

FERTILIZERS
Market is expected
to maintain a positive
outlook in 2020

**INDIA INVESTS
US\$6 BILLION IN BRAZIL**
Interview with the Consul
General of India in Brazil,
Amit Kumar Mishra

**HIGHEST LEVEL OF
DEVELOPMENT**
Soybean yield is at the
same level as in the USA

SOYBEAN ASIAN RUST
Claudia Godoy, Embrapa
researcher, says:
"The disease has been
disappearing from crops"



Inside Agribusiness

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“Brazilian agribusiness has grown at Chinese rates”



The current scenario in Brazil is intensely influenced by economic and political factors that generate pressures on the economy and impacts the country as a whole. The year of 2020 points to high volatility, affecting several sectors and areas such as the consequent increase in the levels of informal jobs and the lack of investments.

AgriBrasilis invited an authority in the financial sector to discuss the

theme. Sylvia Brasil Coutinho is an agronomist graduated from the 'Luiz de Queiroz' College of Agriculture at the University of São Paulo, where she also did postgraduate studies. She also has an MBA from Columbia University in New York (USA).

She has been president of the UBS Group in Brazil, one of the largest banks in the world and a leader in Latin America, since 2013 UBS Bank is considered the largest global wealth

manager, headquartered in Zurich, Switzerland. Its foundation dates from July 1998, as a result of the merger of Union de Banques Suisses with Société de Banque Suisse.

Sylvia Brasil gave AgriBrasilis an interview where she spoke about the importance and perspectives of agribusiness in the country.

What is the level of Brazilian agribusiness today?

巴西，不可阻挡的经济体

巴西当前的局势严重地受到经济和政治因素的影响，这些因素对经济造成了压力，并影响着整个国家。2020年将是高波动性的一年，这影响到多个行业和领域，例如随之而来的失业率的增加，以及投资的缺乏。

AgriBrasilis邀请了金融行业的权威人士来讨论该主题。Sylvia Brasil Coutinho，是位农学家，本科毕业于圣保罗大学'Luiz de Queiroz'农学院，并在该大学攻读研究生。此外，她还获得了美国纽约哥

伦比亚大学的工商管理硕士学位。

自2013年以来，她一直担任巴西瑞银集团(UBS)总裁。该集团是全球最大的银行之一，也是拉丁美洲的引领者。瑞银银行(UBS)，总部位于瑞士苏黎世，被认为是全球最大的财富管理公司，它成立于1998年7月，是瑞士联合银行与瑞士银行合并的产物。

Sylvia Brasil 接受了 AgriBrasilis 的采访，并谈了农业企业在巴西的重要性和前景。

巴西的农业企业目前处于怎样的水准？

农业企业现在是，将来也是巴西经济的重要部分。农业企业受益于近期的货币贬值，但是和上一年相比，2019年的出口收入较低。

尽管有竞争优势，除了“巴西成本”，由于与之相关的物流效率低下和电信设施的落后，农业企业的发展严重受阻。

即使遭受了最后的经济“萧条”期，农业企业仍以“中国的速度”增长，这改变了巴西在国内创造财富的轴心。

Agribusiness continues and will continue to be very important for the Brazilian economy. The branch benefited from the devaluation of the real currency in recent times, but presented a lower revenue from exports in 2019, when compared to the previous year.

Despite competitiveness, the sector suffers the most in proportion to the inefficiencies linked to logistics and telecommunications infrastructure, in addition to the “Brazil cost”.

Even during the last period of economic “depression” that we suffered, agribusiness continued to grow at Chinese rates, which changed the axis of wealth generation for the interior of Brazil.

What is the main role of banks, especially UBS, in this scenario?

Agribusiness is a capital-intensive sector. Thus, banks can operate on several fronts, providing producers and companies different types of credit, facilitating producers’ access to capital through structuring and issuing debts, stock offers and other products.

With lowest interest rates at the historical level that they are today, I see a turning point in the Brazilian capital market, in which agribusiness and other sectors are expected to enter

strong financing.

UBS can also act by advising and negotiating possible merger and acquisition movements through its Investment Bank teams and a global Research team. And for families that own agribusiness, the bank provides complete Family Office advice, investment advice and equity structuring, both locally and globally.

How have financial operations in Brazilian agribusiness been going? Has this economy grown in recent years?

In agribusiness, the sugar and ethanol industry has suffered from

its results, manifested by a number of companies undergoing judicial recovery. Although a few figures stand out in their operations, sugar cane mills and farmers have great scope for improving productivity (in the field as well as in the industry), in the processing and management of their enterprises.

Since the 2000s, agribusiness has seen its exports increase at a rapid pace. However, after the end of the commodity boom in 2011, the export revenue stabilized.

With the current possible economic recovery, the matter is how the segment will look in a local and global economy in transition. Still, if there is one area in which we are competitive, this is food production, and it would also include biofuels and renewable energies.

Economically, what can be expected for the near future?

After a severe crisis between 2014 and 2016, and a period of great uncertainty during 2018, 2019 showed a beginning of recovery for the economy.

A more accelerated step is expected in 2020, led mainly by investments. During this period, we should see greater stability for the real currency and for inflation.

“ exports
increased at
a rapid pace
”

在这种情况下，银行尤其是瑞银银行（UBS）扮演的主要角色是什么？

农业企业是资金密集型企。因此，银行可以在多个方面开展业务，为生产者和企业提供不同类型的信贷，比如通过结构化和发行债券、股票以及供应其他产品，为生产者提供资金。

目前的利率为史上最低，从这来看，我认为巴西的资本市场会出现一个转折点，农业企业和其他企业将会获得强有力的融资。

瑞银银行（UBS）还可以通过它的投资银行团队和全球研究团队对可能的并购提供咨询和交涉场所。对于运营农业企业的家庭，银行在当地和全球提供完整的“家庭咨询办公室”，投资建议和股权结构信息。

巴西农业企业的经济运作好不好？在近几年农业经济有所发展吗？

在农业企业中，因一些企业正历经司法恢复，糖和乙醇行业受到了影响。尽管甘蔗制糖厂和农民在经营中脱颖而出，

但在企业的加工和管理上，甘蔗制糖厂和农民（不管在田间还是企业中）仍需极大地提高生产效率。

自2000年以来，农业企业的出口迅速增长。然而，在2011年农贸高峰后，出口收入下降并稳定下来。

随着当前经济复苏的可能，农业企业在转型中的关键是它在当地经济和全球经济上会发展到什么地位。不过，若要说我们具备哪一领域的优势，那便是粮食生产，其中还包括生物燃料和可再生能源的生产。

Real (Brazilian currency) interest rates are already close to zero, pulling hard on credit, especially private ones. New loans via financial system (banks only) grow in double digits. Externally, the coronavirus ends up pushing commodity prices down.

UBS has revised China’s growth this year from 6% to 5.5%. The effect may be temporary, but as long as the health problem does not stabilize, risks are still significant for growth.

What is the recommendation

for foreigners about Brazilian agribusiness?

In general, our agribusiness has numerous opportunities, as it is a sector of tremendous competitive advantage, not only because of its natural characteristics, but also because it has developed, over decades, vast knowledge and production technologies in tropical soils.

On the other hand, these advantages are diminished by the negative impact of inefficiencies and bottlenecks, as in the areas of infrastructure, and by the

famous “Brazil cost”.

Investments in the country fell with the recent economic crisis and, therefore, opportunities and demands for a recovery in all sectors are not lacking.

If we do our homework, which includes staying on the reform agenda as well as improving our perception of the environment and the Amazon region, Brazil can become one of the most attractive emerging markets for investment and the preferred choice of foreign investors.

Sylvia Brasil Coutinho,
CEO of UBS Bank in Brazil

Sylvia Brasil Coutinho,
巴西瑞银银行（UBS）首席执行官



从经济的层面看，不久的将来会发生什么？

历经2014-2016严重的经济危机和2018年的迷茫期后，2019年经济开始复苏。

有了投资的主要支持，2020年的经济发展步伐将会加快。在此期间，我们应该会看到货币和通货膨胀更具稳定性。

实际（巴西货币）利率早已接近于零，这沉重打击了信贷尤其是私人信贷。通过金融系统（仅限银行）的新贷款现在以两位数在增长。但在外部因素下，冠状病毒导致了商品价

格的下跌。

瑞银银行（UBS）把中国今年的经济增长指数从6%改为5.5%，虽然影响可能是暂时的，但是如果疫情无法稳定，发展的风险依然存在。

关于巴西的农业企业，您有什么建议给外国投资者？

总的来说，我们的农业企业有许多发展的机会，因为它极具竞争优势，这不仅是因为它的自然特征，还因为它在热带土壤上发展了几十年，因此拥

有大量的知识和生产技术。

另一方面，由于效率低下和发展瓶颈（如基础设施落后），以及著名的“巴西成本”，这些优势的发挥不能最大化。

国内投资随着近期的经济危机而减少，因此，各行各业都力争和要求恢复发展。

如果我们做好功课，包括坚持改革议程，以及提升我们对环境和亚马逊地区的洞察力，巴西会成为最吸引眼球的新兴投资市场之一，也会是外国投资者的首选。

“There is a new revolution taking place in the field”

Interview with the CEO of SLC Agrícola, Aurélio Pavinato

Founded in 1977 as one of the first in the agricultural sector to have shares traded on the Stock Exchange in the world, SLC Agrícola is a reference and one of the largest world producers of grains and fibers, its focus being soy, corn and cotton.

