

# **Robusta Varieties**

A global catalog of Robusta coffee varieties from around the world.

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# About the Catalog

Information is power. There are dozens of widely cultivated Arabica and Robusta coffee varieties around the world, and each is unique in its performance and adaptation to local conditions. This catalog brings urgently needed information to coffee farmers to help them decide which coffee is best for their situation. Agronomic data — expected yield, nutrition requirements, optimal altitude, disease and pest resistance, etc — about the widespread array of existing cultivated Arabica and Robusta coffee varieties has never been available in an open-access format before.

Because the life of a coffee tree is 20–30 years, the decision producers make about which variety to plant will have consequences until the next generation. If a farmer makes a poor decision on variety, the cumulative loss can be huge. Most coffee farmers — who earn their livelihoods based on the decisions they make about what kind of coffee to plant — don't typically have access to transparent information about available varieties and how they differ. The lack of a comprehensive, up-to-date coffee catalog puts farmers at risk and perpetuates chronically low yields around the globe.

The purpose of the catalog is to lower the risk associated with coffee farming by providing direct information to farmers and other farm renovation or planting decision-makers to enable them to make an informed choice about what variety is best for their circumstances. Choosing the right type of coffee lowers the risk of disease and pest losses, has consequences for quality in the cup, and will be critical for coffee producers facing rapidly changing climates. Choosing the correct variety — one that meets the farmer's goals and needs — can significantly reduce losses due to diseases/pests, increase production volume, and/or increase quality.

Throughout the coffee-producing world, there is widespread need for replanting with young trees, trees resistant to major diseases and pests (including coffee berry disease, coffee leaf rust, antestia bug and stem borer), and with improved varieties capable of meeting the challenges of the climate crisis.

# Using the catalog

This catalog aims to present information for coffee producers and anyone working with coffee plants about how different varieties can be expected to perform under ideal conditions.

Of course, coffee is not always grown under ideal conditions. Factors such as environment, altitude, soil nutrition, weather, the age of the tree, and farm management practices can significantly affect a coffee tree's yield, quality, and health.

Because of this, it is impossible to give absolute data about certain aspects of a variety's performance (for example, cup quality or yield). In those cases, we provide a common variety (Caturra in Central America, SL28 in Africa) as a reference in the description of relevant variables. If a farmer knows how Caturra or SL28 would perform on their farm, given their particular climate, soil, and farm practices, they should be able to measure the relative performance of other varieties against that knowledge.

The intention of this catalog is that those working with coffee should be able to make informed decisions about which variety will work best for their situation and needs.

### A living document

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This catalog of coffee varieties is a living document and will continue to grow as more regions of the world are covered and as new varieties are developed.

### Genetic modification in coffee

All the varieties listed in this catalog have been created through traditional breeding approaches. To the knowledge of scientists at World Coffee Research, no commercially available coffee variety has been created through genetic engineering.

World Coffee Research and all parties receiving funding from WCR are prohibited from engaging in the development of genetically modified coffees.

# What's included

This catalog covers varieties from the two species of coffee plants that are in wide cultivation globally—*C. arabica* (known as Arabica), and *C. canephora* (known as Robusta).

### Arabica

Arabica is the dominant species in Central and South America and much of east Africa, and is considered to produce the highest cup quality. The Arabica species is made up of many varieties or cultivars – distinct types that are able to sexually reproduce with one another.

### Robusta

Robusta is the second-most commonly grown coffee species; its commercial importance has grown steadily over the last century and it now accounts for approximately 40% of global production. The genetic diversity of robusta coffee is much larger than that of arabica, and it is only just beginning to be explored by breeders and the industry alike.

### Varieties scope

The varieties in this catalog have been selected for inclusion because of their economic, historical, cultural, or genetic importance to the global cultivation of coffee. World Coffee Research consulted widely with national coffee institutions, breeders, researchers, and coffee companies from across the world to make these selections.

Because the catalog is meant to be a practical tool and guide for coffee producers, it does not aim to represent an exhaustive list of all coffee varieties in existence. The varieties included here have been selected or developed by farmers and breeders primarily over the last century, although the domestication of coffee began at least 500 years ago.

### Definition of a variety

To be considered for inclusion in this catalog, varieties must meet the following standards (based on the definition of a variety as given by the International Union for the Protection of New Varieties of Plants (UPOV):

- The variety is distinct. It is distinguishable from other varieties based on the above set of characteristics.
- The variety is uniform. It can be precisely described by a set of characteristics and all the plants of this type look the same.
- The variety is stable. The variety can be reproduced in such a manner that its characteristics are unchanged in the next generation.

Note: There is some exception to the above rule of thumb. Some coffees included in this catalog—T5175, T5296, Anacafe 14, and Pacamara—do not meet the above definition because they are neither uniform nor stable from one generation to the next. They are included here because they are commonly known to farmers and grown widely in their respective regions, but it's important to know they lack uniformity and stability and therefore do not meet the definition of variety laid out here.

# Geographical scope

### Arabica

The current version of the arabica catalog covers the most important coffee varieties in the 15 countries listed below. Many varieties in this catalog are also found in countries not listed below.

- Costa Rica
- El Salvador
- Guatemala
- Honduras
- Jamaica
- Kenya
- Malawi
- Nicaragua
- Panama
- Perú
- República Dominicana
- Rwanda

- Uganda
- Zambia
- Zimbabwe

### Robusta

The current version of the catalog covers important robusta varieties in the 8 countries listed below.

- Brazil
- Mexico
- Uganda
- Indonesia
- Vietnam
- India
- Thailand
- Philippines

### Partners and reviewers

A special thanks to the following individuals and institutions who provided expertise and information to guide the development of the full catalog.

### Arabica catalog

The arabica catalog was developed in consultation with coffee experts from across Central America and Africa. It is the result of visits to 16 countries and interviews of nearly 180 people from some over 100 private and public bodies involved in national or regional coffee sectors in Central America, the Caribbean, and Africa.

- Costa Rica
   Instituto del Café de Costa Rica (ICAFÉ)
- El Salvador
   Fundación Salvadoreña para Investigaciones en Café (PROCAFÉ)
   Consejo Salvadoreño de Café
- Guatemala
   Asociación Nacional del Café (ANACAFÉ)
- Honduras
   Instituto Hondureño del Café (IHCAFÉ)
- Jamaica
   Jamaica Agricultural Commodities Regulatory Authority (JACRA)
- Kenya
   Kenya Agricultural & Livestock Research Organization (KALRO)
- Malawi Department of Agricultural Research Services (DARS)
- Nicaragua Instituto Nicaragüense de Tecnología Agropecuaria (INTA)
- Panama
   Ministerio de Desarrollo Agropecuarío (MIDA)
- República Dominicana
   Consejo Dominicano del Café (CODOCAFÉ)
- Perú
   Junta Nacional de Café (JNC)
- Rwanda Rwanda Agriculture Board (RAB)
- Uganda National Coffee Research Institude (NaCORI)
- Zimbabwe
   Coffee Research Institute

The following individuals provided expertise and information to guide the development of this catalog:

- Noël Arrieta, Instituto del Café (ICAFE), Costa Rica
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- Pardon Chidoko, Coffee Research Institute (CRI), Zimbabwe
- Gusland McCook, Jamaica Agricultural Commodities Regulatory Authority (JACRA)
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Oscar Ramos, Fundación Salvadoreña para Investigaciones en Café (PROCAFÉ), El Salvador

- Carlos Mario Rodríguez, Starbucks
- Susana Schuller Petzold, Junta Nacional de Café (JNC), Peru
- Alfredo Zamarripa, RD2 Vision (formerly)

### **Robusta catalog**

The robusta catalog was developed in consultation with coffee experts across the world in South America, Central America, North America, Europe, Africa, and Asia. The following individuals and institutions that provided expertise and information to guide the development of this catalog:

- Alexsandro Lara Teixeira, Brazilian Agricultural Research Corporation (EMBRAPA), Brazil
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- Gava Ferrão, Capixaba Institute for Research, Technical Assistance and Rural Extension (INCAPER), Brazil
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- Hurtado Mario, MERCON Coffee Group, Nicaragua
- Kurian Raphael, Tata Coffee, India
- Mario Fernandez, Specialty Coffee Association, USA
- Nayani Surya Prakash, Former Director of Research Coffee Board, India
- Rafael Chan, Nestlé, France
- Robert Adomati, UGACOF, Uganda
- Sunalini Menon, CoffeeLab Ltd., India
- Tracy May Adair, J.M. Smucker Co., USA
- Trinh Duc Minh, Buonmathuot Coffee Association, Vietnam
- Tyler Youngquist, Smucker's, USA
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### Introduction

Coffee is one of the most important cash crops in the world, generating significant foreign exchange and supporting the livelihoods of millions of people globally. Over the last 30 years, demand for coffee has grown steadily, leading to an expansion in production and exports.

There are 131 species in the *Coffea* genus known to science (Davis, et al., 2021), with two that are cultivated widely and on a global scale —*Coffea* arabica (commercially known as arabica) and *Coffea* canephora (commercially known as robusta). Throughout this essay and the catalog generally, we use this term "robusta" to refer to the entire *C. canephora* species and all its subtypes.

Until recently, arabica held reign over most of the coffee market due to preferences for its cup quality, but various factors, including the increasing demand for coffee, have led to expansions in the production of robusta, as the species requires less stringent growing conditions and possesses a certain level of resistance to pests and diseases that often plague farm productivity. Robusta production expanded rapidly after the emergence of soluble coffee in the 1950s.

Presently, approximately 60% of the coffee produced and marketed in the world comes from arabica plants and 40% comes from robusta plants (ICO, 2021).

The top global producers of robusta are currently Vietnam, Brazil, Indonesia, Uganda, and India, which together produce over 90% of the world's robusta (Slipchenko, 2021). Of these producers, Vietnam and Uganda are the foremost exporters of robusta (Brazil, for example, retains a substantial portion of its production for internal consumption). However, an increasing number of countries that currently restrict or have previously restricted coffee production to arabica are beginning to explore robusta; these include Mexico, Nicaragua, Guatemala, and Colombia, among others. Additionally, there is growing interest in exploring the potential of increasing the cup quality of robusta.

### About Robusta

*Coffea canephora Pierre ex A. Froehner is a* species of coffee that originated in central and western sub-Saharan Africa. In the wild, it is found mainly in the understory of humid, evergreen forests (but sometimes in seasonally dry humid forests or gallery forests) with elevations ranging from 50 to 1500 m above sea level (Davis, et al., 2006).

The interest in producing Robusta at a global level resides in the fact that it can be grown in a wider range of climates and altitudes compared to arabica, which requires precise conditions in order to thrive, like heavy shade and high altitudes. In contrast to arabica, robusta plants typically have a greater crop yield, contain higher levels of caffeine, lower levels of sugar, higher levels of soluble solids, and are less susceptible to damaging pests and diseases (Goldemberg et al., 2015). Further, robusta can be grown in hotter, more humid temperature ranges, found in lower altitudes between 200–800 meters (Slipchenko, 2021), and often requires less maintenance via herbicide and pesticide (Daviron & Ponte, 2005). Despite these attributes, robusta is still sensitive to environmental disturbances. Research suggests that robusta's ability to thrive in hotter climates may be overstated and that temperatures over 20.5 degrees centigrade can have a significant negative impact on yields Kath et al., 2020). Additionally, many robusta varieties are still susceptible to key diseases and pests, such as coffee leaf rust, stem borer, coffee berry disease, coffee berry borer, and nematodes, among others (Vega et al., 2006)

Due to the aforementioned benefits, though, robusta is often easier to farm, allows for greater productivity, and is more cost-effective to produce than Arabica. Ongoing climate predictions of rising temperatures and altered precipitation patterns by 2050 indicate that arabica cultivation may no longer be sustainable in the coming years, which may, in turn, increase the production of robusta by a significant margin (Bunn, et al., 2015, Kath, et al., 2023, Dinh, et al., 2022, Kath et. al, 2022, de Aquino, et al., 2022). Even so, robusta faces its own limitations and climate vulnerability (Tournebize, et al., 2022).

However, the beans that come from robusta production generate differences in terms of taste and cup quality (Leroy, et al., 2006). For instance, coffee brewed from robusta beans is often lower in acidity, higher in bitterness, and more "full-bodied" due to its pyrazine content (Miyanari, 2008), an aromatic known for its earthiness. But when handled and processed properly, Robusta can serve as a product for specialty markets (Uganda Coffee Development Authority, 2019).

### **Robusta Diversity**

Many different common terms are used to describe robusta in the areas where it is grown. These include "robusta," "conilon," "nganda," "koillou/quillou," and others. These terms are generally regional, colloquial, and do not necessarily correspond to specific genetically distinct varieties/clones that have been developed and released by breeders over the years. Because robusta cross-pollinates — a single robusta tree cannot successfully pollinate its own flowers, as Arabica trees can do; scientists call this "allogamous" (Nowak, et al., 2011) — subtypes grown in the same field typically interbreed (Thomas, 1935). A consequence of this mating system is that the majority of cultivated robusta is still made up of unselected populations obtained from open-pollinated seeds (Labouisse et al, 2020). For more back-ground on Robusta breeding, see Montagnon, Thierry, and Eskes, 1998a & b.

