disease-resistant varieties.

Consult local authorities and technical assistance programs for information on recommended varieties in your area.

Evaluate performance characteristics and climate adaptation potential of different varieties to see which might fit your location.

Consider what management plan will be feasible to implement in terms of nutrition, disease and pest control, shade management, and more according to the profile of farmers in the specific value chain.

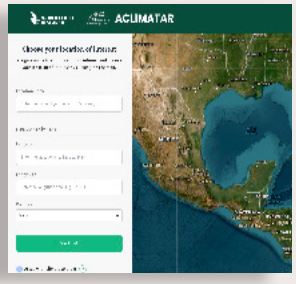
Consider the propagation needs of your project. Some varieties are able to be propagated from seed but others (i.e., hybrids) should only be reproduced through clonal propagation from trusted nurseries. Seeds from varieties that require clonal propagation will not have the same characteristics as parent plants.

Tools and resources

Coffee Varieties Catalog

Interactive website profiling 100+ arabica and robusta varieties from around the world.

Information on yield and quality potential, disease and pest susceptibility, and agronomics for specific varieties.



CafeClima

Interactive website integrating the largest dataset on variety performance with advanced climate modeling.

Predictive insight into how select existing varieties might perform in future climate scenarios to support informed planting decisions.

2 Plant quality

Obtain seeds and/or plants that conform genetically to the specific profile of the variety or varieties you have selected to ensure they will perform to their full potential in the field.

Identify promising seed sources. Consult reputable sources, such as national authorities, local technical assistance programs, or World Coffee Research resources below, to find seed sources that offer genetic conformity.

Seek genetic conformity. Ask seed or seedling providers for genetic traceability of the varieties they offer, examine the phytosanitary quality of plants, and evaluate sources for their implementation of best management practices before purchasing.

Tools and resources

Genetically confirmed seed lots in LatAm

A list of seed lots in the Latin American region confirmed by WCR to be producing varieties with genetic conformity between 90-100%.

Genetic verification of varieties via Intertek

Verify the genetic conformity of seed/plants through genetic testing with Intertek (contact agritech@intertek.com). Only available for select varieties commonly grown in Latin America; the resource here contains the genetic markers used to build the service.

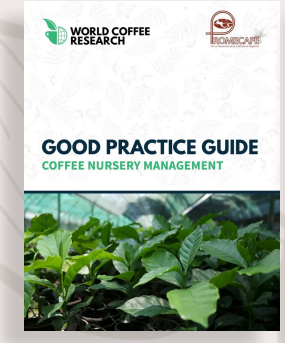
3 Plant health & traceability

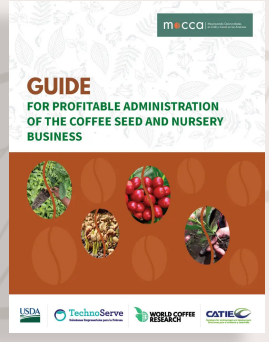
When procuring planting new varieties, work with your nursery or propagation provider to ensure they are following recommended best practices at the nursery level to maximize potential performance.

Follow agronomic recommendations. Ensure the management of the plants in the nursery or seed lot follows agronomic recommendations (e.g., nutrition, pest management, pest control, soil) for the specific varieties you have selected.

Maintain traceability and reduce cross-pollination risks. If plants are being used as a source of seed, ensure that best practices for plant health, avoiding cross pollinations between varieties, and maintaining traceability (including during post-harvest processing) are followed.

Tools and resources





Good practice guides

A series of guides and videos that outline best practices for producing healthy, traceable seed and managing plants in a nursery, in addition to the administration of profitable coffee seed and nursery businesses.

*Guides and videos also available in French.