In addition to pioneering the development of agriculture in the Brazilian Cerrado region, the group has a history in agribusiness which resulted in the largest machinery factory in Latin America, a business that was sold to the American John Deere in 1999.

The company has 16 production units in six Brazilian states. Intentional geographic diversification minimizes potential regional climate risks and the incidence of pests and diseases.

The total area of the units has 457,500 ha, with 234,149 ha of soybeans, 123,721 ha of cotton, 88,918 ha of corn and 1,912 ha in other crops.

SLC Agrícola is one of the few Brazilian companies that use the joint

venture strategy, a strategy based on an economic association between two (or more) firms in order to gather its resources to perform a specific task. In this case, strategic alliances are formed for the production of large-scale crops.

CEO of SLC since 2012, Aurélio Pavinato has a degree in Agronomy from the Federal University of Santa Maria and master's degree in Soil

Sciences from the Federal University of Rio Grande do Sul.

Pavinato talked to **AgriBrasilis** about being part of the Brazilian agribusiness giants, the performance of the company that is a leader in commodities.

What are the advantages and disadvantages of producing in Brazil? What aspects could be improved?

The Brazilian agricultural sector has grown rapidly in recent decades, mainly through increased productivity, but also through expansion and consolidation of new agricultural frontiers.

Brazil has vast tracts of arable land, with flat topography, abundance of rain and sunshine, and stable temperatures throughout the year in most regions. They are ideal conditions for the development of highly competitive agriculture.

The main aspect that has a high



Aurélio Pavinato, CEO of SLC Agrícola
SLC Agrícola 首席执行官, Aurélio Pavinato

“这个领域正在发生一场新的革命”

SLC Agrícola 成立于 1977 年，是世界上首批在证券交易所上市的农业企业之一，是全球最大的谷物和纤维生产商之一，其业务主要涉及大豆、玉米和棉花。

除了在西拉朵（Cerrado）地区开拓农垦外，该集团在农业产业化业务方面有着悠久的历史，并最终建立了拉丁美洲最大的机械工厂，该业务于 1999 年被出售给美国迪尔公司

（John Deere）。

SLC Agrícola公司在巴西的六个州拥有16个生产单位。特别的地理环境多样化将潜在的区域气候风险和病虫害的发病率降至最低。

16个生产单位总面积达45.75万公顷，其中大豆23.4149万公顷，棉花12.3721万公顷，玉米8.8918万公顷，其他作物1912公顷。

SLC Agrícola 是为数不多

的使用合资经营战略的巴西公司之一，该战略基于两个（或多个）公司之间的合作关系，以便统筹其资源来开展特定项目。在本文的案例中，战略联盟的建立则是为了大规模作物的生产。

自 2012 年起担任 SLC 的首席执行官。他拥有圣玛丽亚联邦大学（UFMS）的农学学位和南里奥格兰德州联邦大学（UFRGS）的土壤科学硕士学位

potential for improvement is the infrastructure. The country still depends heavily on the road modal, which is more expensive and deprives competitiveness compared to other nations that invested in railways and waterways.

In addition, the agricultural insurance policy can be better developed. The United States, for instance, guarantees a far more stability to producers, with the distribution of risk among financial agents who have a greater capacity to absorb such risks.

How the areas of technological innovation development in your company reflected in the situation in Brazil?

We can say that we are at the highest level of development in terms of using agricultural technology on a large scale.

Soybean yield in Brazil is at the same level as that achieved in the United States, and in the case of SLC Agrícola, we already have an advantage of more than 10% when compared to the average in efficiency, besides having lower costs per hectare.

[Such condition] reflects the gains in scale, but also modernization. There

is a new revolution taking place in the field, and we are leading the adoption of technologies.

In addition, we have been investing for some years in training our team to make the best use of all the new resources available.

Our innovation ambition is to be early adopters of technologies that enable gains in efficiency. As such, we created two programs that reflect efforts in this direction: AgroExponencial, which makes our connection with startups, and Ideas & Results, which promotes intrapreneurship. The objective is to map internal challenges and seek solutions in the most agile way possible, guided by the principle of open innovation.

Should Brazilian agriculture be recommended to foreigners?

“SLC Agrícola has an advantage of more than 10% when compared to the average in efficiency ”

Agribusiness has been the main engine of the Brazilian economy in recent years due to the excellent geographical and human conditions for production in the country.

The growth opportunities are still huge. It is natural that the area continues to attract many investments. And if there is a sector worth investing in in Brazil, it is agriculture.

Given that we are one of the world's largest soy exporters, how has SLC Agrícola contributed to this?

The history of the success of soybean in Brazil is intertwined with that of the development of the Brazilian Cerrado as well as that of our company. SLC Agrícola was one of the pioneers in the development of this agricultural frontier.

Our way of operating is a world benchmark in scale cultivation. The business model is based on a modern production system, with standardization of production units, world-class technology, strict cost control and social-environmental responsibility.

We believe that doing more with less is the true path to sustainability, and we publicize our practices,

位。

Pavinato先生向AgriBrasilis谈到了，作为巴西农业产业巨头的一员，本公司在大宗作物生产领域公司中的表现处于领先地位。

巴西的生产有哪些优点和缺点？有哪些方面可以改进？

近几十年来，巴西农业部门，主要是通过提高生产力，但同时也通过扩大和巩固新的农业领域获得迅速发展。

巴西拥有大片可耕地，地形平坦，雨水和阳光充足，大部分地区全年气温稳定。这些是发展优势农业的理想条件。

具有巨大改进潜力的方面主要是基础设施。巴西目前依然严重依赖公路运输模式。与致力于投资铁路和水路的其他国家相比，公路模式成本更高，并削弱了竞争力。

此外，还可以更好地发展农业保险政策。例如，美国为保证生产者的财务稳定，将风险分散给有能力承担并吸收风险的金融机构。

结合巴西的情况，贵公司在技术创新领域如何发展？

可以说，在大规模利用农业技术方面，我们处于领先水平。

巴西的大豆产量与美国的大豆产量相同；SLC Agrícola的大豆生产水平，除了每公顷成本较低外，我们拥有10%以上的效率优势。

这反映了规模效应，同时也反映了农业现代化。这一领域正在发生一场新的革命，我们正在引领技术的普及。此外，多年来，我们一直在培养我们的团队，以充分利用所有可用的新资源。

我们的创新目标是成为能够成为增效科技的早期实践者。对此，我们创建了两个方案，反映出我们为实现该目标所作出的努力：AgroExponencial，

contributing to the improvement of agriculture in the country.

One of the main limitations of competitiveness regarding soybeans are logistics, which have not kept pace with the development of the sector. Income protection policies are also considered an obstacle, especially in regards to agricultural insurance, which could be much broader than it is.

Could you explain more about SLC Agrícola's differentiated business model?

Regarding land ownership, the company has been migrating to a model that we call asset light. In such a way that 50% of the currently planted area comes from lease agreements or joint ventures.

The joint ventures were an alternative for the growth of the planted area without the need to acquire the land. Therefore, it is similar

to leases.

We have two strategic unions, one with Grupo Roncador, which owns one of the largest farms in the country in the state of Mato Grosso, and another with the Japanese multinational Mitsui, which also owns several lands, mainly in the state of Bahia.



它使我们与初创公司建立联系；Ideas & Results，促进内部创新。这些努力的目标是在开放创新原则的指导下，以尽可能灵活的方式规划内部挑战并寻求解决方案。

是否会向外国人推荐投资巴西农业？

近年来，由于巴西良好的地理和人文条件，农业产业一直是巴西经济的主要引擎。

农业的增长机会仍然很巨大。这个地区能继续吸引大量投资，这是很自然的。如果说在巴西有一个值得投资的行业，就是农业。

鉴于我们是世界上最大的大豆出口国之一，SLC Agrícola做出怎样的贡献？

巴西大豆的成功史与Cer-

rado的发展以及我们公司的成长历史是彼此交织在一起的。SLC Agrícola 是发展这种前沿农业的先驱之一。

我们的经营方式是规模种植的世界标杆。商业模式以现代化的生产体系为基础，综合了具有标准化的生产单位、世界一流的技术、严格的成本控制和社会环境责任。

我们认为，多快好省是实现可持续发展的真正途径，我们宣传我们的做法，为改善这个国家的农业作出贡献。

削弱大豆竞争力的主要因素之一是物流，因为物流跟不上农业部门的发展。收入保护政策也被认为是一个障碍，特别是在农业保险方面，因为农业保险的运用可能比现在要广泛得多。

您能介绍更多关于 SLC Agrícola的差异化业务模式吗？

在土地所有权方面，公司已经转移到一种被我们称之为“资产之光”的模式。在这种模式下，目前50%的种植面积来自租赁协议或合资企业。

合资企业是一种无需取得土地即可扩大种植面积的替代方案。因此，它类似于租约。

我们有两个战略同盟，一个是Roncador集团，拥有巴西马托格罗索州 (State of Mato Grosso) 最大的农场之一；另一个日本跨国集团Mitsui，后者也拥有几处土地，主要在巴伊亚州 (State of Bahia)。

在这些合资企业中，由SLC 管理运营，利润和必要投入由我们公司和上述合作伙伴 (Roncador 和Mitsui) 分担。SLC 收取管理费，这是将我们在该行业的专业知识货币化的一种方式。

Asian Rust: Management strategies reduce losses

Interview with the researcher at Embrapa, Cláudia Godoy

Asian rust, caused by the biological agent *Phakopsora pachyrhizi*, has disturbed Brazilian fields for years. However, at the 2019/2020 harvest, the phenomenon has a lower incidence today due to intense work and investment in the country, as explained by Dr. Cláudia Vieira Godoy, agronomist and doctor in phytopathology and researcher at Embrapa Soja, in the city of Londrina, Paraná state, for soybean research, where she works studying epidemiology and control of soybean diseases.