Put simply, robusta plantations are not genetically uniform; consequently, many robusta farmers have little awareness of which variety or subtypes they are growing. This is one reason why colloquially, *C. canephora* is often referred to as simply "robusta," as described and commercialized by Linden in 1900 (Dagoon, 2005).

Because robusta is a cross-pollinating species (i.e., it requires pollen from two different types of plants in order to produce new cherries), it is necessary for farmers to grow more than one type of robusta in their fields in order to have successful pollination and fruit production. Some breeding programs have developed and released "polyclonal" or "multiline" varieties to address this challenge where the "variety" is an intentional mix of genetically distinct clones (Campuzano, et al., 2022, Montagnon, et al., 2003, Berthaud & Charrier, 1998).

However, not all Robusta types can successfully grow together in a field – the cross-compatibility of types is genetically controlled. Some varieties are unable to fertilize one another (Lashermes et al., 1996, Prakash, 2018). So far, research on optimal combinations of subtypes in production has been scarce, but one key consideration is simultaneous flowering.

In different production regions, how such mixes are released and distributed for farmers is handled differently. It is common in West Africa, for example, for breeders to create polyclonal seed varieties (i.e., multiple different types of robusta are distributed together in the same seed packets to farmers). In Brazil, it is more common for breeders to create multiple unique clones that are then tested for compatibility; the highest-performing complimentary clones are then propagated and released to farmers (Depolo, et al., 2022, Surya, 2018). The scope of genetic diversity in robusta coffee is much larger than that of arabica. There are many unknown variations (including traits related to cup quality) in the robusta gene pool. By and large, these hidden variations are yet to be explored by breeders.

# History of cultivation & dispersal

Robusta originates from humid lowland forests in tropical areas of Africa, an area with a wide natural geographic distribution from Guinea to Uganda and Angola, growing in numerous forms and ecotypes. It has been surveyed and prospected by ORSTOM and FAO missions (Dussert et al., 1999). The exact natural origins of the cultivated types are difficult to know for certain given the widespread introduction and naturalization of different subtypes around the region and the geneflow between wild and nearby plantations (Davis, 2006, Kiwuka et al., 2021).

Cultivation of the species began around 1870 in Congo, using material coming from Zaïre's Lomami River region, now known as the Democratic Republic of Congo (Berthaud & Charrier, 1988). A subtype of robusta called "kouillou" (later renamed "conilon" via linguistic distortion when it was introduced to Brazil) was observed in the wild by the French in 1880 between Gabon and the mouth of the Congo River, mainly along the Kouilou-Nari River region. The species was named *C. canephora* by the botanist Louis Pierre in 1895. Pierre, who worked in France at the Muséum National d'Histoire Naturelle, received a sample of the plant collected in Gabon by the Reverend Théophile Klaine. The name was first published along with a description of the species by Froehner in 1897. In 1898, Edouard Luja, in preparation for the 1900 Paris Exposition, was sent to collect 10 species with economic potential in the Congo. During this mission, Luja collected several thousand seeds in the surroundings of Lusambo of a 'new' coffee species (Benoit, 1968). These seeds were probably collected on an early robusta plantation in the region. Belgian Congo became one of the principal breeding centers, from which breeding lines were distributed throughout the tropics.

At the turn of the century, the species began to spread to other parts of the world. Robusta seeds from Congo were sent to Brussels, and from there it was sent under the name "robusta" to Java, Indonesia, where it was quickly accepted by farmers due to its productivity and apparent resistance to coffee leaf rust (Cramer, 1957), as a major outbreak occurred in Southeast Asia in the late 1800s. These materials were later enriched with those from Gabon and Uganda. Around the same time, other Robusta material selected from wild populations was brought to areas of Ivory Coast, Guinea, and Uganda (Charrier and Eskes, 1997).

From here, robusta continued to move around the world, entering India by way of Java (with later introductions from west Africa). Material selected in Java was reintroduced to central Africa from 1910 onward, and to the Belgian Congo in 1916 at the Institut National pour Étude Agronomique du Congo (INEAC), which served as the home to the majority of selection from 1930 to 1960. Within Africa, robusta production grew in Madagascar, Uganda, Ghana, and the Ivory Coast, often intermingling endemic variants with those introduced from commercial production in other parts of the continent.

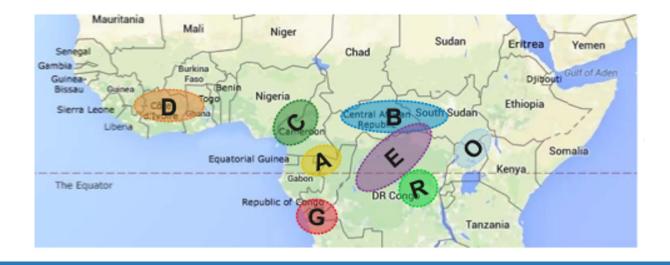
As noted previously, much of the movement of robusta and the increase in the popularity of its production during this period may be attributed to the spread of coffee leaf rust (CLR), a fungal disease that ravages coffee plants. One of the greatest benefits of robusta production is that the species possesses a natural resistance to some of the major pests and diseases that impact coffee production; they can thrive under harsh conditions (Campuzano, et al., 2022).

Robusta was later introduced to Latin America, and in particular Brazil, with some additional commercial introductions in Central America via Guatemala between 1930–1935. Further, CATIE in Costa Rica introduced robusta plants called "French lines" between 1981–1983.

In present day, countries that lie within Asia and Oceania are collectively the largest producers of robusta, generating 60% of the world's output at 41.5 million 60 kg bags annually. This region is followed by South America, which produces 28% of the world's share of robusta, generating 19.8 million bags of coffee in the 2020–2021 year.

### Genetic diversity and conservation

*C. canephora* is is a diploid (2n=2x=22) species divided into two broad genetic groups, Guinean and Congolese. The Guinean group originated in central-west Africa, while the Congolese group originated in central Africa. Among these two groups, the Guinean is the most widespread. In addition, within each group, there are different populations, or subgroups. Within the Guinean group, there are at least two subgroups, named "kouilou" or "conilon," and "robusta." However, more recent studies using advanced genetics techniques, have further refined the robusta species into eight subcategories. Studies of the genetic relationships within *C. canephora* have shown that, in general, these populations are well differentiated and genetically isolated (Berthaud, 1986, Montagnon, 1992, Cubry, et al., 2008, Musoli, et al., 2009, Dussert et al., 1999, Gomez et al. 2009, Mérot-L'Anthoëne et al., 2019). Montagnon (1992) proposed a substructure within the Congolese group with two subdivisions, SG1 and SG2. Dussert (1999) added two extra groups (including B and C, as referenced below) to the Congolese group. However, these sub-groups are not necessarily visually distinct from one another (Chadburn & Davis, 2017, Charr et al., 2020).



Using RFLP and SSR markers, Gomez et al. (2005) pooled *C. canephora* genetic diversity into five genetic groups (A, B, C, D, and E). Geographically, genetic group A comprised wild populations from Congo and Cameroon, group B from eastern-central Africa, group C from western-central Africa, Cameroon and northeastern Congo, group E from Congo and southern Cameroon, while group D consisted of wild populations from Côte d'Ivoire and Guinea, separated geographically by the Dahomey Gap from the other diversity groups. Musoli et al. (2009) further determined that some Ugandan wild populations clustered into another distinct group (group O). Finally, Mérot-L'Anthoëne et al. (2019), using a genome-wide Coffee 8.5K SNP array, described *C. canephora* genetic diversity with eight distinct genetic groups, including the Ugandan one (group O), thus identifying two new genetic groups, (comprising samples from southern Democratic Republic of the Congo) and G (comprising samples from Angola), whereas the differentiation between groups E and R was weaker.

Wild populations are the primary genetic relative of robusta coffee, and cultivated coffee has changed little from its wild progenitors. It is also a secondary genetic relative of arabica, conferring potential disease and pest resistance (Chadburn & Davis, 2017).

As a part of the genetic conservation of the species, gene banks of robusta were established in several producing countries in Africa and Asia. There are currently 40 known collections of this species held in ex-situ collections (Tram, et al., 2022, Botanic Gardens International, PlantSearch). The species was set into collection in Côte d'Ivoire, with 700 wild genotypes by ORSTROM in collaboration with the Center de Coopération Internationale en Recherch Agronomique Pour Development.

In addition, the species was collected in Guinea, Cameroon, the Congo, and Central African Republic and later introduced into field gene banks. The species is found in protected areas such as Mangala Forest Reserve in Tanzania, Bia National Park in Ghana, Isalowe Forest Reserve in the Democratic Republic of Congo, and Reserve du Dja in Cameroon.

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### Variables

### YIELD POTENTIAL

What is the yield potential of this variety in kg/ha of green beans? Note that yield can vary significantly depending on environmental conditions and how the variety is managed. Yield values presented here are the result of specific limited field trials undertaken by the breeders of this variety; they do not represent guarantees of yield.

### COUNTRY OF RELEASE

In which countries is the variety commercially available?

Mexico, Uganda, Indonesia, India, Vietnam, Brazil, Thailand, Philippines, Nicaragua



### CONTENTS OF MUCILAGE IN THE CHERRY

What is the relative amount of mucilage in the cherry? (Mucilage is the inner layer of coffee pulp that remains attached to the parchment after pulping.)

Low, Average, High, Unknown, Not applicable



### **BEAN SIZE**

How big are the coffee beans?

Below Average, Average, Large, Very Large, Unknown, Not applicable



### COFFEE LEAF RUST

Is the plant susceptible to leaf rust?

Coffee rust is a foliar disease of coffee caused by the fungus *Hemileia vastatrix* that causes defoliation and may result in severe crop losses. Plant diseases are constantly evolving. *Note: A variety that is resistant to a disease today may not be resistant tomorrow.* 

Resistant, Tolerant, Susceptible, Unknown, Not applicable

### COFFEE BERRY DISEASE

Is the plant susceptible to CBD?

CBD is a coffee disease that affects the fruit. It is caused by the fungus, *Colletotrichum kahawe*. Currently, CBD is not present in Central America, but it is a concern that the disease will spread. *Note: Plant diseases are constantly evolving. A variety that is resistant to a disease today may not be resistant tomorrow.* 

Resistant, Tolerant, Susceptible, Unknown, Not applicable

### NEMATODE

Is the plant susceptible to nematodes (specifically the species *Meloidogyne spp.* and/or *Pratylenchus spp.*)? Nematodes are microscopic animals which infect the plant roots and can cause wilting and death of the plant.

Resistant, Tolerant, Susceptible, Unknown, Not applicable

### COFFEE BERRY BORER

Is the plant susceptible to coffee berry borer? Coffee berry borer (*Hypothenemus hampei*), called broca in Spanish, is a bark beetle endemic to Central Africa that is now distributed throughout all coffee-producing countries in the world, with the exception of Nepal and Papua New Guinea.

Resistant, Tolerant, Susceptible, Unknown, Not applicable

### SHOOT HOLE BORER (\_XYLOSANDUS COMPACTUS\_)

Is the plant susceptible to shoot hole borers (*Xylosandus compactus*)? Shoot hole borer is a species of ambrosia beetle. Common names for this beetle include black twig borer, black coffee borer, black coffee twig borer, and tea stem borer.

Resistant, Tolerant, Susceptible, Unknown, Not applicable

# STATURE

What is the growth habit of the plant (e.g., is the plant tall or compact)?

Dwarf, Tall, Unknown, Not applicable

# YEAR OF FIRST PRODUCTION

When will the tree produce its first fruit?

Year 2, Year 3, Year 4, Unknown, Not applicable

# NUTRITION REQUIREMENT

What level of nutrition (e.g., compost, fertilizer) does this plant require?

Very High, High, Medium, Low, Unknown, Not applicable

# **RIPENING OF FRUIT**

At what time in the harvest season will the tree fruit ripen? For Arabica reference, Caturra = Average. No Robusta reference.

Early, Average, Late, Very late, Unknown, Not applicable

# CHERRY TO GREEN BEAN OUTTURN

What is the ratio of the volume of green bean in relation to the cherry/fruit (given as a percentage)?

# PLANTING DENSITY

What spacing should you use for planting this variety? Note: In Central America, trees are typically pruned to have one main stem. In Africa, it is typical to prune trees for multiple (2-3) stems per tree. So, while tree planting densities typically are much lower in Africa, each tree is fruiting relatively more because there are multiple main stems.

1000-2000 per ha (using multiple-stem pruning) 2000-3000 per ha (using multiple-stem pruning) 3000-4000 per ha (using single-stem pruning) 5000-6000 per ha (using single-stem pruning) 4000-5000 per ha (using single-stem pruning) Unknown Not applicable

# LEAF TIP COLOR

What color are the tips of new leaves?