According to Embrapa, the average loss from 2001 to 2018 is equivalent to US\$ 2.8 billion per season. According to the Conab (a state owned company controlled by the Ministry of Agriculture, in charge of government

policy to ensure the production and supply of agricultural products) the 2018/2019 harvest recorded a yield of 115 million tons of soybean. In addition, according to CESB (Brazilian Strategic Committee of Soybean), a record of 123.88 bags per hectare was recorded, reestablishing Brazil among the largest world producers of the grain.

Dr. Cláudia Vieira Godoy granted this interview to **AgriBrasilis**, explaining about the disease that affects the soybean production and how this issue is managed in Brazil.

What is the history of Asian rust in Brazil? How is the fungal incidence fluctuating in national production?

The disease caused by the fungus

Phakopsora pachyrhizi was first identified in Brazil in 2001, and quickly spread through the producing regions. Its presence is constant in the fields, but losses have been reduced over the years due to the proper management and strategy adoptions.

The rust incidence in recent years has been low in the first harvest of the year, much of it is due to the escape (escape is the period of total absence of live soy plants and the removal and prohibition of cultivation in the period between July 1st and September 15th to prevent the fungus of Asian rust to multiply during the end of the intake). At large part of the growing areas there is no presence of the disease or it only happens at the end of the soybean cycle due to the use of early cultivars,

巴西2019-2020年度大豆锈病的发病率较低

由豆薯层锈菌(*Phakopsora pachyrhizi*)引起的亚洲锈病,多年来一直困扰巴西田间地头。然而,在位于帕拉纳州隆德里纳的巴西农牧研究院(Embrapa)从事大豆流行病学和大豆疾病控制研究的研究员、农学家和植物病理学博士Cláudia Vieira Godoy 解释说,在2019/2020年收获季,由于巴西投入了大量工作及投资,如今这一现象的发病率较低。

根据巴西农牧研究院(Embrapa)的数据,2001年至2018年的平均损失相当于28亿美元/季。根据巴西农业部下属的国家商品供应公司(Conab)

的数据,2018/2019年大豆产量为1.15亿吨。此外,据巴西大豆战略委员会(CESB)所载,每公顷123.88袋的记录也使巴西重新跻身于世界上最大的谷物生产国之列。

博士接受了**AgriBrasilis**的采访,介绍了影响大豆产量的疾病以及巴西是如何应对这一问题。

亚洲锈病在巴西有怎样的历史? 真菌发病率在全国产量中如何波动?

由豆薯层锈菌(*Phakopsora pachyrhizi*)引起的疾病于2001

年在巴西首次被发现,并迅速在产区传播。它在田间地头存在不断,但由于适当的管理和所采取的应对策略,多年来损失已经减少。

近年来,锈病的发生率在该年的第一季收成中一直很低,这很大程度上是由于避病(避病是指在病菌流行期完全没有活的大豆植物,并且在7月1日至9月15日之间禁止耕种病菌宿主作物的时期,以阻断亚洲锈菌的繁殖)。在大部分生长地区,没有这种病的存在,或者仅在大豆周期结束时才出现这种病,这是由于使用了早期品种,该品种在季节开始时播

sown at the beginning of the season to make a second harvest in summer.

At national level, how serious is the disease?

The severity is lower than when the disease was introduced in Brazil. Many farmers still have the pathological agent in the farms and its control is the main objective of the use of fungicides, but it has been disappearing from the fields. In regions that do the sowing after November, the disease may require intensive control.

What are the main control strategies adopted by the Brazilian producers against *P. pachyrhizi*? How is the



fungicide market today?

In 2006, the adoption of the sanitary break began, a period of at least 60 days during the off-season, in which the sowing of soybeans is prohibited and the elimination of volunteer plants/weeds is mandatory to reduce the inoculum of the fungus.

One thing that reduced its incidence was the use of early-cycle cultivars. Its adoption enabled two harvests in the summer, such as soybean-corn, soybean-cotton and soybean-beans, and as a consequence there is the rust escaping.

The use of resistance genes (Rpp) do not dismiss the use of fungicides, but soybean cultivars with resistance genes have been made available.

One of the major problems is the resistance (less sensitivity) of the pathogenic fungus to fungicides from the group of demethylation inhibitors (IDM), external Quinone inhibitors (IQe) and succinate dehydrogenase inhibitors (ISDH), these are the three

main site groups that make up all registered fungicides in use for the disease control.

Multisite fungicides, such as mancozebe, chlorothalonil and cuprics, began to be used in soybean cultivation in 2013/14 to increase the efficiency of site-specific fungicides and also as an anti-resistance strategy.

What is the fungicide testing consortium for disease control in soybean crops? What are the impacts of collecting such database?

The testing consortium are experiments with the same protocol in which registered as well as products in the process of being registered are being evaluated for different biological targets in certain producing regions.

The experiments have been carried out since 2003 for asian rust and the great merit of the consortium is to provide researchers in the multiple regions, going along the changes in the sensitivity of the fungus.

Cláudia Godoy, researcher at Embrapa

Cláudia Godoy博士, 巴西农牧研究院研究员

种,以便在夏季进行第二次收获。

在全国范围,这种疾病有多严重?

其严重程度低于该病传入时。许多农民在施用杀菌剂时,农田病理剂仍然是控制的主要目标,但它已经逐渐从田间消失了。在11月之后进行播种的地区,该病可能需要加强控制。

巴西生产商对亚洲锈病采取的主要控制策略是什么? 如今的

杀菌剂市场怎么样?

2006年开始实行卫生休耕期,在淡季至少60天,禁止大豆播种,强制除去自播植株以减少真菌的接种。

减少发病率其一是使用早期周期品种。它的采用实现了夏季两收,如大豆-玉米、大豆-棉花和大豆-其他豆类,因此,锈病可避病。

使用抗性基因(Rpp)并不排除杀菌剂的使用,但具有抗性基因的大豆品种已经上市。

主要问题之一是致病真菌对脱甲基化抑制剂(IDM)、外部奎啉抑制剂(IQe)和琥珀酸

脱氢酶抑制剂(ISDH)组杀菌剂的抗药性(敏感性较低),这三个主要位群构成了用于疾病控制的所有已登记杀菌剂。

2013/14年,多作用位点的杀菌剂,如代森锰锌(mancozebe)、百菌清(chlorothalonil)和cuprics,开始用于大豆种植,以提高现场专用杀菌剂的效率,并作为一种抗性策略。

大豆作物疾病控制杀菌剂检测联合体是什么? 收集此类数据库有何影响?

测试联合体是采用同一规约所做的实验,在该规约中,在



Losses in soybean productivity due to Asian rust

What would be your perspectives for the Brazilian production in the future, taking into account the genetic resistance under the fungus that is often greater than the speed with which new products are launched?

The control with fungicides in Brazil is quite complicated due to resistance, but the disease has had its incidence reduced in most regions.

Despite it all, there are active ingredients still showing acceptable efficiency and the association with multi sites has helped. However, the fact that some of these products are being suspended in Europe may concern more than the resistance itself about the future of disease control.

In the successful results of the anti-rust fungicide consortium, as commented by the researcher, different active ingredients were evaluated by Embrapa, relating them with their applied doses and with the yield reduction in relation to a control without the inoculum of the disease.

特定产区针对不同的生物目标对已注册和在申请注册中的产品，进行评估。

自2003年以来，亚洲锈病的实验一直在进行，该联合体最大的优点是多个地区的研究人员提供真菌敏感性的变化。

尽管如此，有些活性成分仍然显示出可接受的功效并且有了多作用位点的协助。然而，其中一些产品在欧洲被暂停使用，这一事实可能不仅仅是未来抗药性本身。

在抗锈杀菌联合体的成功实验结果中，正如研究人员所评论的，Embrapa评估了不同的活性成分，并将这些成分应用的剂量，产量减少量以及在无疾病控制的情况相关联。

考虑到真菌下的植物抗病基因，你对未来巴西产量的看法如何？

巴西的杀菌剂控制由于抗性而相当复杂，但该病在大多数地区的发病率已经下降。

Phakopsora pachyrhizi fungus-infected soybean leaf in Londrina



Active ingredient (a.i.)	Dose (grams of a.i. per hectare)	Reduced yield (%)
Control	-	34
Chlorothalonil	1080	4
Copper oxychloride + Chlorothalonil	630 + 600	8
Mancozebe	1125	8
Copper oxychloride + Mancozebe	302,4 + 450	8
Fluazinan	500	8
Copper oxychloride	560	12

Table 1 shows active ingredients tested separately
表1显示了单独测试的活性成分

Source: Embrapa, 2019; adapted

Active ingredient (a.i.)	Dose (grams of a.i. per hectare)	Reduced yield (%)
Control	-	38
metominostrobin + tebuconazole (mtm+tbz)	79,7 + 119,62	15
(mtm+tbz) and mancozebe	79,7+119,62 e 1125	2
(mtm+tbz) + Copper oxychloride + Chlorothalonil	79,7+119,62 e 630 + 600	3
(mtm+tbz) + Chlorothalonil	79,7+119,62 e1080	1
(mtm+tbz) + Copper oxychloride	79,7+119,62 e 560	5

Table 2 indicates a mix of tested active ingredients
表2显示了混合测试的活性成分

Source: Embrapa, 2019; adapted

CUSTOMER FIRST, HONESTY AND HARMONY, WIN-WIN

Company introduction

Jiangsu Yongkai Chem Co., Ltd is State-designated manufacturing enterprise in China, founded in September 2011, located in Duigou Chemical Industrial Park, Guannan County, Lianyungang city, Jiangsu Province, covers an area of 30 acres, is a chemical company with research and development, production and sales. Now it has developed into Yongkai Group, its pesticide production as the core of Jiangsu Yongkai Chem Co. Ltd., Jiangsu Unik Bio-science Co.,Ltd mainly take charge of domestic sales and international trade and Pharmaceutical business belongs to Jiangsu Hengsen Pharmaceutical Technology Co. Ltd., the Group has a strong economic and technological strength.

Yongkai is with the idea of green chemistry and environmental protection chemistry, it is growing rapidly in the industry. Yongkai provide pesticide tech, pharmaceutical and pesticide Intermediates. Product best-selling domestic more than 20 provinces, are exported to Europe , South America, Southeast Asia ,Australia And other Countries And regions.

Our Company spirit of "Customer first, Honesty, Harmony And Win-win" the purpose, wholeheartedly welcome domestic and foreign customers to visit our guide, to carry out information exchange, technical cooperation and business contacts, and jointly promote the innovation and development of Chinese agricultural chemical industry.

Technical Grades

1. Fenoxaprop-P-ethyl
2. Clodinafop-propargyl
3. Mefenacet
4. Cyhalofop-butyl
5. MCPA
6. MCPA 2EH
7. MCPA Sodium
8. Thifluzamide

Chemical Products And Intermediates

1. Cloquintocet-mexyl
2. Mefenpyr-diethyl
3. 2-Mercapto-6-chlorobenzoxazole
4. 2,6-Dichlorobenzoxazole
5. Ethyl R-(+)-2-(4-hydroxyphenoxy)propionate
6. 5-Chloro-2,3-difluoropyridine
7. 2,3,5-trichloropyridine
8. 2-methyl-4(trifluoromethyl)-1,3-thiazole-4-carboxylic acid

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India shall invest US\$ 6 billion in Brazil

Interview with the Consul General of India in Brazil, Amit Kumar Mishra

Apart by a half-world distance, Brazil and India are not so far away when it comes to business. Both countries are part of BRICS, and they have always been apt to strengthen their partnerships. After the recent agreements signed, trade between them grew by 57% in two months (Brazilian Ministry of Development, Industry and Trade).

In 2020, Brazil already bought US\$ 441 million in Indian goods, and Brazilian exports to India increased 46%, reaching US\$ 155 million.

The Consul General of India in Brazil, Amit Kumar Mishra, is a career diplomat, and he joined the Indian Foreign Service in 2004. In his postings abroad, he has dealt with political, commercial, education, cultural and diaspora issues.

The consul opened the doors of his office to give an interview to **AgriBrasilis**, in which he discussed the mutual commercial interests between the countries.

What is the importance of Brazil entering the Indian market and vice versa?

The fact that both countries are emerging economies, means we have similar problems. We have a strong strategic relationship.

I think we were too involved with other partners and we did not pay enough attention to Brazil. On the other hand, if I had to be fair to companies on this and that side, Indian companies did a better job of discovering Brazil than Brazilian ones in discovering India

This year, our leaders, agreed on the ambitious goal of doubling trade in the next two years. I hope that we will also discover ourselves in the economic sense, because there is still a lot to be created.

What was the purpose of the Brazilian president's visit to India in January?

Prime Minister Modi visited Brasilia for the BRICS Summit, and he extended an invitation to Bolsonaro as the main guest on Republic Day

During the event, fifteen agreements were signed, covering a wide range of subjects. Among them are: biofuels, sugar and ethanol industry, genomic evaluation in livestock, defense industry, research centers in India.

I hope that the agreements will help us to bridge the existing gap between both developing countries.

What is the importance of the BRICS to make economic agreements with each other?

BRICS is seen as the next bloc of emerging economies that will drive the world. Collectively, we are able to better handle the growth and stability of the economy. All five countries have common challenges.

BRICS's economy represents perhaps 40% of the global economy, targeting US\$ 500 billion trade within these countries.

A good example would be research targeting cure for dengue; if you give US\$ 100 million to the Brazilian government, the results would probably not be the same level if you distributed US\$ 100 million in five laboratories.

Jointly, we find better solutions. Together, we have the monetary, human and intellectual resources to solve problems.

Brazilian investments in India do not reach US\$ 1 billion while Indian investments in Brazil represent almost US\$ 6 billion. What is expected from these investments?

Thinking of India, we are a market of 1.3 billion people. Estimates confirms that our economy will grow four times. How does an exporting country like Brazil ignores a market that will become the world's second largest economic power?

Our agricultural area is not going to increase much, our mining sector is not as well developed as Brazil's. On the other hand, we managed to export in science and technology in general. Definitely there are areas where we can contribute mutually.

An example is the satellite created by the National Institute for Space Research (INPE) that will be launched by India and will be used to monitor deforestation in the Amazon.

Why was Brazil chosen as the partner country in India's energy supply?

Brazil is simply the best in the field of biofuels.

We are not blessed with energy resources, it is the highest amount we spend on imports. So, one of the possibilities is to increase ethanol production in India.

The Brazilian experience with biofuels is quite extensive and, now, with flex vehicles, there is a new market that also provided some kind of stability to the sugarcane agricultural system.

We intend to increase the ethanol content in our gasoline from 7% to 20%.

How is the Indian sugar-energy sector today?

Indian agriculture is different: there are millions of people involved in subsistence, and we don't have large properties, nor do we have corporate agriculture.

Our industry suffers ups and downs. We want to be like Brazil in the area of biofuels. We want our mills to get into that, not only to make more

印度将在巴西投资60亿美金

采访印度驻巴西总领事，Amit Kumar Mishra

巴西当前的局势严重地受到经济和政治因素的影响，这些因素对经济造成了压力，并影响着整个国家。2020年将是高波动性的一年，这影响到多个行业尽管巴西与印度有半个世界之遥，但生意将两个国家拉近。两个国家都是金砖国家的一部分，并且两国一直倾向于加强伙伴关系。最近的协议签署后，他们之间的贸易在两个月内增长了57%。（巴西发展部，工业和贸易部）

在2020年，巴西已经购买了

4.41亿美元的印度商品，巴西对印度的出口增长了46%，高达1.55亿美元。

印度驻巴西总领事，Amit Kumar Mishra,是职业外交官，他于2004年加入印度外事服务部。在他的国外任职期间他处理过政治，商业，教育，文化及侨民问题。

该领事打开了办公室的大门，接受了**AgriBrasilis**的采访，他在会上讨论了两国之间的共同商业利益。

巴西进入印度市场的重要性如何，反之亦然？

两国都是新兴经济体，这意味着我们有类似的问题。我们有着牢固的战略关系。

但是我认为我们与其他合作伙伴的参与者过多，对巴西没有予以足够的重视。另一方面，如果我公平的对待这方面的公司，那么印度公司在发现巴西方面比巴西公司发现印度方面做得更好。