Green, Bronze, Green or Bronze, Light Bronze, Dark Bronze, Unknown, Not applicable

# ΤΥΡΕ

What type of Robusta variety is it? When an individual plant is selected for its unique or superior qualities and is held separate for propagation, the plants propagated from this mother plant are called clones. They are exact genetic copies of the mother. Because Robusta is an out-crossing species, it requires that more than one clone be planted in the same field in order to produce fruit. Polyclonal varieties are composed of an intentional mix of genetically distinct clones. Synthetic varieties are developed by allowing open pollination to occur for several generations among a number of different cultivars, such as inbreds.

Clone, Polyclonal, Polyclonal/synthetic

# **GENETIC DESCRIPTION**

To which genetic group of Robusta does this variety belong?

Guinea group Congo group Uganda group Guinea x Congo group Guinea x *Coffea congensis* group Unknown

# LINEAGE

What are the parents of this variety (when known) or what is its genetic lineage?

# BREEDER

If the variety was created by a breeder, what is the name of the breeder?

# Perdenia - Old Robusta

Vigorous, wide-spreading, grow into moderately large trees. High-yielding, beans relatively small in size.

vield potential 1500-3000 kg/ha	COUNTRY OF RELEASE India		CONTENTS OF MUCILAGE IN THE CHERRY	
			000	
BEAN SIZE Small (screen size 14 or below)	coffee leaf rust <b>Tolerant</b>		coffee berry disease Unknown	
	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
NEMATODE	COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS COMPACTUS)	
Tolerant	Susceptible		Susceptible	
SUSCEPTIBLE RESISTAN	T SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
Agronomics				
STATURE	Tall			
YEAR OF FIRST PRODUCTION	Year 4			
NUTRITION REQUIREMENT	Medium			
RIPENING OF FRUIT	Late			
CHERRY TO GREEN BEAN OUTTURN	25%			
PLANTING DENSITY	1000-2000 plants/ha (using single-stem prur	ning)		
LEAF TIP COLOR	Green or Bronze			
ADDITIONAL AGRONOMIC INFORMATION	It can be grown at altitudes of 500 to 1000 m are spread out with 50–70 fruits per node in average cup quality. The fruit is relatively sm kg/ha under rainfed and shaded conditions intensive cultivation practices including blos	normal clusters, red in nall in size. Yield of up t and up to 2500 kg/ha u	color with o 1500 nder	

### Background

Y

ТҮРЕ	Clone
GENETIC DESCRIPTION	Congo group
LINEAGE	Unknown
BREEDER	Central Coffee Research Institute (CCRI), Coffee Board of India



Sln.3R - CxR (Congensis x Robusta) Compact plant stature with good yielding potential, suitable for high-density planting.

YIELD POTENTIAL		COUNTRY OF RELEASE		CONTENTS OF MUCILAGE IN THE CHE	RRY
1500-2500 kg/ha		India		High	
					0
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE	
Large (screen size >17)		Tolerant		Unknown	
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS CO	DMPACTUS)
Tolerant		Susceptible		Susceptible	
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
Agronomics					
STATURE		Dwarf/Compact			
YEAR OF FIRST PRODUCTION		Year 2			
NUTRITION REQUIREMENT		Medium			
RIPENING OF FRUIT		Average			
CHERRY TO GREEN BEAN OUTTURN		20%			
PLANTING DENSITY		1000-2000 plants/ha (using single	e-stem pruning)		
LEAF TIP COLOR		Light Bronze			
ADDITIONAL AGRONOMIC INFORMATION		other Robusta varieties. It is cons If using seed, it will produce in ye shade. Using irrigation can assist	t for blossom and backing compa idered year-1 producing when usi ar 2 and year 3, when cultivated u with early ripening. The planting « 2.4m to 2.7m x 2.7m. Cultivated a	ng clones. nder density for	

Background

Duengi ounu	
ТҮРЕ	Polyclonal
GENETIC DESCRIPTION	Guinea x Coffea congensis group
LINEAGE	Coffea congensis x Coffea canephora and recurrent back cross to Robusta. Selection from BC2.

practices including blossom & backing irrigation.

this variety ranges from to 2.4m x 2.4m to 2.7m x 2.7m. Cultivated at altitudes of 500 to 1000 meters above sea level. Yield of up to 1500 kg/ha under rain-fed and shaded conditions and up to 2500 kg/ha under intensive cultivation



Sln.1R - S.274, CxR (Congensis x Robusta) Plants that are very vigorous and grow into moderately large trees.

YIELD POTENTIAL COUNTRY OF RELEASE CONTENTS OF MUCILAGE IN THE CHERRY 1500-3000 kg/ha India Unknown COFFEE LEAF RUST COFFEE BERRY DISEASE BEAN SIZE Medium (screen size 15-16) Tolerant Unknown SUSCEPTIBLE RESISTANT SUSCEPTIBLE RESISTANT NEMATODE COFFEE BERRY BORER SHOOT HOLE BORER (XYLOSANDUS COMPACTUS) Tolerant Tolerant Unknown SUSCEPTIBLE RESISTANT SUSCEPTIBLE RESISTANT SUSCEPTIBLE RESISTANT

### Agronomics

STATURE	Dwarf/Compact
YEAR OF FIRST PRODUCTION	Unknown
NUTRITION REQUIREMENT	Unknown
RIPENING OF FRUIT	Late
CHERRY TO GREEN BEAN OUTTURN	20%
PLANTING DENSITY	1000-2000 plants/ha (using single-stem pruning)
LEAF TIP COLOR	Green
ADDITIONAL AGRONOMIC INFORMATION	This variety is composed of two clones—S.270 and S.274—which are required to be planted together, because separate planting will reduce fruit sets.These two genotypes have recorded yields of nearly 1000 kg/ha on an average over 35 years of testing in rain-fed conditions. The planting density for this variety is 3m x 3m.

8	
ТУРЕ	Polyclonal
GENETIC DESCRIPTION	Guinea x Coffea congensis group
LINEAGE	<i>Coffea congensis</i> x <i>Coffea canephora</i> and recurrent back cross to Robusta. Selection from BC2.
BREEDER	Central Coffee Research Institute (CCRI), Coffee Board of India



Sln.2R - Balehonnur Robustas, CxR (Congensis x Robusta) Plants that are very vigorous and grow into moderately large trees and produce large beans.

vield potential 1500-3000 kg/ha		COUNTRY OF RELEASE India			CONTENTS OF MUCILAGE IN THE CHERRY	
BEAN SIZE Large (screen size >17)		coffee leaf rust <b>Unknown</b>			coffee berry disease <b>Unknown</b>	
NEMATODE Unknown		SUSCEPTIBLE COFFEE BERRY BORER <b>Unknown</b>		RESISTANT	SUSCEPTIBLE SHOOT HOLE BORER ( <i>XYLOSANDUS COMPACTUS</i> ) <b>Unknown</b>	RESISTANT
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE		RESISTANT	SUSCEPTIBLE	RESISTANT
Agronomics						
STATURE YEAR OF FIRST PRODUCTION NUTRITION REQUIREMENT RIPENING OF FRUIT CHERRY TO GREEN BEAN OUTTURN PLANTING DENSITY LEAF TIP COLOR		Unknown Unknown Unknown Unknown Unknown 1000-2000 plants/ha ( Unknown	using single-stem pruning)			
ADDITIONAL AGRONOMIC INFORMATION		However, these clones Sln.1R. This variety is —which are required t reduce fruit sets. Yield	s of Sln.2R, including yield poter s have a higher stability for A-gra composed of a mixture of three to be planted in mixtures, becau I of up to 1,500 kg/ha in wet and en managed carefully, including ng management.	ide beans tha clones—BR 9, se separate pl shaded condi	n the 10, and 11 anting will tions and	
Background						
TYPE		Polyclonal				

ТҮРЕ	Polyclonal
GENETIC DESCRIPTION	Guinea x Coffea congensis group
LINEAGE	Coffea congensis x Coffea canephora
BREEDER	Central Coffee Research Institute (CCRI), Coffee Board of India



# BP 534 -

Most commonly grown clone by farmers in Indonesia; suitable for cultivation under agroforestry systems.

YIELD POTENTIAL		COUNTRY OF RELEASE		CONTENTS OF MUCILAGE IN THE	CHERRY	
1700-2200 kg/ha		Indonesia		Average		
			A Contraction			
			The second second			
		-				
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE		
Large (screen size >17)		Resistant		Tolerant		
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	F	RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSAND	US COMPACTUS)	
Resistant		Susceptible		Unknown		
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	F	RESISTANT
Agronomics						
STATURE		Tall				

ronomics	
STATURE	Tall
YEAR OF FIRST PRODUCTION	Year 2
NUTRITION REQUIREMENT	Medium
RIPENING OF FRUIT	Average
CHERRY TO GREEN BEAN OUTTURN	21%
PLANTING DENSITY	1000-2000 plants/ha (using single-stem pruning)
LEAF TIP COLOR	Light Bronze
ADDITIONAL AGRONOMIC INFORMATION	Suitable for wet climates in areas with elevation 400–900 meters above sea level. The plant has short internodes. There is a clear white line on green cherry. This clone is susceptible to <i>Pratylenchus coffeae</i> . Must be planted together with other clones to enable fruit set.

Background

ТҮРЕ	Clone
GENETIC DESCRIPTION	Congo group
LINEAGE	Individual selection labeled 6 from a Congolensis population.
BREEDER	Indonesian Coffee and Cocoa Research Institute (ICCRI)

High productivity and high cup quality.

yield potential Medium-High kg/ha		COUNTRY OF RELEASE Nicaragua		CONTENTS OF MUCILAGE IN THE CHERRY	
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE	
Medium (screen size 15-16)		Resistant		Unknown	
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS COMPACT)	JS)
Unknown		Unknown		Unknown	
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
Agronomics					
STATURE		Not applicable			
YEAR OF FIRST PRODUCTION		Year 2			
NUTRITION REQUIREMENT		Medium			
RIPENING OF FRUIT		Unknown			
CHERRY TO GREEN BEAN OUTTURN		18-21%			
LEAF TIP COLOR		Not applicable			
ADDITIONAL AGRONOMIC INFORMATION		Plant with other clones for fruit set.			
Background					
ТҮРЕ		Clone			

GENETIC DESCRIPTION	Unknown
LINEAGE	Unknown
BREEDER	Nestlé Research

Very good cup quality and high productivity.

YIELD POTENTIAL Medium-High kg/ha		COUNTRY OF RELEASE Nicaragua		CONTENTS OF MUCILAGE IN THE CHERRY	
BEAN SIZE Small (screen size 14 or below)		coffee leaf rust Resistant		coffee berry disease <b>Unknown</b>	
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS COMPACTUS)	
Unknown		Unknown		Unknown	
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
Agronomics					
STATURE		Not applicable			
YEAR OF FIRST PRODUCTION		Year 2			
NUTRITION REQUIREMENT		Medium			
RIPENING OF FRUIT		Unknown			
CHERRY TO GREEN BEAN OUTTURN		18-21%			
LEAF TIP COLOR		Not applicable			
ADDITIONAL AGRONOMIC INFORMATION		Plant with other clones for fruit set			
Background					
ТҮРЕ		Clana			
		Clone			
CENETIC DESCRIPTION		Unknown			
GENETIC DESCRIPTION					
GENETIC DESCRIPTION LINEAGE BREEDER		Unknown Nestlé Research			

High productivity and high cup quality.

YIELD POTENTIAL Medium-High kg/ha		COUNTRY OF RELEASE Nicaragua		CONTENTS OF MUCILAGE IN THE CHERR	Y
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE	
Medium (screen size 15-16)		Resistant		Unknown	
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS COM	PACTUS)
Unknown		Unknown		Unknown	
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
Agronomics					
STATURE		Not applicable			
YEAR OF FIRST PRODUCTION		Year 2			
NUTRITION REQUIREMENT		Medium			
RIPENING OF FRUIT		Unknown			
CHERRY TO GREEN BEAN OUTTURN		18-21%			
LEAF TIP COLOR		Not applicable			
ADDITIONAL AGRONOMIC INFORMATION		Plant with other clones for fruit set.			
Background					
ТҮРЕ		Clone			

GENETIC DESCRIPTION	Unknown
LINEAGE	Unknown
BREEDER	Nestlé Research

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BREEDER

High productivity and high cup quality.