今年，我们的领导人商定了在未来两年内实现贸易翻番的

宏伟目标。我希望我们也能在经济意义上发现自己，因为我们仍有很多工作需要去做。

巴西总统在一月份访问印度的目的是什么？

Narendra Modi总理访问了巴西利亚，参加金砖国家峰会，并在共和日当天邀请Bolsonaro作为主要客人

活动期间，签署了十五项协议，涵盖了广泛的主题。其中包括生物燃料，糖和乙醇行业，畜牧业的基因组评估，国防工业，及印度的研究中心。

我希望这些协议将有助于我们弥合两个发展中国家之间的现有差距。

金砖国家与彼此达成经济协议的重要性是什么？

金砖国家被视为推动世界发

展的下一个新兴经济体集团。总体而言，我们可以更好的处理经济的增长及稳定。这五个国家都有共同的挑战。

金砖四国的经济可能占全球经济的40%，这些国家的目标是达成5000亿美元的贸易。

一个很好的例子是针对登革热治愈的研究。如果您向巴西政府捐献1亿美元，与您在5个实验室中分配1亿美元，结果可能会不一样。

我们将共同寻找更好的解决方案。我们拥有共同的财力，人力及智力来解决问题。

巴西在印度的投资未达到10亿美元，而印度在巴西的投资接近60亿美元。这些投资将带来什么？

考虑到印度是一个拥有13亿人口的市场，预估将使我们的

经济增长4倍。像巴西这样的出口国，如何忽略一个将成为世界第二大经济大国的市场？

我们的农业面积不会增加太多，我们的采矿业发展不如巴西的发达。另一方面，我们总体上设法出口科学技术。肯定有些领域我们可以相互贡献。

例如：由美国国家空间研究所（INPE）创建的卫星将由印度发射，并将用于监测亚马逊地区的森林砍伐。

为何巴西被选为印度能源供应合作国？

巴西简直是生物燃料领域中最好的。

我们没有能源资源，所以我们在进口上花费最高金额。因此，可能性之一是增加印度乙醇产量。巴西在生物燃料方面的经验非常丰富，现在，在灵

money, but also to make this a stable source of income for farmers.

In the agriculture, what perspectives can arise from our partnerships?

We want to know how Brazil went from being an active agricultural importer to the second largest exporter on the planet.

In India, we struggle with logistics, cold storage etc. Our estimates of post harvest losses are about \$15 billion, in some products, even 30 to 40% of agricultural production is lost between

the farm and the supermarket.

Recently, India has opened up to Brazilian exports of chicken and oak. As things grow, we expect this to be reflected in business numbers.

Can large companies like UPL be more present in the Brazilian market after these agreements?

I would say that Indian companies are more active here, and UPL is one of the good examples of growth. Their coming to Brazil means that Indian corporations can settle here.

UPL has a stable presence and has announced some investments and plans for the next five years, in terms of adapting to research, to expand the existing network. It just tends to grow more.

What is the importance of environmental issues in the signed agreements?

The Indian prime minister has committed to the Paris Agreement; we have a huge solar energy expansion program; and this year, we will have 100 gigawatts of renewable energy storage capacity.

India invited all countries to be part of a global coalition to place such energy as the preferred power generation, and Brazil joined it.

We handle environmental challenges better as a group; together we can reduce the impacts and be prepared for them.



Amit Kumar Mishra, Consul General of India in Brazil (left) and AgriBrasilis contributors, in São Paulo
印度驻巴西总领事，Amit Kumar Mishra先生(左)和AgriBrasilis 贡献者，在圣保罗

活车辆方面，有一个新市场也为甘蔗农业系统提供了某种稳定性。

我们打算将汽油中的乙醇含量从7%提高到20%。

如今印度的糖能源部门情况如何？

印度的农业有所不同：有数百万人从事生计，我们没有大片土地，也没有公司农业。

我们的行业遭受跌宕起伏。我们希望在生物燃料领域像巴西一样。我们希望我们的工厂参与其中，不仅要赚更多的钱，还要使它成为农民稳定的收入来源。

在农业领域，我们的合作伙伴关系可以带来什么看法？

我们想知道巴西是如何从活跃的农业进口国转变为地球上第二大出口国的。

在印度，我们在物流，冷藏等方面苦苦挣扎。我们估计收获后的损失约为150亿美元，在某些产品中，农场和超市之间甚至损失了30%至40%的农业生产。

此外，由于合作社是具有商业盈利能力的公司，因此我们了解它们的模式。

最近，印度开放了对巴西出口鸡肉和橡木，随着事情的发展，我们希望这会反映的业务

数字中。

达成这些协议后，UPL之类的大公司能否在巴西市场上占有更多份额？

我想说印度公司在这里更活跃，UPL是增长的很好的例子之一。他们来到巴西意味着印度公司也可以在这里立足。

因UPL的业务稳定，UPL宣布了未来五年的一些投资和计划，以适应研究的需要，扩展现有网络，只会增长更多。

签署的协议中环境问题的重要性是什么？

印度总理已承诺执行《巴黎协定》；我们有一个巨大的太阳能扩建项目；今年，我们将拥有100千兆瓦的可再生能源存储容量。

印度邀请所有国家加入全球性联盟，以放置诸如首选发电等能源，巴西也加入了该联盟。

我们作为一个整体更好地应对环境挑战；我们可以共同减少影响并为之做好准备。



Your product accepted by the main regulatory agencies in the world.

Plantec Laboratories is a Brazilian complex of laboratories with vast experience conducting GLP studies using international guidelines (OECD, EPA, ASTM) with full infrastructure to make sure that your product will be technically well accepted by all regulatory agencies in the world.

We have recently developed a new, modern laboratory and expanded our scope to include alternative in vitro toxicological tests. We also have GLP recognition for alternative methods that offer reduction in the number of animals used.



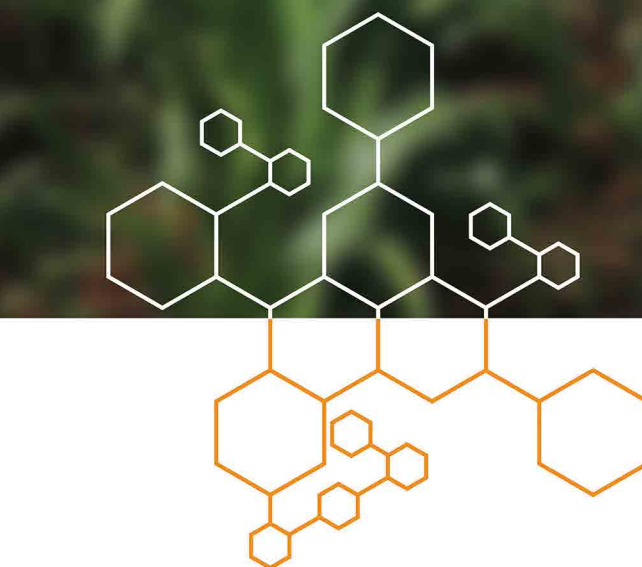
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The strength of cooperatives in agribusiness in Brazil

Agricultural cooperativism in Brazil has played a fundamental role in agricultural development in recent decades. There are 1618 cooperatives that add approximately 1 million members. According to IBGE (Brazilian Institute of Geography and Statistics) data, 48% of everything produced in the field goes through cooperatives.

One of the prominent cooperatives is the Coopercitrus Cooperativa

de Produtores Rurais, located in Bebedouro city, State of São Paulo. Founded in 1976, with strong presence in citrus, coffee and sugar cane, with 60 branches and more than 35 thousand members, In 2018 Coopercitrus had net revenue of R\$ 3.7 billion (US\$ 9,7 million).

AgriBrasilis spoke with Fernando Degobbi, executive president of Coopercitrus about the practices and

the importance of cooperativism.

What is the main objective of cooperativism?

It means making all cooperative members have a more profitable activity with better results, and enabling opportunities that they would not be able to achieve alone.

Coopercitrus has a very relevant role in agribusiness, being the largest



Coopercitrus headquarters in Bebedouro city
在Bebedouro市的Coopercitrus合作社总部

巴西农业企业合作社的实力

在巴西，近年来农业企业合作社在农业企业扮演着重要的角色。

现有1618个合作社，合作社成员增加约100万人。

根据巴西地理与统计研究所 (IBGE) 的数据，该领域48%的产品为合作社所产。

著名的合作社之一是位于圣保罗州Bebedouro市的Coopercitrus农村生产合作社。Coopercitrus成立于1976年，在柑橘，咖啡和甘蔗生产中具

有重要地位，其分支机构有60个，成员超过3.5万名。2018年Coopercitrus净收入为37亿雷亚尔。

AgriBrasilis与Coopercitrus合作社执行总裁Fernando Degobbi交谈了合作社的一些做法和合作的重要性。

合作的主要目的是什么？

这意味着所有合作社成员能进行更有益的活动，取得更好的成果，并创造他们无法独自

创造的机会。

Coopercitrus合作社在农业企业中扮演着非常重要的角色，它是巴西东南部地区最大的合作社，也是巴西最大的合作社之一。

生产者加入合作社有什么优势？

生产者可获得在其经营中用于购买投入品、技术支援和业务支持的融资帮助。

就谷物和咖啡生产者而

cooperative in the southeastern region of Brazil, and among the largest cooperatives in Brazil.

What are the advantages of the producer when joining a cooperative?

The producer ends up having all the support in financing lines suitable for the purchase of inputs, technical assistance and support in his

operation.

In the case of grain and coffee producers, Coopercitrus has a structure for receiving and marketing production, in addition to supplying the necessary inputs for agricultural activity.

How do you see the current scenario of Brazilian Cooperativism system?

It is very positive for agricultural

cooperatives. They are very important in the country's agribusiness GDP, and also have social, as well as economic and strategic relevance, because cooperatives transform the regions where they operate.

They transform in order to create conditions so that the families of rural producers are able to settle and remain in activities that are fundamental to the development of the nation.

Fernando Degobbi, executive president of Coopercitrus cooperative

Fernando Degobbi, 合作社执行总裁



言，Coopercitrus合作社除了提供农业活动所需的投入品外，还具有接收和销售产品的结构。

您如何看待当前巴西的合作制度？

这对农业合作社有着非常积极的影响。因合作社改变了他们所经营的地区，它们在国家农业企业的GDP中极其重要，且具有社会，经济和战略意义。

他们进行变革，为的是使农村生产者的家庭能够安顿下来，并投身于对国家发展至关重要的活动。

Coopercitrus合作社主要的农业投入品是什么？它们的百分比是多少呢？

Coopercitrus在农业投入品销售的收入比例为70%。

我们主要得农业投入品为：农药（25%），肥料（22%），机械（15%），柴油（8%），及动物保健品和营养品（10

%)。

Coopercitrus在哪运作，它有何区别呢？

我们经营的合作社在圣保罗州，米纳斯吉拉斯州和戈亚斯州，其目的是以一体化的模式为35,000名成员提供服务，为所有农业活动，农艺服务，以及会影响成员生产系统的精密农业和数字技术的服务提供完整的机械，设备和农业投入的解决方案。

合作社为成员提供融资吗？该资金占合作社收入比例的多少呢？

合作社向合作社成员提供用于购买农业投入品的资金，并进行大量的咖啡和谷物易货贸易。这占收入的30%。

目前农业企业面临的最大困难是什么？对于这些困难Coopercitrus合作社将如何应对？

最大的困难是整合解决方

案，以便在整个农业企业链中提供可持续的经营模式。

Coopercitrus合作社有37,000名成员，多数为中小型农民，他们需要技术，商贸和后勤援助。通过与世界主要农业投入品制造商的战略联盟，以及对数字技术，精密农业的大量投资，我们提供的解决方案将对所援助农民的经营产生重大影响。

您如何看待未来几年巴西的农业企业？

由于生产前景良好，且农业是巴西的一项伟业，巴西的农业企业是，并将继续是世界舞台的主角。

Coopercitrus在未来5年有何计划呢？

我们打算利用更加一体化的服务模式，以现有和计划模式的协同效应拓展区域的业务，从而巩固作为巴西最重要的合作社之一的地位。

What are the main agricultural inputs and their percentages in Coopercitrus?

The percentage of Coopercitrus' revenues regarding the sale of agricultural inputs is 70%.

Our main agricultural inputs are: pesticides, 25%; fertilizers, 22%; machinery, 15%, diesel, 8%, and animal health and nutrition, 10%.

Where does Coopercitrus operate and what is its differential?

Our cooperative operates in the states of São Paulo, Minas Gerais and Goiás and has the purpose of serving a group of 35 thousand members in an integrated manner, offering solutions with a complete portfolio of machines, equipment, agricultural inputs for all agricultural activities, agronomic services, services with precision agriculture and digital technology that impact the member's productive

system.

Does Coopercitrus have any type of financing for its members? How much does this represent on the cooperative's revenue?

The cooperative offers to cooperative members financing for the purchase of agricultural inputs and also carry out a large number of coffee and grain barter operations. This represents 30% of revenues.

What are the biggest difficulties facing agribusiness today and how is Coopercitrus acting in the face of these difficulties?

The greatest difficulty is to integrate solutions in order to offer a sustainable model in the entire agribusiness chain.

Coopercitrus has 37 thousand members, mostly small and medium farmers, who need technical,

commercial and logistical assistance. Through strategic alliances with the main manufacturers of agricultural inputs in the world and large investments in digital technology, precision agriculture, we are offering solutions that strongly impact the results of assisted farmers.

How do you see Brazilian agribusiness in the coming years?

Brazilian agribusiness is a protagonist on the world scenario and will continue to be, due to the excellent prospects for production and Brazil's great vocation in agriculture.

What are Coopercitrus' plans for the next 5 years?

We intend to work with even more integrated service models, expand business in regions with synergies in the current and planned models, thus consolidating itself as one of the most important cooperatives in Brazil.

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Há 51 anos a Dinagro está ao lado do produtor como a maior fabricante de isca formicida do Brasil e com o lançamento de Matrine, que protege plantações de frutas, legumes e verduras com resíduo zero. Hoje, por meio de investimento e inovação, a empresa é líder de mercado.

Posição conquistada com investimento em tecnologia e inovação na fabricação de seus produtos.

For 51 years Dinagro has been side by side with the producer as Brazil's largest manufacturer of ant poison bait as well as with the launching of Matrine, which protects fruit and vegetable plantations with zero residue. Nowadays, by means of investment and innovation, the company is the market leader.

This position was achieved with investment in technology and innovation in the manufacturing of its products.



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	Cooperative	Net Sales 2018 (billion)	Branches & Products	Number of members (000)	Headquarter
1	Coamo	142雷亚尔 36.8美元 R\$ 14.2 US\$ 3.68	PR, SC和MS州有100个运营单位 100 operational units in the States of PR, SC and MS 大豆, 玉米, 小麦, 咖啡, 羽绒棉 Soybean, corn, wheat, coffee, feather cotton	2.91 29.1	Campo Mourão
2	Copersucar	124雷亚尔 32.1美元 R\$ 12.4 US\$ 3.21	SP, PR和MG州有44个生产单位 44 production units in the States of SP, PR and MG 甘蔗 Sugar cane	8.7 87	Jaú
3	Lar Coopera- tiva	63.8雷亚尔 16.4美元 R\$ 6.38 US\$ 1.64	PR, MT和SC州有29个运营单位 29 operational units in the States of PR, MT and SC 罐头和冷冻食品, 鸡肉块, 谷物 Canned and frozen foods, chicken cuts, grains	1.08 10.8	Medianeira
4	Comigo	42.4雷亚尔 10.9美元 R\$ 4.24 US\$ 1.09	GO州有15个运营单位 15 operational units in GO State 肥料, 种子, 饲料, 植物油 Fertilizers, seeds, feed, vegetable oil	0.75 7.5	Rio Verde
5	Cocamar	40雷亚尔 10.4美元 R\$ 4 US\$ 1.04	SP, PR和MS州有80个运营单位 80 operational units in States of SP, PR and MS 大豆, 玉米, 小麦, 咖啡, 橙子 Soybean, corn, wheat, coffee, orange	1.5 15	Maringá



COURTESY OF COOPERCITRUS

6	Copacol	36.5雷亚尔 9.5美元 R\$ 3.65 US\$ 0.95	PR州有19个运营单位 19 operational units in PR State 鸡肉, 谷物, 猪养殖 Chicken, grains, hog raising	0.6 6	Cafelândia
7	Cooxupé	3.79雷亚尔 9.7美元 R\$ 3.79 US\$ 0.97	SP和MG州有12个运营单位, 供给城市200个 12 operational units in the States of SP and MG, serving 200 cities 咖啡 Coffee	1.45 14.5	Guaxupé
8	Coopercitrus	3.7雷亚尔 9.7美元 R\$ 3.7 US\$ 0.97	SP, MG和GO州有61个运营单位 61 operational units in the States of SP, MG and GO 咖啡, 甘蔗, 柑橘, 大豆, 玉米, 牲畜, 园艺 Coffee, sugar cane, citrus, soybean, corn, livestock, horticulture	3.7 37	Bebedouro
9	Agrária	33雷亚尔 8.5美元 R\$ 3.3 US\$ 0.85	PR和SP州有17个运营单位 17 operational units in the States of PR and SP 谷物, 麦片, 麦芽, 小麦粉, 动物营养品 Grains, cereals, malt, wheat flour, animal nutrition	63 630	Guarapuava
10	Castrolândia	32雷亚尔 8.3美元 R\$ 3.2 US\$ 0.83	PR和SP州有12个运营单位 12 operational units in the States of PR and SP 肉, 牛奶, 土豆, 豆类及种子 Meat, milk, potato, beans and seeds	96.1 961	Castro

The top ten agribusiness cooperatives, in revenue, with almost 1.8 million members and total net sales of US\$ 15.23 billion in 2018.
在2018年, 收入前十的农业企业合作社有近180万名成员, 且净销售额达152.3亿美元。

Acquisition of rural properties in Brazil by foreign investors



Camila Machado de Assunção, Master of Laws by Columbia University and post-graduated by Fundação Getúlio Vargas (FGV/SP). Lawyer at Andrade, Foz, Hypolito e Médicis Advogados.