YIELD POTENTIAL		COUNTRY OF RELEASE		CONTENTS OF MUCILAGE IN THE CHERRY	
Medium-High kg/ha		Nicaragua		Unknown	
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE	
Small (screen size 14 or below)		Resistant		Unknown	
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS COMPACTUS)	
Unknown		Unknown		Unknown	
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
Agronomics					
STATURE		Not applicable			
YEAR OF FIRST PRODUCTION		Year 2			
NUTRITION REQUIREMENT		Medium			
RIPENING OF FRUIT		Unknown			
CHERRY TO GREEN BEAN OUTTURN		18-21%			
LEAF TIP COLOR		Not applicable			
ADDITIONAL AGRONOMIC INFORMATION		Plant with other clones for fruit set.			
Background					
ТҮРЕ		Clone			
GENETIC DESCRIPTION		Unknown			
LINEAGE		Unknown			

Nestlé Research



# BP 936 -

Wide adaptability to different environments, with optimal productivity in areas with wet climates; suitable for cultivation under agroforestry systems.

vield potential 1600-2200 kg/ha				CONTENTS OF MUCILAGE IN THE CHERRY	
BEAN SIZE Large (screen size >17)		COFFEE LEAF RUST Resistant		COFFEE BERRY DISEASE Tolerant	
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDU	IS COMPACTUS)
Resistant		Susceptible		Unknown	
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
Agronomics					
STATURE		Tall			

STATURE	Tall
YEAR OF FIRST PRODUCTION	Year 2
NUTRITION REQUIREMENT	Medium
RIPENING OF FRUIT	Average
CHERRY TO GREEN BEAN OUTTURN	20%
PLANTING DENSITY	1000-2000 plants/ha (using single-stem pruning)
LEAF TIP COLOR	Light Bronze
ADDITIONAL AGRONOMIC INFORMATION	The clone has wide adaptability, but optimal productivity will be achieved in wet climates areas with elevations ranging from 400–900 meters above sea level. This clone is susceptible to <i>Pratylenchus coffeae</i> . Must be planted together with other clones to enable fruit set.

ТУРЕ	Clone
GENETIC DESCRIPTION	Congo group
LINEAGE	SA 164-11 x BP 42
BREEDER	Indonesian Coffee and Cocoa Research Institute (ICCRI)



# BP 939 -

Wide adaptability to different environments that produces best in areas with dry climates; suitable for cultivation under agroforestry systems.

vield potential 1400-1900 kg/ha			CONTENTS OF MUCILAGE IN THE CHERRY Average	
		F		
BEAN SIZE Large (screen size >17)	coffee leaf rust <b>Resistant</b>		COFFEE BERRY DISEASE TOlerant	
	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
NEMATODE	COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS COM	PACTUS)
Resistant	Susceptible		Unknown	
SUSCEPTIBLE R	ESISTANT SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
Agronomics				

STATURE	Tall
YEAR OF FIRST PRODUCTION	Year 2
NUTRITION REQUIREMENT	Medium
RIPENING OF FRUIT	Average
CHERRY TO GREEN BEAN OUTTURN	21%
PLANTING DENSITY	1000-2000 plants/ha (using single-stem pruning)
LEAF TIP COLOR	Light Bronze
ADDITIONAL AGRONOMIC INFORMATION	The clone has wide adaptability but optimal productivity will be achieved in dry climate areas with altitudes ranging between 400–900 meters above sea level. This clone is susceptible to <i>Pratylenchus coffeae</i> . Must be planted together with other clones to enable fruit set.

ТҮРЕ	Clone
GENETIC DESCRIPTION	Congo group
LINEAGE	BP 42 x SA 1366
BREEDER	Indonesian Coffee and Cocoa Research Institute (ICCRI)



# SA 237

Suitable for cultivation under agroforestry systems in areas with dry climates.

YIELD POTENTIAL		COUNTRY OF RELEASE		CONTENTS OF MUCILAGE IN TH	E CHERRY
800-2100 kg/ha		Indonesia		Average	
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE	
Large (screen size >17)		Resistant		Tolerant	
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS COMPACTUS)	
Susceptible		Susceptible		Unknown	
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
Agronomics					
STATURE		Tall			
YEAR OF FIRST PRODUCTION		Year 2			
NUTRITION REQUIREMENT		Medium			
RIPENING OF FRUIT		Average			
CHERRY TO GREEN BEAN OUTTURN		Unknown			

RIPENING OF FRUIT	Average
CHERRY TO GREEN BEAN OUTTURN	Unknown
PLANTING DENSITY	1000-2000 plants/ha (using single-stem pruning)
LEAF TIP COLOR	Light Bronze
ADDITIONAL AGRONOMIC INFORMATION	This clone is suitable for cultivation in dry climate areas and will perform best in the altitude range of 400–900 meters above sea level. This clone is susceptible to <i>Pratylenchus coffeae</i> . Must be planted together with other clones to enable fruit set.

ТҮРЕ	Clone
GENETIC DESCRIPTION	Congo group
LINEAGE	The genetic composition of this clone is close to the 'R' group of robusta species.
BREEDER	Indonesian Coffee and Cocoa Research Institute (ICCRI)



# BRS 1216

Adaptable to the environments of the Western Amazon with high productivity. Plant structure suitable for mechanized harvesting. Resistant to nematodes and coffee rust.

VIELD POTENTIAL		COUNTRY OF RELEASE Brazil		CONTENTS OF MUCILAGE IN THE CHERRY	
		*		000	
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE	
Medium (screen size 15-16)		Resistant		Unknown	
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS COMPACTUS)	
Resistant		Susceptible		Unknown	
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT

### Agronomics

STATURE	Dwarf/Compact
YEAR OF FIRST PRODUCTION	Year 2
NUTRITION REQUIREMENT	High
RIPENING OF FRUIT	Average
CHERRY TO GREEN BEAN OUTTURN	25%
PLANTING DENSITY	2000-3000 plants/ha (using multiple-stem pruning)
LEAF TIP COLOR	Light Bronze
ADDITIONAL AGRONOMIC INFORMATION	High yield per hectare when established in full sun with no shade. When in an environment with low water availability in the soil, it shows generalized yellowing. Overall beverage quality score (Specialty Coffee Association) = 79 points. Flavor attributes: Chocolate, cereals, woody. Highest fruit set will occur when planted with other clones in gametophytic compatibility Groups II and III, as this variety is from Group I.

ТҮРЕ	Polyclonal
GENETIC DESCRIPTION	Guinea x Congo group
LINEAGE	Robusta 1675 x Encapa 03
BREEDER	Brazilian Agricultural Research Corporation (EMBRAPA)

# 

# Roubi 10 High productivity and high cup quality.

YIELD POTENTIAL Medium-High kg/ha	COUNTRY OF RELEASE		CONTENTS OF MUCILAGE IN THE CHERRY $Unknown$	
BEAN SIZE	COFFEE LEAF RUST		COFFEE BERRY DISEASE	
Medium (screen size 15-16)	Resistant		Unknown	
	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
NEMATODE	COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS COMPACTUS)	
Unknown	Unknown		Unknown	
SUSCEPTIBLE RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
Agronomics				
STATURE	Not applicable			

STATURE	Not applicable
YEAR OF FIRST PRODUCTION	Year 2
NUTRITION REQUIREMENT	Medium
RIPENING OF FRUIT	Unknown
CHERRY TO GREEN BEAN OUTTURN	18-21%
LEAF TIP COLOR	Not applicable
ADDITIONAL AGRONOMIC INFORMATION	Plant with other clones for fruit set.

ТҮРЕ	Clone
GENETIC DESCRIPTION	Unknown
LINEAGE	Unknown
BREEDER	Nestlé Research



Combines excellent yield and cup quality. Very high acceptance among farmers.

yield potential Medium-High kg/ha		COUNTRY OF RELEASE Mexico, The Philippines		CONTENTS OF MUCILAGE IN THE CHERRY UNKNOWN	
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE	
Medium (screen size 15-16)		Resistant		Unknown	
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS COMPACTUS)	
Unknown		Unknown		Unknown	
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
Agronomics					

STATURE	Not applicable
YEAR OF FIRST PRODUCTION	Year 2
NUTRITION REQUIREMENT	Medium
RIPENING OF FRUIT	Unknown
CHERRY TO GREEN BEAN OUTTURN	18-21%
LEAF TIP COLOR	Not applicable
ADDITIONAL AGRONOMIC INFORMATION	Plant with other clones for fruit set.

ТҮРЕ	Clone
GENETIC DESCRIPTION	Unknown
LINEAGE	Unknown
BREEDER	Nestlé Research



Combines excellent yield and cup quality. Very high acceptance among farmers.

YIELD POTENTIAL Medium-High kg/ha	COUNTRY OF RELEASE Mexico, The Philippines			CONTENTS OF MUCILAGE IN THE CHERRY UNKNOWN	
BEAN SIZE Large (screen size >17)	coffee leaf rust <b>Resistant</b>		coffee berry disease Unknown		
	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	
NEMATODE Unknown	coffee berry borer <b>Unknown</b>		shoot hole borer ( <i>xylosandus compactus</i> ) <b>Unknown</b>		
SUSCEPTIBLE RES	ISTANT SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	
Agronomics					

STATURE	Not applicable
YEAR OF FIRST PRODUCTION	Year 2
NUTRITION REQUIREMENT	Medium
RIPENING OF FRUIT	Unknown
CHERRY TO GREEN BEAN OUTTURN	18-21%
LEAF TIP COLOR	Not applicable
ADDITIONAL AGRONOMIC INFORMATION	Plant with other clones for fruit set.

ТҮРЕ	Clone
GENETIC DESCRIPTION	Unknown
LINEAGE	Unknown
BREEDER	Nestlé Research



Roubi 4 High productivity in combination with large bean size.

vield potential Medium-High kg/ha		country of release Thailand		CONTENTS OF MUCILAGE IN THE CHERRY Unknown		
BEAN SIZE Large (screen size >17)		coffee leaf rust Resistant		coffee berry disease <b>Unknown</b>		
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOS/	ANDUS COMPACTUS)	
Unknown		Unknown		Unknown		
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	
Agronomics						

STATURE	Not applicable
YEAR OF FIRST PRODUCTION	Year 2
NUTRITION REQUIREMENT	Medium
RIPENING OF FRUIT	Unknown
CHERRY TO GREEN BEAN OUTTURN	18-21%
LEAF TIP COLOR	Not applicable
ADDITIONAL AGRONOMIC INFORMATION	Plant with other clones for fruit set.

ТҮРЕ	Clone
GENETIC DESCRIPTION	Unknown
LINEAGE	Unknown
BREEDER	Nestlé Research



Roubi 5 High produtivity in combination with large bean size.

vield potential Medium-High kg/ha		COUNTRY OF RELEASE Thailand		CONTENTS OF MUCILAGE II	N THE CHERRY	
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE		
Large (screen size >17)		Resistant		Unknown		
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE		RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLO	SANDUS COMPACTUS)	
Unknown		Unknown		Unknown		
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE		RESISTANT
Agronomics						
STATURE		Not applicable				
YEAR OF FIRST PRODUCTION		Year 2				
NUTRITION REQUIREMENT		Medium				

NUTRITION REQUIREMENT	Medium
RIPENING OF FRUIT	Unknown
CHERRY TO GREEN BEAN OUTTURN	18-21%
LEAF TIP COLOR	Not applicable
ADDITIONAL AGRONOMIC INFORMATION	Plant with other clones for fruit set.