Camila Machado de Assunção, 哥伦比亚大学法律学士, Fundação Getúlio Vargas (FGV/SP) 大学硕士, Andrade, Foz, Hypolito e Médicis Advogados 律师事务所律师

The acquisition of rural properties by foreign investors is a controversial matter in Brazil. However, such controversy may be close to an end, possibly opening a new market in the country. The new Bill of Law n. 2963 of 2019 ("Bill 2963/19"), which is currently pending approval by the Federal Senate, intends to regulate the matter, with important innovations.

In general terms, foreign individuals and companies are currently subject to a series of restrictions to acquire rural lands, such as the necessity that the area be destined for agricultural, livestock, industrial or colonization projects, the necessity of approval by the National Institute for Agrarian Reform (INCRA), the prohibition that rural lands belonging to foreigners exceed ¼ of the area of the relevant city, besides the prohibition that foreigners of the same nationality hold more than

ten percent of the city, among others.

The major debate regarding the matter relates to the applicability of such restrictions to Brazilian companies controlled by foreign individuals or companies. A polemic opinion from the Federal Attorney General (AGU) published in 2010 conveyed the understanding that such Brazilian companies shall be legally treated as foreign companies because of their foreign control, being subject to all restrictions described above.

Aiming at changing the regulation on the matter, the Bill 2963/19 proposes relevant innovations – some of them are highlighted in this article. The first one is the elimination of the restrictions for acquisition of rural properties by Brazilian companies controlled by foreigners.

Besides, the National Congress may authorize, by means of a legislative

decree, the acquisition of properties beyond the limits established by the law whenever it refers to the implementation of projects considered as priority for the development plans of Brazil.

Another relevant point addressed in the Bill 2963/19 concerns the granting of guarantees. In case the conditional ownership of a rural land is transferred to a foreigner by virtue of a guarantee, as it occurs in certain fiduciary guarantees in Brazil, Bill

2963/19 proposes that the land shall be sold within two years, renewable for the same period, under penalty of the transaction being reversed, with the return of the land to the original owner.

Bill 2963/19, in contrast, maintain some restrictions such as the prohibition that rural lands belonging to foreigners exceed ¼ of the area of the relevant city, and that foreigners of the same nationality hold more than ten percent of the city.

In December 2019, the Bill was

approved by the Economic Affairs Commission and the Agriculture and Agrarian Reform Commission. Now, it is under analysis of the Constitution, Justice and Citizenship Commission of the Federal Senate and will be sent to the House of Representatives. If approved, the new law will be a milestone in the sector, with a meaningful opening of the market to new foreign investment groups, which will be able to invest in the country with a higher level of legal security.



外国投资者在巴西获取乡村地产

在巴西, 外国投资者获取乡村地产是个有争议的问题。然而, 此争议或将结束, 这很可能将在巴西开拓新的市场。目前有待联合参议院审批的2019年第2,963号新法律草案(第2,963/19号草案)打算通过作出重要创新来规范该问题。

一般而言, 外国个体或公司目前在获取乡村土地上受到一系列的的限制。例如, 需将这些区域用于农业, 畜牧业, 工业或殖民项目, 需要获得国家土地改革研究所(INCRA)的批准, 禁止外国人拥有乡村土地超过相关城市面积的1/4。此外, 相同国籍的外国人不得拥有该市10%以上的土地。

这一问题主要争议内容涉及到这些限制是否适用于外国个体或公司控制的巴西公司。联

邦总检察长(AGU)于2010年发表的充满争议性的观点所传达的是, 此类巴西公司因受外国控制, 在法律上应视为外国公司, 受上述所有限制约束。

为改变针对这一问题的法规, 第2,963/19草案提出相关创新, 部分创新在文中有所强调。第一个创新便是取消对外国控制的巴西公司获取乡村地产的限制。

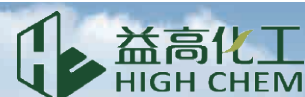
此外, 国民议会可通过一项法令, 只要它被认作是实施巴西发展计划中的优先项目, 就能获得超出法律规定范围的地产。

第2963/19号法案中涉及的另一相关问题与担保的授予有关。如果将乡村土地有条件地把所有权通过担保转让给外国人(像在巴西某些信托担保

里那样), 第2,963/19号法案倡议土地在两年内出售, 同一期间可续签, 取消交易需缴罚金, 并将土地归还所有者。

相比之下, 第2963/19号法案保留了一些限制。例如, 禁止外国人拥有乡村土地超过相关城市面积的1/4, 及相同国籍的外国人不得拥有该市10%以上的土地。

2019年12月, 该法案获得经济事务委员会和农业及土地改革委员会的批准。目前, 法案经由联邦参议院宪法、司法及公民委员会审议, 并呈交至众议院。若法案获批, 新法案将成为该行业的里程碑, 为新的外国投资集团提供一个有意义的开放的市场, 使得他们能够在法律安全水平更高的国家进行投资。



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Agricultural machinery: deficit of US\$ 235 million

Interview with the Market Director for New Holland, Eduardo Kerbauy

Agricultural machinery sector began 2020 with a 9.4% drop compared to last year, with a total deficit of R\$ 1 billion (US\$ 235 million), according to the balance sheet released by ABIMAQ¹. In January this year, its net revenue reached R\$ 7.9 billion (US\$ 1.85 billion) 3.6% less compared to the same month in 2019.

According to ANFAVEA² when comparing the results for the years 2018 to 2019, domestic sales fell 8.4%, machinery production fell 19.1% and exports rose 1.5%.

The tractor market in Brazil is predominantly composed of international manufacturers, with emphasis on Massey Ferguson, John Deere, Valtra and New Holland. Leading local manufacturers are Agrale

and Jacto.

In order to understand this market, **AgriBrasilis** interviewed Eduardo Kerbauy, Market Director for New Holland Agriculture in Brazil. The company is part of the CNH Industrial Group, which has been operating in the country since 1975 with 7 factories, 200 dealerships and more than 400 resellers. In 1986, New Holland incorporated Ford Tractors, becoming one of the leaders in the sector. In 2019, New Holland produced 7,948 tractors (22% of the national market) and 2,272 grain harvesters (36% of the national market). The company also manufactures sprayers and seeders.

Eduardo Kerbauy recognizes the unfavorable performance of the agricultural machinery industry, but

remains optimistic about 2020.

What launches are planned for 2020 and did the agricultural machinery market meet expectations in 2019? Does Brazil have the potential to be the global leader in the sector?

This year we will present many new features that will surprise the market. A record harvest is expected in Brazil, leading us to believe we should surpass the USA in soy production. This gives us confidence that the sector will not leave continue to grow.

We had the best December since 2014 considering the number of new vehicle licenses. It is the third consecutive year of growth in the sector, despite the 8.4% drop in sales for agricultural machinery in general.

巴西农用机械市场赤字10亿雷亚尔

根据ABIMAQ¹发布的资产负债表, 到2020年年初, 农用机械行业与去年相比下降9.4%, 赤字总额为10亿雷亚尔。今年1月, 其净收入达到79亿雷亚尔, 与2019年同月相比减少3.6%。

据ANFAVEA²报告显示, 2019年和2018年相比, 国内销售额下降8.4%, 机械生产下降19.1%, 出口增长1.5%。

巴西的拖拉机市场主要由国际制造商组成, 重要的制造商有Massey Ferguson,

John Deere, Valtra 和 New Holland。巴西本国领先的制造商是Agrale和Jacto。

为了解该市场, **AgriBrasilis**采访了巴西 New Holland农业公司的市场总监Eduardo Kerbauy。New Holland农业公司是CNH工业集团的一部分, 该集团从1975年就一直在巴西运营, 它拥有7个工厂, 200个经销商和400多个分销商。1986年, New Holland农业公司合并了 Ford拖拉机公司, 成为该行业的领导者之一。2019

年, New Holland生产了7,948台拖拉机(占全国市场的22%)和2,272台谷物收割机(占全国市场的36%)。此外, 该公司还生产喷雾器和播种机。

Eduardo Kerbauy察觉到农用机械行业的不良表现, 但仍对2020年保持乐观。

2020年有什么发展措施吗? 农用机械市场在2019年是否达到了预期? 巴西有没有潜力成为该行业的全球领导者呢?

今年, 我们将展示许多令市

According to ANFAVEA², the sector is expected to grow 5.4% this year. Domestic sales are expected to rise 2.9% and exports, 1%. It is still slow growth, but we are optimistic that the sector is on the right track. Brazil has the ability to lead the production of agricultural machinery.

What kind of technology is present in the machines and implements?

Our machines today incorporate a lot of technology. We have a very innovative precision agriculture system; incorporating a telemetry portal with connection to other digital agriculture systems. It is information that stays in the cloud, being aggregated in one space. It is part of a strategy to develop flexible, open and connectable solutions.

A platform was launched that agronomically manages the property, seeking to integrate data such as soil fertility, productivity, meteorological data and satellite images, helping the producer to intervene at the right time and place. In addition, the platform

also makes it possible to analyze operational data from the machines.

It is still possible for New Holland Agriculture customers to connect their current and older machine fleets to the platform. The technology can also be used with mixed fleets.

What are the government's incentives to leverage agricultural machinery sales? Regarding the installation of the company in the national territory, was there any kind of incentive offered by the government?

The main government incentive for rural producers to purchase agricultural machinery is financing, which basically depends on the interest rate.

The investment line of the Program for Strengthening Family Agriculture (Pronaf) and Mais Alimentos (More food) received a new contribution, of R\$ 1 billion (US\$ 805 million), according to the Ministry of Agriculture and the Central Bank.

This is the second credit

contribution made by the portfolio for this modality in the 2019/2020 Harvest Plan (economic plan made by Brazilian banks to provide credit for planting). Regarding the original resource, the Pronaf investment line has already received R\$ 14.8 billion, an increase of 14.5% (R\$ 1.9 billion) when compared to the R\$ 12.9 million initially granted.

In the 2020/2021 Harvest Plan, almost R\$ 2 billion (US\$ 468 million) more were allocated to agricultural credit programs than in the previous crop year. According to the federal government, the Modernization Program for the Agricultural Tractor and Implements Fleet (Moderfrota) received approximately R\$ 9.7 billion (US\$ 2.27 billion).

Regarding incentives for the installation of factories, proposals include tax exemption for donation of land, an investment that creates jobs along with the collection of taxes, in addition to moving other sectors around the factory.

场震惊的新功能。预计巴西的收成将创历史新高, 这让我们相信我们的大豆产量可能超过美国, 且该行业会持续发展。

从新机械牌照数量来看, 我们度过了2014年以来最好的12月。尽管总体上农用机械的销售额下降了8.4%, 但这是该行业连续增长的第三年。

据ANFAVEA²的预测, 该行业今年将增长5.4%。国内销售预计将增长2.9%, 出口将增长1%。虽然增长仍然缓慢, 但我们乐观地认为, 该行业在正确的轨道上发展。巴西有能力领导农用机械的生产发展。

农用机械和机具中使用的是哪种技术?

如今我们的机器采用了许多技术。我们拥有创新性极高的精密农业系统(将遥测系统与

其他数字农业系统连接起来)。信息会进行云储存, 并整合在同一个地方。这是开发灵活, 开放和可连接的解决方案的策略的一部分。

我们推出了一个以农艺方式进行管理的平台, 力求整合诸如土壤肥力, 生产力, 气象数据和卫星图像之类的数据, 以帮助生产者在正确的时间和地点进行干预。此外, 该平台还可以分析来自机器的运行数据。

对New Holland农业公司的客户而言, 他们仍有可能将其现有和较旧的机械机组连接到平台上。该技术还可用于混合机组。

政府提高农用机械销售的激励措施是什么? 对全国建立的公司, 政府是否提供奖励?

对农村生产者购买农用机械, 政府的主要奖励是提供资金, 提供资金多与少基本上取决于利率。

据农业部 and 中央银行称, 加强家庭农业计划(Pronaf)和Mais Alimentos(更多食品)的投资项目获得了新的资金支持, 金额为10亿雷亚尔。

这是该投资组合在2019/2020年收成计划(巴西银行为种植提供信贷的经济计划)中为该模式提供的第二笔信贷支持。关于原有资金, Pronaf投资项目已收到148亿雷亚尔, 比最开始的发放的1,290万雷亚尔增加了14.5%(19亿雷亚尔)。

在2020/2021收成计划中, 农业信贷项目的拨款比上一年度增加了近20亿雷亚尔。根据联邦政府, 农用拖

It is noticed that the machines and implements developed today have a lot of potential that is not yet explored by the farmer. What would be the reasons for this?

The main difficulty that producers face is the lack of connectivity in the field, due to the absence of telephone networks. This is the main obstacle to the use of technology embedded in the machines.

However, that has been changing due to programs like ConectarAGRO, a program that was created to encourage the improvement of rural connectivity. This program addresses the fact that the number of people who do not have access to telephony in the field is 21%, according to IBGE³.

It is a premise to work with open technologies that have a global standard. The idea requires having access to the internet throughout the national territory, especially in rural properties.

The cost of purchasing and operating machines in Brazil is still a challenge for the producer, what is the influence of the rise in the dollar?

Exchange rate variation is a challenge for all sectors of society, including rural producers. But I believe that the biggest challenge is interest rates for agricultural subsidies in the country.

More than a cost, renewing the

agricultural machinery fleet is an investment, which will result in greater productivity and reduced production costs. With more and more embedded technology, the machinery justifies the investment with increased production.

What are New Holland's prospects for 10 years from now?

We see the sector with a lot of optimism, mainly because the Brazilian economy is on a recovery trend. We have seen an increase in market share over the past 5 years, especially in tractors and harvesters, especially those designed for precision agriculture.

We hope to continue growing together with Brazilian agribusiness, which with each harvest surpasses records.



Eduardo Kerbaux, Brazil Market Director at New Holland Agriculture
Eduardo Kerbaux, New Holland
农业公司巴西市场总监

拉机和农具机组现代化计划 (Moderfrota) 获得款项约97亿雷亚尔。

关于建立工厂的激励措施, 倡议包括了对捐赠土地的工厂免税, 该投资除了将其他部门转移到工厂周围外, 还增加了就业机会和税收征收。

人们注意到, 如今开发的机械和农具具有很多潜力, 但农民尚未发掘。这是什么原因呢?

生产者面临的主要困难是由于缺乏电话网络, 导致该地区通讯落后。这是使用机械嵌入式技术的主要障碍。

但是, 因ConectarAGRO等

计划 (该计划旨在鼓励改善农村地区的通讯), 通讯落后的情况已有改观。 据IBGE³, 该计划呈现了这样一个事实, 即该地区无法使用电话的人数达21%。

改善通讯是使用具有全球标准的开放技术的前提, 这个想法要求在全国范围内, 尤其是在农村地区, 人们能够使用互联网。

在巴西, 购买和使用机械的成本仍然是生产者面临的挑战, 美元上涨会产生什么影响呢?

汇率变动对包括农村生产者在内的社会所有部门都是一个

挑战。 但是我相信最大的挑战是巴西农业补贴的利率。

更新农用机械机组不仅是一项成本, 也是一项投资, 它将提高生产率并降低生产成本。随着越来越多的嵌入式技术的出现, 这些机械可以通过增加产量来证明投资的合理性。

New Holland农业公司在未来十年前景如何?

我们认为该行业前景乐观, 主要是因为巴西经济正在复苏。在过去的五年里, 我们已经看到特别是拖拉机和收割机市场份额的增长, 且这些器械尤其是为精密农业而设计。

我们希望继续与巴西农业企业一起成长发展, 让每一次收成超过纪录。

AGROCHEMSHOW



13th Brazil AgrochemShow

August 10th & 11th 2020

Venue:
Novotel CenterNorte
São Paulo, Brazil

Brasil@AgrochemShow.com.br



MEDIA PARTNER

 AgriBrasilis

Events Agro in Brazil 2020 2020年巴西农业活动		
	Event 活动	Venue 地点
May 五月	19° Herbishow - Seminário sobre Controle de Plantas Daninhas na Cana	Ribeirão Preto
	Bahia Farm Show	Luís Eduardo Magalhães
	II Simpósio de Sementes e Genética de Soja	Londrina
	Agrotecnoleite	Morrinhos
	Hortitec	Holambra
June 六月	Simpósio Nacional da Agricultura Digital	Piracicaba
	Fórum Nacional de Trigo	Carambeí
	Expocitros	Cordeirópolis
July 七月	16° InsectShow - Seminário sobre Controle de Pragas da Cana	Ribeirão Preto
	Simpósio sobre Tecnologia de Produção de Cana	Piracicaba
	Fórum AllierBrasil	São Paulo
	Congresso de Aviação Agrícola	Sertãozinho
	Fenagra - Feira Internacional da Agroindústria	Campinas
	17º Encontro Nacional de Plantio Direto na Palha	Dourados



August 八月	13º Brazil AgroChem Show	São Paulo
	Congresso Brasileiro da Ciência das Plantas Daninhas	Rio Verde
	Simpósio da Cultura da Soja	Uberlândia
	56º CBO - Congresso Brasileiro de Olericultura	Bento Gonçalves
	Simpósio da cultura da soja	Uberlândia
September 九月	Congresso ANDAV	São Paulo
	28º Congresso Brasileiro de Entomologia	Curitiba
	Expointer 2020	Esteio
	FIIB - Feira Internacional da Irrigação Brasil	Campinas
	4º InovaCana	Ribeirão Preto
October 十月	22º Seminário de Mecanização e Produção de Cana	Ribeirão Preto
	12º AgroCampo	Maringá
	Congresso Nacional das Mulheres do Agronegócio	São Paulo
November 十一月	PorkExpo & Congresso Internacional de Suinocultura	Foz do Iguaçu
	Semana Internacional do Café	Belo Horizonte
	Global Agribusiness Forum	São Paulo
	Congresso Brasileiro de Sementes	Curitiba
	Fórum Rio + Agro : Inovações e Negócios Agropecuária	Rio de Janeiro
	19º Produtividade e Redução de Custos da Agroindústria Canavieira	Ribeirão Preto