ТҮРЕ	Clone
GENETIC DESCRIPTION	Unknown
LINEAGE	Unknown
BREEDER	Nestlé Research



# BRS 2299

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Plant structure suitable for mechanized harvesting. Stands out for its tolerance to the root-knot nematode *Meloidogyne sp* 

yield potential 6600 kg/ha	COUNTRY OF RELEASE Brazil	CONTENTS OF MUCILAGE IN THE CHERRY Average
	*	
BEAN SIZE	COFFEE LEAF RUST	COFFEE BERRY DISEASE
Medium (screen size 15-16)	Resistant	Unknown
	SUSCEPTIBLE R	ESISTANT SUSCEPTIBLE RESIST.
NEMATODE	COFFEE BERRY BORER	SHOOT HOLE BORER (XYLOSANDUS COMPACTUS)
Resistant	Susceptible	Unknown
SUSCEPTIBLE RESISTANT	SUSCEPTIBLE R	ESISTANT SUSCEPTIBLE RESIST.
SUSCEPTIBLE RESISTANT	SUSCEPTIBLE R	ESISTANT SUSCEPTIBLE RESIST.
SUSCEPTIBLE RESISTANT	SUSCEPTIBLE R	ESISTANT SUSCEPTIBLE RESIST.
	SUSCEPTIBLE R	ESISTANT SUSCEPTIBLE RESIST.
Agronomics		ESISTANT SUSCEPTIBLE RESIST.
Agronomics	Dwarf/Compact	ESISTANT SUSCEPTIBLE RESIST.
Agronomics Stature Year of first production	Dwarf/Compact Year 2	ESISTANT SUSCEPTIBLE RESIST.
Agronomics Stature Year of first production NUTRITION REQUIREMENT	Dwarf/Compact Year 2 High	ESISTANT SUSCEPTIBLE RESIST.
Agronomics STATURE YEAR OF FIRST PRODUCTION NUTRITION REQUIREMENT RIPENING OF FRUIT	Dwarf/Compact Year 2 High Average	ESISTANT SUSCEPTIBLE RESIST.
Agronomics STATURE YEAR OF FIRST PRODUCTION NUTRITION REQUIREMENT RIPENING OF FRUIT CHERRY TO GREEN BEAN OUTTURN	Dwarf/Compact Year 2 High Average 25%	ESISTANT SUSCEPTIBLE RESIST.
Agronomics STATURE YEAR OF FIRST PRODUCTION NUTRITION REQUIREMENT RIPENING OF FRUIT CHERRY TO GREEN BEAN OUTTURN PLANTING DENSITY	Dwarf/Compact         Year 2         High         Average         25%         2000-3000 plants/ha (using multiple-stem pruning)	sun with no shade. It s, caused by irregular ry season. Overall 0 points. Flavor ccur when planted
Agronomics STATURE YEAR OF FIRST PRODUCTION NUTRITION REQUIREMENT RIPENING OF FRUIT CHERRY TO GREEN BEAN OUTTURN PLANTING DENSITY LEAF TIP COLOR	Dwarf/Compact         Year 2         High         Average         25%         2000-3000 plants/ha (using multiple-stem pruning)         Light Bronze         Presents high yield per hectare when established in full can present a greater unevenness in the ripening of fruit flowering in years of greater rain frequency during the d beverage quality score (Specialty Coffee Association) = 1 attributes: Neutral, cereal, herbal. Highest fruit set will o with other clones in gametophytic compatibility Groups	sun with no shade. It s, caused by irregular ry season. Overall 0 points. Flavor ccur when planted
Agronomics STATURE YEAR OF FIRST PRODUCTION NUTRITION REQUIREMENT RIPENING OF FRUIT CHERRY TO GREEN BEAN OUTTURN PLANTING DENSITY LEAF TIP COLOR ADDITIONAL AGRONOMIC INFORMATION	Dwarf/Compact         Year 2         High         Average         25%         2000-3000 plants/ha (using multiple-stem pruning)         Light Bronze         Presents high yield per hectare when established in full can present a greater unevenness in the ripening of fruit flowering in years of greater rain frequency during the d beverage quality score (Specialty Coffee Association) = 1 attributes: Neutral, cereal, herbal. Highest fruit set will o with other clones in gametophytic compatibility Groups	sun with no shade. It s, caused by irregular ry season. Overall 0 points. Flavor ccur when planted
Agronomics STATURE YEAR OF FIRST PRODUCTION NUTRITION REQUIREMENT RIPENING OF FRUIT CHERRY TO GREEN BEAN OUTTURN PLANTING DENSITY LEAF TIP COLOR ADDITIONAL AGRONOMIC INFORMATION BACkground	Dwarf/Compact         Year 2         High         Average         25%         2000-3000 plants/ha (using multiple-stem pruning)         Light Bronze         Presents high yield per hectare when established in full can present a greater unevenness in the ripening of fruit flowering in years of greater rain frequency during the d beverage quality score (Specialty Coffee Association) = in attributes: Neutral, cereal, herbal. Highest fruit set will o with other clones in gametophytic compatibility Groups variety is from Group II.	sun with no shade. It s, caused by irregular ry season. Overall 0 points. Flavor ccur when planted



# BRS 2314 High cupping scores; has been classified as a 'fine robusta.'

vield potential 6600 kg/ha		COUNTRY OF RELEASE Brazil		CONTENTS OF MUCILAGE IN THE CHERRY		
		*			0 0	
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE		
Small (screen size 14 or below)		Resistant		Unknown		
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE		RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLC	SANDUS COMPACTUS)	
Resistant		Susceptible		Unknown		
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE		RESISTANT
Agronomics						
STATURE		Dwarf/Compact				
YEAR OF FIRST PRODUCTION		Year 2				
NUTRITION REQUIREMENT		High				
RIPENING OF FRUIT		Late				
CHERRY TO GREEN BEAN OUTTURN		25%				

PLANTING DENSITY

ADDITIONAL AGRONOMIC INFORMATION

LEAF TIP COLOR

Background	
ТУРЕ	Polyclonal
GENETIC DESCRIPTION	Guinea x Congo group
LINEAGE	Robusta 640 X Encapa 03
BREEDER	Brazilian Agricultural Research Corporation (EMBRAPA)

2000-3000 plants/ha (using multiple-stem pruning)

Presents high yield per hectare under irrigation. This cultivar has received 80 points or more in all the cupping events conducted, reaching 87.2 points in one of the samples. Following the Fine Robustas Tasting Protocol developed by the Coffee Quality Institute, it has been classified as a 'Fine Robusta.'

Average beverage quality score (Specialty Coffee Association) = 80 points. Flavor attributes: chocolate, caramel, fruit. Highest fruit set will occur when planted with other clones in gametophytic compatibility Groups I and III, as

Light Bronze

this variety is from Group II.



# BRS 2336

Adaptable to the environments of the Western Amazon, with high productivity and bean size.

vield potential 7200 kg/ha		COUNTRY OF RELEASE Brazil		CONTENTS OF MUCILAGE IN THE CHERRY High		
		*			0 0	
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE		
Medium (screen size 15-16)		Resistant		Unknown		
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE		RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOS)	ANDUS COMPACTUS)	
Susceptible		Susceptible		Unknown		
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE		RESISTANT
Agronomics						

STATURE	Dwarf/Compact
YEAR OF FIRST PRODUCTION	Year 2
NUTRITION REQUIREMENT	High
RIPENING OF FRUIT	Late
CHERRY TO GREEN BEAN OUTTURN	25%
PLANTING DENSITY	2000-3000 plants/ha (using multiple-stem pruning)
LEAF TIP COLOR	Light Bronze
ADDITIONAL AGRONOMIC INFORMATION	Presents high yield per hectare when established in full sun with no shade. Resistant to water stress; however, irrigation is recommended. Leaves demonstrate the behavior of plants under water stress, even in conditions of high water availability. Beverage quality score (Specialty Coffee Association) = 75 points. Flavor attributes: sweet aftertaste, soft. Highest fruit set will occur when planted with other clones in gametophytic compatibility Groups I and III, as this variety is from Group II.

ТУРЕ	Polyclonal
GENETIC DESCRIPTION	Guinea x Congo group
LINEAGE	Unknown parents. Natural cross between conilon and robusta plants. These were selected from farmers' fields.
BREEDER	Brazilian Agricultural Research Corporation (EMBRAPA)



Compact canopy, which allows for densification. Short stems allow one additional harvest before renewal.

vield potential		country of release Brazil		CONTENTS OF MUCILAGE	IN THE CHERRY	
		*			0	
BEAN SIZE Medium (screen size 15-16)		coffee leaf rust Susceptible		coffee berry disease <b>Unknown</b>		
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE		RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYL	OSANDUS COMPACTUS)	
Susceptible		Susceptible		Unknown		
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE		RESISTANT
Agronomics						
STATURE		Dwarf/Compact				
YEAR OF FIRST PRODUCTION		Year 2				
NUTRITION REQUIREMENT		High				

Late

25%

Dark Bronze

Background

RIPENING OF FRUIT

PLANTING DENSITY

LEAF TIP COLOR

CHERRY TO GREEN BEAN OUTTURN

ADDITIONAL AGRONOMIC INFORMATION

ТҮРЕ	Polyclonal
GENETIC DESCRIPTION	Guinea x Congo group
LINEAGE	Unknown parents. Natural cross between conilon and robusta plants. These were selected from farmers' fields.
BREEDER	Brazilian Agricultural Research Corporation (EMBRAPA)

2000-3000 plants/ha (using multiple-stem pruning)

and III, as this variety is from Group II.

Presents high yield per hectare when established in full sun with no shade. It has small, narrow leaves that allow good air circulation inside its crown. It is susceptible to the root-knot nematode, and is susceptible to coffee leaf rust.

Beverage quality score (Specialty Coffee Association) = 70 points. Flavor attributes: neutral, no attributes worth highlighting. Highest fruit set will occur when planted with other clones in gametophytic compatibility Groups I



Recognized for its rusticity, presenting good vegetative and productive characteristics in dry conditions and low-fertility soils.

vield potential 6600 kg/ha		COUNTRY OF RELEASE <b>Brazil</b>		CONTENTS OF MUCILAGE IN	THE CHERRY	
		*			0	
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE		
Small (screen size 14 or below)		Tolerant		Unknown		
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE		RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOS)	ANDUS COMPACTUS)	
Tolerant		Susceptible		Unknown		
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE		RESISTANT
Agronomics						
STATURE		Dwarf/Compact				
YEAR OF FIRST PRODUCTION		Year 2				

YEAR OF FIRST PRODUCTION	Year 2
NUTRITION REQUIREMENT	Medium
RIPENING OF FRUIT	Early
CHERRY TO GREEN BEAN OUTTURN	25%
PLANTING DENSITY	2000-3000 plants/ha (using multiple-stem pruning)
LEAF TIP COLOR	Light Bronze
ADDITIONAL AGRONOMIC INFORMATION	Beverage quality score (Speciality Coffee Association) = 70 points. Flavor attributes: neutral. Highest fruit set will occur when planted with other clones in gametophytic compatibility Groups I and II, as this variety is from Group III.

ТУРЕ	Polyclonal
GENETIC DESCRIPTION	Guinea x Congo group
LINEAGE	Unknown parents. Natural cross between conilon and robusta plants. These were selected from farmers' fields.
BREEDER	Brazilian Agricultural Research Corporation (EMBRAPA)



Long primary branches. Production peak in the second or third commercial harvest due to its initial growth, which reduces the biannual production of the crop by compensating for lower yields of other clones.

vield potential 6000 kg/ha		COUNTRY OF RELEASE Brazil		CONTENTS OF MUCILAGE IN	THE CHERRY	
		*			0 0	
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE		
Small (screen size 14 or below)		Tolerant		Unknown		
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE		RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOS	ANDUS COMPACTUS)	
Tolerant		Susceptible		Unknown		
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE		RESISTANT
Agronomics						
STATURE		Dwarf/Compact				
YEAR OF FIRST PRODUCTION		Year 2				
NUTRITION REQUIREMENT		High				
RIPENING OF FRUIT		Early				

CHERRY TO GREEN BEAN OUTTURN	25%
PLANTING DENSITY	2000-3000 plants/ha (using multiple-stem pruning)
LEAF TIP COLOR	Light Bronze
ADDITIONAL AGRONOMIC INFORMATION	Recognized for having the longest length of productive branches among the genotypes studied, and for presenting with a high number of rosettes per branch. Beverage quality score (Specialty Coffee Association) = 75 points. Flavor attributes: chocolate, caramel, almond. Highest fruit set will occur when planted with other clones in gametophytic compatibility Groups I and II, as this variety is from Group III.
Background	

ТҮРЕ	Polyclonal
GENETIC DESCRIPTION	Guinea x Congo group
LINEAGE	Unknown parents. Natural cross between conilon and robusta plants. These were selected from farmers' fields.
BREEDER	Brazilian Agricultural Research Corporation (EMBRAPA)



Good adaptability and stability in the environments of the Western Amazon. Good productivity and bean size.

YIELD POTENTIAL		COUNTRY OF RELEASE		CONTENTS OF MUCILAGE IN THE CH	IERRY
7200 kg/ha		Brazil		High	
		*		0 0	0
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE	
Medium (screen size 15-16)		Resistant		Unknown	
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS	COMPACTUS)
Susceptible		Susceptible		Unknown	
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
Agronomics					
STATURE		Tall			
YEAR OF FIRST PRODUCTION		Year 2			
NUTRITION REQUIREMENT		High			
RIPENING OF FRUIT		Late			
CHERRY TO GREEN BEAN OUTTURN		25%			
PLANTING DENSITY		2000-3000 plants/ha (using mu	ltiple-stem pruning)		
LEAF TIP COLOR		Green			
ADDITIONAL AGRONOMIC INFORMATION		Resistant to water stress, however, irrigation is recommended. Even in conditions of high water availability, its leaves demonstrate the behavior of plants under water stress. Presents high yield per hectare, 120 60-kg bags. Beverage quality score (Specialty Coffee Association) = 75 points. Attributes:			

Background

ТҮРЕ	Polyclonal
GENETIC DESCRIPTION	Guinea x Congo group
LINEAGE	Unknown parents. Natural cross between conilon and robusta plants. These were selected from farmers' fields.
BREEDER	Brazilian Agricultural Research Corporation (EMBRAPA)

compatibility Groups I and II, as this variety is from Group III.

Sweet aftertaste, soft. This cultivar is established in full sun with no shade. Highest fruit set will occur when planted with other clones in gametophytic



Adaptable to the environments of the Western Amazon recognized for good productivity and bean size.

YIELD POTENTIAL		COUNTRY OF RELEASE		CONTENTS OF MUCILAGE IN THE CH	ERRY
7200 kg/ha		Brazil		High	
		*			0
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE	
Medium (screen size 15-16)		Resistant		Unknown	
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS (	COMPACTUS)
Susceptible		Susceptible		Unknown	
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
Agronomics					
STATURE		Tall			
YEAR OF FIRST PRODUCTION		Year 2			
NUTRITION REQUIREMENT		High			
RIPENING OF FRUIT		Late			
CHERRY TO GREEN BEAN OUTTURN		25%			
PLANTING DENSITY		2000-3000 plants/ha (using multipl	e-stem pruning)		
LEAF TIP COLOR		Green			
		Presents high yield per hectare whe Resistant to water stress, however, conditions of high water availability	irrigation is recommended. Ever	n in	

ADDITIONAL AGRONOMIC INFORMATION

Background

ТҮРЕ	Polyclonal
GENETIC DESCRIPTION	Guinea x Congo group
LINEAGE	Unknown parents. Natural cross between conilon and robusta plants. These were selected from farmers' fields.
BREEDER	Brazilian Agricultural Research Corporation (EMBRAPA)

plants under water stress. Beverage quality score (Specialty Coffee Association) = 75 points. Flavor atributes: sweet aftertaste, soft. Highest fruit set will occur when planted with other clones in gametophytic compatibility

Groups I and II, as this variety is from Group III.



Adaptable to the environments of the Western Amazon, recognized for good productivity and bean size.

YIELD POTENTIAL		COUNTRY OF RELEASE		CONTENTS OF MUCILAGE IN THE CHER	RRY
6600 kg/ha		Brazil		High	
		*			0
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE	
Medium (screen size 15-16)		Resistant		Unknown	
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS CO	MPACTUS)
Susceptible		Susceptible		Unknown	
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
Agronomics					
STATURE		Tall			
YEAR OF FIRST PRODUCTION		Year 2			
NUTRITION REQUIREMENT		High			
RIPENING OF FRUIT		Late			
CHERRY TO GREEN BEAN OUTTURN		25%			
PLANTING DENSITY		2000-3000 plants/ha (using multip	ble-stem pruning)		
LEAF TIP COLOR		Green			
ADDITIONAL AGRONOMIC INFORMATION		Presents high yield per hectare wh Resistant to water stress, however conditions of high water availabili plants under water stress. Beveray Association) = 75 points. Flavor at set will occur when planted with o	r, irrigation is recommended. Ever ity, its leaves demonstrate the beh ge quality score (Specialty Coffee tributes: sweet aftertaste, soft. Hij ther clones in gametophytic com	n in navior of ghest fruit	

Background

ТҮРЕ	Polyclonal
GENETIC DESCRIPTION	Guinea x Congo group
LINEAGE	Unknown parents. Natural cross between conilon and robusta plants. These were selected from farmers' fields.
BREEDER	Brazilian Agricultural Research Corporation (EMBRAPA)

Groups I and II, as this variety is from Group III.

# NARO-Kituza Robusta 1 - *KR1* Resistant to coffee wilt disease (CWD).

yield potential 2800 kg/ha		COUNTRY OF RELEASE Uganda	,	CONTENTS OF MUCILAG	E IN THE CHERRY	
BEAN SIZE Medium (screen size 15-16)		coffee leaf rust <b>Resistant</b>		coffee berry disease <b>Unknown</b>		
		SUSCEPTIBLE	RESISTAN	T SUSCEPTIBLE		RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (X	SHOOT HOLE BORER (XYLOSANDUS COMPACTUS)	
Unknown		Unknown		Unknown		
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTAN	T SUSCEPTIBLE		RESISTANT
Agronomics						
STATURE		Tall				
YEAR OF FIRST PRODUCTION		Unknown				
NUTRITION REQUIREMENT		High				
RIPENING OF FRUIT		Late				
CHERRY TO GREEN BEAN OUTTURN		20%				
PLANTING DENSITY		1000-2000 plants/ha (using	single-stem pruning)			
LEAF TIP COLOR		Green				

Background

ADDITIONAL AGRONOMIC INFORMATION

ТҮРЕ	Clone
GENETIC DESCRIPTION	Uganda group
LINEAGE	Hybrid clone of natural cross-pollination
BREEDER	National Coffee Research Institute of Uganda (NACORI)

be planted together with other clones to enable fruit set.

Resistant to wilt and red blister disease. 81 cupping score on the Specialty

Coffee Association scale. Weight of green beans is 19-22g per 100 beans. Must

# NARO-Kituza Robusta 2 - *KR2* Resistant to coffee wilt disease (CWD).

vield potential 2600 kg/ha		COUNTRY OF RELEASE		CONTENTS OF MUCILAGE IN THE CHERRY Unknown		
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE		
Medium (screen size 15-16)		Resistant		Unknown		
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS CO	MPACTUS)	
Unknown		Unknown		Unknown		
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	
Agronomics						
STATURE		Tall				
YEAR OF FIRST PRODUCTION		Unknown				
NUTRITION REQUIREMENT		High				
RIPENING OF FRUIT		Late				
CHERRY TO GREEN BEAN OUTTURN		20%				
PLANTING DENSITY		1000-2000 plants/ha (using single	-stem pruning)			
LEAF TIP COLOR		Green				
		Resistant to wilt and red blister di				

Background

ADDITIONAL AGRONOMIC INFORMATION

ТҮРЕ	Clone
GENETIC DESCRIPTION	Uganda group
LINEAGE	Hybrid clone of natural cross-pollination
BREEDER	National Coffee Research Institute of Uganda (NACORI)

Coffee Association scale. Weight of green beans is 18-22g per 100 green beans. Must be planted together with other clones to enable fruit set.

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# NARO-Kituza Robusta 3 - *KR3* Resistant to coffee wilt disease (CWD).

YIELD POTENTIAL 4900 kg/ha		COUNTRY OF RELEASE Uganda		CONTENTS OF MUCILAGE I	N THE CHERRY	
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE		
Medium (screen size 15-16)		Resistant		Unknown		
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE		RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLC	DSANDUS COMPACTUS)	
Unknown		Unknown		Unknown		
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE		RESISTANT
Agronomics						
STATURE		Tall				
YEAR OF FIRST PRODUCTION		Unknown				
NUTRITION REQUIREMENT		High				
RIPENING OF FRUIT		Late				
CHERRY TO GREEN BEAN OUTTURN		20%				
PLANTING DENSITY		1000-2000 plants/ha (using sing	gle-stem pruning)			
LEAF TIP COLOR		Green				
ADDITIONAL AGRONOMIC INFORMATION		Coffee Association scale. Weigh	disease. 78 cupping score on the Sp It of green beans is 19-22g per 100 gr Ir with other clones to enable fruit so	reen		

ТҮРЕ	Clone
GENETIC DESCRIPTION	Uganda group
LINEAGE	Hybrid clone of natural cross-pollination
BREEDER	National Coffee Research Institute of Uganda (NACORI)

RESISTANT

RESISTANT

# NARO-Kituza Robusta 4 - *KR4* Resistant to coffee wilt disease (CWD).

YIELD POTENTIAL		COUNTRY OF RELEASE		CONTENTS OF MUCILAGE IN	I THE CHERRY
2300 kg/ha		Uganda		Unknown	
		(read)			
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE	
Medium (screen size 15-16)		Resistant		Unknown	
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLO	SANDUS COMPACTUS)
Unknown		Unknown		Unknown	
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	
Agronomics					
STATURE		Tall			
YEAR OF FIRST PRODUCTION		Unknown			

STATURE	Tall
YEAR OF FIRST PRODUCTION	Unknown
NUTRITION REQUIREMENT	High
RIPENING OF FRUIT	Early
CHERRY TO GREEN BEAN OUTTURN	20%
PLANTING DENSITY	1000-2000 plants/ha (using single-stem pruning)
LEAF TIP COLOR	Green
ADDITIONAL AGRONOMIC INFORMATION	Resistant to wilt and red blister disease. 81 cupping score on the Specialty Coffee Association scale. Weight of green beans is 16g per 100 green beans. Must be planted together with other clones to enable fruit set.

## Background

ТҮРЕ	Clone
GENETIC DESCRIPTION	Uganda group
LINEAGE	Hybrid clone of natural cross-pollination
BREEDER	National Coffee Research Institute of Uganda (NACORI)

# NARO-Kituza Robusta 5 - *KR5* Resistant to coffee wilt disease (CWD).

YIELD POTENTIAL		COUNTRY OF RELEASE Uganda			CONTENTS OF MUCILAGE I	N THE CHERRY	
BEAN SIZE Medium (screen size 15-16)		COFFEE LEAF RUST Resistant			coffee berry disease <b>Unknown</b>		
		SUSCEPTIBLE	R	RESISTANT	SUSCEPTIBLE		RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS COMPACTUS)			
Unknown		Unknown			Unknown		
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	R	RESISTANT	SUSCEPTIBLE		RESISTANT
Agronomics							
STATURE		Tall					
YEAR OF FIRST PRODUCTION		Unknown					
NUTRITION REQUIREMENT		High					
RIPENING OF FRUIT		Late					
CHERRY TO GREEN BEAN OUTTURN		20%					
PLANTING DENSITY		1000-2000 plants/ha (usi	ng single-stem pruning)				
LEAF TIP COLOR		Green					

Background

ADDITIONAL AGRONOMIC INFORMATION

ТҮРЕ	Clone
GENETIC DESCRIPTION	Uganda group
LINEAGE	Hybrid clone of natural cross-pollination
BREEDER	National Coffee Research Institute of Uganda (NACORI)

Resistant to wilt and red blister disease. 76 cupping score on the Specialty

Coffee Association scale. Weight of green beans is 19-22g per 100 green beans. Must be planted together with other clones to enable fruit set.

# NARO-Kituza Robusta 6 - *KR6* Resistant to coffee wilt disease (CWD).

YIELD POTENTIAL		COUNTRY OF RELEASE Uganda		CONTENTS OF MUCILAGE IN THE CHERRY	, ,
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE	
Medium (screen size 15-16)		Resistant		Unknown	
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
NEMATODE		COFFEE BERRY BORER SHOOT HOLE BORER (XYLOSANDUS COMPACTUS)		PACTUS)	
Unknown		Unknown Unknown			
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
Agronomics					
STATURE		Tall			
YEAR OF FIRST PRODUCTION		Unknown			
NUTRITION REQUIREMENT		High			
RIPENING OF FRUIT		Late			
CHERRY TO GREEN BEAN OUTTURN		20%			
PLANTING DENSITY		1000-2000 plants/ha (using single	-stem pruning)		

ADDITIONAL AGRONOMIC INFORMATION

LEAF TIP COLOR

Background

C INFORMATION	Resistant to wilt and red blister disease. 70 cupping score on the Specialty Coffee Association scale. Weight of green beans is 19-22g per 100 green beans. Must be planted together with other clones to enable fruit set.
	Clone
	Uganda group

Green

ТҮРЕ	Clone
GENETIC DESCRIPTION	Uganda group
LINEAGE	Hybrid clone of natural cross-pollination
BREEDER	National Coffee Research Institute of Uganda (NACORI)

# NARO-Kituza Robusta 7 - *KR7* Resistant to coffee wilt disease (CWD).

vield potential		COUNTRY OF RELEASE Uganda		CONTENTS OF MUCILAGE IN THE CH	ERRY
BEAN SIZE Medium (screen size 15-16)		coffee leaf rust <b>Tolerant</b>		coffee berry disease <b>Unknown</b>	
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS (	COMPACTUS)
Unknown		Unknown		Unknown	
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
Agronomics					
STATURE		Tall			
YEAR OF FIRST PRODUCTION		Unknown			

Background
------------

NUTRITION REQUIREMENT

CHERRY TO GREEN BEAN OUTTURN

ADDITIONAL AGRONOMIC INFORMATION

RIPENING OF FRUIT

PLANTING DENSITY

LEAF TIP COLOR

ТҮРЕ	Clone
GENETIC DESCRIPTION	Uganda group
LINEAGE	Hybrid clone of natural cross-pollination
BREEDER	National Coffee Research Institute of Uganda (NACORI)

Resistant to wilt and red blister disease. 76 cupping score on the Specialty

Coffee Association scale. Weight of green beans is 19-22g per 100 green beans. Must be planted together with other clones to enable fruit set.

1000-2000 plants/ha (using single-stem pruning)

High

Late

20%

Green

# 

# NARO-Kituza Robusta 8 - *KR8* Resistant to coffee wilt disease (CWD).

vield potential 3100 kg/ha		COUNTRY OF RELEASE		CONTENTS OF MUCILAGE IN T	'HE CHERRY	
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE		
Medium (screen size 15-16)		Tolerant		Unknown		
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE		RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS COMPACTUS)		
Unknown	Unknown			Unknown		
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE		RESISTANT
Agronomics						
STATURE		Tall				
YEAR OF FIRST PRODUCTION		Unknown				
NUTRITION REQUIREMENT		High				

	•
RIPENING OF FRUIT	Early
CHERRY TO GREEN BEAN OUTTURN	20%
PLANTING DENSITY	1000-2000 plants/ha (using single-stem pruning)
LEAF TIP COLOR	Green
ADDITIONAL AGRONOMIC INFORMATION	Resistant to wilt and red blister disease. 79 cupping score on the Specialty Coffee Association scale. Weight of green beans is 19-22g per 100 green beans. Must be planted together with other clones to enable fruit set.

ТҮРЕ	Clone
GENETIC DESCRIPTION	Uganda group
LINEAGE	Hybrid clone of natural cross-pollination
BREEDER	National Coffee Research Institute of Uganda (NACORI)

# NARO-Kituza Robusta 9 - *KR*9 Resistant to coffee wilt disease (CWD).

vield potential 3900 kg/ha		COUNTRY OF RELEASE Uganda		CONTENTS OF MUCILAGE IN THE CHE $Unknown$	ERRY
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE	
Medium (screen size 15-16)		Tolerant		Unknown	
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS C	OMPACTUS)
Unknown		Unknown		Unknown	
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
Agronomics					
STATURE		Tall			
YEAR OF FIRST PRODUCTION		Unknown			

## Background

NUTRITION REQUIREMENT

CHERRY TO GREEN BEAN OUTTURN

ADDITIONAL AGRONOMIC INFORMATION

RIPENING OF FRUIT

PLANTING DENSITY

LEAF TIP COLOR

ТҮРЕ	Clone
GENETIC DESCRIPTION	Uganda group
LINEAGE	Hybrid clone of natural cross-pollination
BREEDER	National Coffee Research Institute of Uganda (NACORI)

Resistant to wilt and red blister disease. 79 cupping score on the Specialty

Coffee Association scale. Weight of green beans is 19-22g per 100 green beans. Must be planted together with other clones to enable fruit set.

1000-2000 plants/ha (using single-stem pruning)

High

Late

20%

Green

# NARO-Kituza Robusta 10 - *KR10* Resistant to coffee wilt disease (CWD).

vield potential 4800 kg/ha		COUNTRY OF RELEASE Uganda		CONTENTS OF MUCILAGE IN THE CH	ERRY
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE	
Medium (screen size 15-16)		Resistant		Unknown	
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS	COMPACTUS)
Unknown		Unknown		Unknown	
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
Agronomics					
STATURE		Tall			
YEAR OF FIRST PRODUCTION		Unknown			
NUTRITION REQUIREMENT		High			
RIPENING OF FRUIT		Late			
CHERRY TO GREEN BEAN OUTTURN		20%			
PLANTING DENSITY		1000-2000 plants/ha (using si	ingle-stem pruning)		
LEAF TIP COLOR		Green			
ADDITIONAL AGRONOMIC INFORMATION			er disease. 80 cupping score on the Sp ght of green beans is 19-22g per 100 g		

Background

ТҮРЕ	Clone
GENETIC DESCRIPTION	Uganda group
LINEAGE	Hybrid clone of natural cross-pollination
BREEDER	National Coffee Research Institute of Uganda (NACORI)

beans. Must be planted together with other clones to enable fruit set.



INIFAP 95-9 - *Clon Romex 51* Tall plant with very large fruit. Susceptible to shoot hole borer.

VIELD POTENTIAL	COUNTRY OF RELEASE Mexico		CONTENTS OF MUCILAGE IN TH		
BEAN SIZE Large (screen size >17)	coffee leaf rust <b>Tolerant</b>		coffee berry disease <b>Unknown</b>		
	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE		RESISTANT
NEMATODE	COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSAN	IDUS COMPACTUS)	
Unknown	Susceptible		Unknown		
SUSCEPTIBLE RESISTA	NT SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE		RESISTANT
Agronomics					
STATURE	Tall				
YEAR OF FIRST PRODUCTION	Year 2				
NUTRITION REQUIREMENT	Medium				
RIPENING OF FRUIT	Average				
CHERRY TO GREEN BEAN OUTTURN	Unknown/Desconocido				
PLANTING DENSITY	1000-2000 plants/ha (using single	-stem pruning)			
LEAF TIP COLOR	Green				
ADDITIONAL AGRONOMIC INFORMATION	This clone is preferred by growers Farmers coloquially refer to it as ' is reflected in good production pe borer; no rust damage has been o which does not guarantee homog detaches easily through pulping a cultivated at 700 meters above se clones to enable fruit set.	improved robusta <sup>2</sup> due to its fruit er unit area. It is susceptible to cof bserved. The multiplication is via geneity of the resulting populatior and fermentation. This clone is typ	size, which fee berry 1 seed, 1. Mucilage pically		

ТҮРЕ	Clone
GENETIC DESCRIPTION	Congo group
LINEAGE	Unknown
BREEDER	Mexican Coffee Institute (INMECAFE)/INIFAP



## INIFAP 97-14 - Clon 14

Tall growth, tendency to form plants with more than three productive stems and good yield of cherries. Very susceptible to stem borers and anthracnose.

AREASE CONTROL OF AREAS ADDOUBTION ADDOUBDED OF ADDOUBD ADDOUB	yield potential Unknown/Desconocido- kg/ha	COUNTRY OF RELEASE		CONTENTS OF MUCILAGE IN THE CH	IERRY
Netium (screen size 15-16) Tolerant Unknown     SUSCEPTIBLE RESISTART SUSCEPTIBLE RESISTART   SUSCEPTIBLE   RESISTART SUSCEPTIBLE RESISTART   SUSCEPTIBLE   RESISTART SUSCEPTIBLE RESISTART   SUSCEPTIBLE   RESISTART SUSCEPTIBLE RESISTART   SUSCEPTIBLE   RESISTART SUSCEPTIBLE RESISTART   SUSCEPTIBLE   RESISTART SUSCEPTIBLE RESISTART   SUSCEPTIBLE   RESISTART SUSCEPTIBLE RESISTART   SUSCEPTIBLE   RESISTART SUSCEPTIBLE RESISTART   SUSCEPTIBLE   RESISTART SUSCEPTIBLE RESISTART   SUSCEPTIBLE   RESISTART SUSCEPTIBLE RESISTART   SUSCEPTIBLE   RESISTART SUSCEPTIBLE RESISTART   SUSCEPTIBLE   RESISTART SUSCEPTIBLE RESISTART   SUSCEPTIBLE   RESISTART SUSCEPTIBLE RESISTART   SUSCEPTIBLE   RESISTART SUSCEPTIBLE RESISTART   SUSCEPTIBLE   RESISTART SUSCEPTIBLE RESISTART   SUSCEPTIBLE   RESISTART SUSCEPTIBLE RESISTART   SUSCEPTIBLE RESISTART SUSCEPTIBLE RESISTART SUSCEPTIBLE SUSCEPTIBLE RESISTART SUSCEPTIBLE SUSCEPTIBLE RESISTART SUSCEPTIBLE SUSCEPTIBLE RESISTART SUSCEPTIBLE RESISTART SUSCEPTIBLE SUSCEPTIBLE RESISTART SUSCEPTIBLE S			r	0 0	
SUSCEPTIBLE RESISTANT RESISTANT REPORTS RESISTANT REPO		COFFEE LEAF RUST		COFFEE BERRY DISEASE	
NEMATORE COFFEE DERRY BORER COFFEE DER COFF	Medium (screen size 15-16)	Tolerant		Unknown	
NEMATORE COFFEE DERRY BORER COFFEE DER COFF		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	PESISTANT
Unknown Susceptible Susceptible Susceptible Susceptible Susceptible Susceptible Susceptible Susceptible RESISTANT Susceptible RESISTANT Susceptible RESISTANT   Susceptible RESISTANT Susceptible RESISTANT Susceptible RESISTANT   Susceptible RESISTANT Susceptible RESISTANT RESISTANT   Susceptible Susceptible RESISTANT Susceptible RESISTANT   Susceptible Susceptible Susceptible RESISTANT RESISTANT   Susceptible Susceptible Susceptible Susceptible RESISTANT   Susceptible Susceptible Susceptible Susceptible Susceptible   Abternates high and low production years. Susceptible to stem and shoot hole Susceptible to stem and shoot hole Susceptible to stem and shoot hole Susceptible Susceptible Susceptible   Susceptible Susceptible Susceptible Susceptible Susceptible Susceptible   Susceptible Susceptible Susceptible Susceptible Susceptible Susceptible   Susceptible Susceptible Susceptible Susceptible	NEMATODE				
SUSCEPTIBLE RESISTANT RESISTANT SUSCEPTIBLE RESISTANT RESIST					Compactory
STATURE       Tall         YEAR OF FIRST PRODUCTION       Year 2         NUTRITION REQUIREMENT       High         RIPENING OF FRUIT       Very Late         CHERRY TO GREEN BEAN OUTTURN       Unknown/Desconocido         PLANTING DENSITY       1000-2000 plants/ha (using single-stem pruning)         DIDITIONAL AGRONOMIC INFORMATION       Dark Bronze         ADDITIONAL AGRONOMIC INFORMATION       Alternates high and low production years. Susceptible to stem and shoot hole borer and leaf anthracnose. The weight of its production can overwhelm the stems. Typically cultivated at 700 meters above sea level. Must be planted to gether with other clones to enable fruit set.				Susceptible	
STATURE       Tall         VEAR OF FIRST PRODUCTION       Year 2         NUTRITION REQUIREMENT       High         RIPENING OF FRUIT       Very Late         CHERRY TO GREEN BEAN OUTTURN       Unknown/Desconocido         PLANTING DENSITY       1000-2000 plants/ha (using single-stem pruning)         LEAF TIP COLOR       Dark Bronze         ADDITIONAL AGRONOMIC INFORMATION       Alternates high and low production years. Susceptible to stem and shoot hole borer and leaf anthracnose. The weight of its production can overwhelm the stems. Typically cultivated at 700 meters above sea level. Must be planted together with other clones to enable fruit set.	SUSCEPTIBLE RES	ISTANT SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
STATURE       Tall         VEAR OF FIRST PRODUCTION       Year 2         NUTRITION REQUIREMENT       High         RIPENING OF FRUIT       Very Late         CHERRY TO GREEN BEAN OUTTURN       Unknown/Desconocido         PLANTING DENSITY       1000-2000 plants/ha (using single-stem pruning)         LEAF TIP COLOR       Dark Bronze         ADDITIONAL AGRONOMIC INFORMATION       Alternates high and low production years. Susceptible to stem and shoot hole borer and leaf anthracnose. The weight of its production can overwhelm the stems. Typically cultivated at 700 meters above sea level. Must be planted together with other clones to enable fruit set.	Agronomics				
NUTRITION REQUIREMENT       High         RIPENING OF FRUIT       Very Late         CHERRY TO GREEN BEAN OUTTURN       Unknown/Desconocido         PLANTING DENSITY       1000-2000 plants/ha (using single-stem pruning)         LEAF TIP COLOR       Dark Bronze         ADDITIONAL AGRONOMIC INFORMATION       Alternates high and low production years. Susceptible to stem and shoot hole borer and leaf anthracnose. The weight of its production can overwhelm the stems. Typically cultivated at 700 meters above sea level. Must be planted to gether with other clones to enable fruit set.		Tall			
RIPENING OF FRUIT       Very Late         CHERRY TO GREEN BEAN OUTTURN       Unknown/Desconocido         PLANTING DENSITY       1000-2000 plants/ha (using single-stem pruning)         LEAF TIP COLOR       Dark Bronze         ADDITIONAL AGRONOMIC INFORMATION       Alternates high and low production years. Susceptible to stem and shoot hole borer and leaf anthracnose. The weight of its production can overwhelm the stems. Typically cultivated at 700 meters above sea level. Must be planted together with other clones to enable fruit set.	YEAR OF FIRST PRODUCTION	Year 2			
CHERRY TO GREEN BEAN OUTTURN       Unknown/Desconocido         PLANTING DENSITY       1000-2000 plants/ha (using single-stem pruning)         LEAF TIP COLOR       Dark Bronze         ADDITIONAL AGRONOMIC INFORMATION       Alternates high and low production years. Susceptible to stem and shoot hole borer and leaf anthracnose. The weight of its production can overwhelm the stems. Typically cultivated at 700 meters above sea level. Must be planted together with other clones to enable fruit set.	NUTRITION REQUIREMENT	High			
PLANTING DENSITY       1000-2000 plants/ha (using single-stem pruning)         LEAF TIP COLOR       Dark Bronze         ADDITIONAL AGRONOMIC INFORMATION       Alternates high and low production years. Susceptible to stem and shoot hole borer and leaf anthracnose. The weight of its production can overwhelm the stems. Typically cultivated at 700 meters above sea level. Must be planted together with other clones to enable fruit set.         Background       Hernates in the stems of the stem stems in the stem stem stem stem stems in the stem stem stem stem stems in the stem stem stem stem stem stem stems in the stem stem stem stem stem stem stem ste	RIPENING OF FRUIT	Very Late			
LEAF TIP COLOR       Dark Bronze         ADDITIONAL AGRONOMIC INFORMATION       Alternates high and low production years. Susceptible to stem and shoot hole borer and leaf anthracnose. The weight of its production can overwhelm the stems. Typically cultivated at 700 meters above sea level. Must be planted together with other clones to enable fruit set.         Background       Image: Color of the stem stems in the stemstema in the stems in the stemstema in the st	CHERRY TO GREEN BEAN OUTTURN	Unknown/Desconocido			
ADDITIONAL AGRONOMIC INFORMATION ADDITIONAL AGRONOMIC INFORMATION ALTIONAL AGRONOMIC INFORMATION Alternates high and low production years. Susceptible to stem and shoot hole borer and leaf anthracnose. The weight of its production can overwhelm the stems. Typically cultivated at 700 meters above sea level. Must be planted together with other clones to enable fruit set. Background	PLANTING DENSITY	1000-2000 plants/ha (using single-	stem pruning)		
ADDITIONAL AGRONOMIC INFORMATION       borer and leaf anthracnose. The weight of its production can overwhelm the stems. Typically cultivated at 700 meters above sea level. Must be planted together with other clones to enable fruit set.         Background	LEAF TIP COLOR	Dark Bronze			
	ADDITIONAL AGRONOMIC INFORMATION	borer and leaf anthracnose. The ways stems. Typically cultivated at 700 n	eight of its production can overv neters above sea level. Must be p	vhelm the	
	Background				
		Clone			

ТҮРЕ	Clone	
GENETIC DESCRIPTION	Congo group	
LINEAGE	Unknown	
BREEDER	Centre de Recherche Nestlé/INIFAP	



## INIFAP 97-15 - Clon 15

Tall growth, tendency to form plants with more than three productive stems. Good yield potential, wide range of adaptation to the climatic conditions of the coast of Chiapas and Veracruz, Mexico.

YIELD POTENTIAL		COUNTRY OF RELEASE		CONTENTS OF MUCILAGE IN THE CH	ERRY
Unknown/Desconocido- kg/ha		Mexico		Low	
			•	00	
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE	
Medium (screen size 15-16)		Unknown		Unknown	
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS	COMPACTUS)
Unknown		Susceptible		Susceptible	
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
Agronomics					
STATURE		Tall			

STATURE	Tall
YEAR OF FIRST PRODUCTION	Year 2
NUTRITION REQUIREMENT	Medium
RIPENING OF FRUIT	Average
CHERRY TO GREEN BEAN OUTTURN	Unknown/Desconocido
PLANTING DENSITY	1000-2000 plants/ha (using single-stem pruning)
LEAF TIP COLOR	Dark Bronze
ADDITIONAL AGRONOMIC INFORMATION	Susceptible to coffee leaf rust, anthracnose, and coffee thread blight. However, it offers a good range of adaptation to different environments. Typically cultivated at 700 meters above sea level. Must be planted together with other clones to enable fruit set.

Ū.	
ТҮРЕ	Clone
GENETIC DESCRIPTION	Guinea group
LINEAGE	Unknown
BREEDER	Centre de Recherche Nestlé/INIFAP



## INIFAP 00-24 - Clon 24

Compact plant grown under the conditions of the Chiapas coast in Mexico. Reduced plant size lends itself to higher yields in dry conditions and differentiates it from any other clone.

YIELD POTENTIAL		COUNTRY OF RELEASE		CONTENTS OF MUCILAGE IN THE CHERI	RY
Unknown/Desconocido- kg/ha		Mexico		Low	
			•	0 0	
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE	
Medium (screen size 15-16)		Tolerant		Unknown	
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS COM	IPACTUS)
Unknown		Susceptible		Susceptible	
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
Agronomics					
STATURE		Dwarf/Compact			
YEAR OF FIRST PRODUCTION		Year 2			
NUTRITION REQUIREMENT					

NUTRITION REQUIREMENT	High
RIPENING OF FRUIT	Average
CHERRY TO GREEN BEAN OUTTURN	Unknown/Desconocido
PLANTING DENSITY	1000-2000 plants/ha (using single-stem pruning)
LEAF TIP COLOR	Light Bronze
ADDITIONAL AGRONOMIC INFORMATION	Has the tendency to produce more than three productive stems per plant with heavy fruit load. Combined with typical multiplication by rooted cuttings, it means the plant may need to be staked. However, this typically does not become a problem and rather facilitates the harvest. Usually cultivated at 700 meters above sea level. Must be planted together with other clones to enable fruit set.

ТҮРЕ	Clone
GENETIC DESCRIPTION	Guinea group
LINEAGE	Unknown
BREEDER	Nestlé Research/Instituto Nacional de Investigaciones Forestales Agricolas y Pecuarias



BREEDER

## INIFAP 00-28 - Clon 28

Tall plants with large and numerous leaves and fruits; highest-yielding clone for the conditions of the coast of Chiapas, Mexico.

YIELD POTENTIAL	COUNTRY OF RELEASE		CONTENTS OF MUCILAGE IN THE C	HERRY
Unknown/Desconocido- kg/ha	Mexico		Low	
			0	
BEAN SIZE	COFFEE LEAF RUST		COFFEE BERRY DISEASE	
Medium (screen size 15-16)	Tolerant		Unknown	
	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
NEMATODE	COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS	S COMPACTUS)
Unknown	Susceptible		Susceptible	
SUSCEPTIBLE RI	ESISTANT SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
Agronomics				
STATURE	Tall			
YEAR OF FIRST PRODUCTION	Year 2			
NUTRITION REQUIREMENT	High			
RIPENING OF FRUIT	Late			
CHERRY TO GREEN BEAN OUTTURN	Unknown/Desconocido			
PLANTING DENSITY	1000-2000 plants/ha (using sir	ngle-stem pruning)		
LEAF TIP COLOR	Green			
ADDITIONAL AGRONOMIC INFORMATION	with 1 or 2 productive stems. S coffee berry disease (CBD). Ty	nany shoots and, normally, the plant is Susceptible to stem and shoot hole bore pically cultivated at 700 meters above s other clones to enable fruit set.	er and	
Background				
ТҮРЕ	Clone			
GENETIC DESCRIPTION	Congo group			
LINEAGE	Unknown			

Nestlé Research/Instituto Nacional de Investigaciones Forestales Agricolas y

Pecuarias (INIFAP)



# Xanh lun - *TS5* Compact, very high yield. High-quality, relative drought tolerance, late to ripen.

vield potential 5000-6000 kg/ha		country of release Vietnam		contents of mucilage	IN THE CHERRY	
		3			0 0	
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE		
Large (screen size >17)		Tolerant		Unknown		
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE		RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYL	OSANDUS COMPACTUS)	
Unknown		Unknown		Unknown		
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE		RESISTANT

## Agronomics

STATURE	Dwarf/Compact
YEAR OF FIRST PRODUCTION	Year 2
NUTRITION REQUIREMENT	High
RIPENING OF FRUIT	Late
CHERRY TO GREEN BEAN OUTTURN	23%
PLANTING DENSITY	1000-2000 plants/ha (using single-stem pruning)
LEAF TIP COLOR	Light Bronze
ADDITIONAL AGRONOMIC INFORMATION	Relatively drought tolerant. Presents low secondary branching in some regions. The optimal altitude for production is around 500-800 meters above sea level. Must be planted together with other clones to enable fruit set.

ТҮРЕ	Clone
GENETIC DESCRIPTION	Congo group
LINEAGE	Selection of mother tree from open-pollinated population in cultivation, vegetative multiplication by grafting
BREEDER	Farmer selected, approved by Western Highlands Agroforestry Science Institute (WASI)



# TR4

High yield and wide adaptation to different environments.

vield potential 5000-7000 kg/ha		country of release Vietnam		CONTENTS OF MUCILAGE IN THE CHERRY
		3		
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE
Medium (screen size 15-16)		Tolerant		Unknown
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS COMPACTUS)
Unknown		Unknown		Unknown
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE RESISTANT

## Agronomics

STATURE	Dwarf/Compact
YEAR OF FIRST PRODUCTION	Year 2
NUTRITION REQUIREMENT	High
RIPENING OF FRUIT	Average
CHERRY TO GREEN BEAN OUTTURN	24%
PLANTING DENSITY	1000-2000 plants/ha (using single-stem pruning)
LEAF TIP COLOR	Green
ADDITIONAL AGRONOMIC INFORMATION	High and stable yield and quality. Strong secondary branching. The optimal altitude for production is around 500–800 meters above sea level. Must be planted together with other clones to enable fruit set.

ТҮРЕ	Clone
GENETIC DESCRIPTION	Congo group
LINEAGE	Selection of mother tree from open-pollinated population in cultivation, vegetative multiplication by grafting
BREEDER	Western Highlands Agroforestry Science Institute (WASI)



# TR9

Very high yield and cup quality, large bean size.

vield potential 5000-6000 kg/ha		country of release Vietnam		CONTENTS OF MUCILAR	SE IN THE CHERRY	
		3			0	
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEAS	:	
Large (screen size >17)		Tolerant		Unknown		
		SUSCEPTIBLE	RESISTA	IT SUSCEPTIBLE		RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (A	YLOSANDUS COMPACTUS)	
Unknown		Unknown		Unknown		
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTA	IT SUSCEPTIBLE		RESISTANT

## Agronomics

STATURE	Dwarf/Compact
YEAR OF FIRST PRODUCTION	Year 2
NUTRITION REQUIREMENT	High
RIPENING OF FRUIT	Late
CHERRY TO GREEN BEAN OUTTURN	23%
PLANTING DENSITY	1000-2000 plants/ha (using single-stem pruning)
LEAF TIP COLOR	Dark Bronze
ADDITIONAL AGRONOMIC INFORMATION	Resistant to coffee leaf rust and high cup quality. The optimal altitude for production is around 500–800 meters above sea level. Must be planted together with other clones to enable fruit set.

ТҮРЕ	Clone
GENETIC DESCRIPTION	Congo group
LINEAGE	Selection of mother tree from open-pollinated population in cultivation, vegetative multiplication by grafting
BREEDER	Western Highlands Agroforestry Science Institute (WASI)

# **TR11**

Very high yield and quality. Strong growth.

vield potential 5000-6000 kg/ha		COUNTRY OF RELEASE		CONTENTS OF MUCILAGE IN THE CHERRY	
		3			
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE	
Medium (screen size 15-16)		Tolerant		Unknown	
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
NEMATODE		COFFEE BERRY BORER		SHOOT HOLE BORER (XYLOSANDUS COMPACTUS)	
Unknown		Unknown		Unknown	
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT

## Agronomics

STATURE	Tall
YEAR OF FIRST PRODUCTION	Year 2
NUTRITION REQUIREMENT	High
RIPENING OF FRUIT	Late
CHERRY TO GREEN BEAN OUTTURN	24%
PLANTING DENSITY	1000-2000 plants/ha (using single-stem pruning)
LEAF TIP COLOR	Green
ADDITIONAL AGRONOMIC INFORMATION	Resistant to coffee leaf rust and high cup quality. The optimal altitude for production is around 500–800 meters above sea level. Must be planted together with other clones to enable fruit set.

ТҮРЕ	Clone
GENETIC DESCRIPTION	Congo group
LINEAGE	Selection of mother tree from open-pollinated population in cultivation, vegetative multiplication by grafting
BREEDER	Western Highlands Agroforestry Science Institute (WASI)



PLANTING DENSITY

ADDITIONAL AGRONOMIC INFORMATION

## TRS1

Wide adaptation to different environments; average input requirements.

vield potential 4000-5000 kg/ha		country of release Vietnam		CONTENTS OF MUCILAGE IN THE CHERRY Average	
		3		0	DO
BEAN SIZE		COFFEE LEAF RUST		COFFEE BERRY DISEASE	
Medium (screen size 15-16)		Tolerant		Unknown	
		SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
NEMATODE		COFFEE BERRY BORER SHOOT HOLE BORER ( <i>XYLOSANDUS COMPACTUS</i> )		US COMPACTUS)	
Unknown		Unknown		Unknown	
SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT	SUSCEPTIBLE	RESISTANT
Agronomics					
STATURE		Dwarf/Compact			
YEAR OF FIRST PRODUCTION		Year 3			
NUTRITION REQUIREMENT		Medium			
RIPENING OF FRUIT		Average			
CHERRY TO GREEN BEAN OUTTURN		22%			

	by farmers. Optimal altitude for production is around 400–900 meters above sea level.		
Background			
ТҮРЕ	Polyclonal		
GENETIC DESCRIPTION	Congo group		
LINEAGE	Parent clones: TR4, TR9, TR11, TR12		
BREEDER	Western Highlands Agroforestry Science Institute (WASI)		

Because this plant is a polyclonal/synthetic variety (i.e., is composed of a combination of multiple unique types), plants will exhibit growth differences.

Easy multiplication by seed. Good adaptation. Variety most commonly used

1000-2000 plants/ha (using single-stem pruning)

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