



# Corteva Agriscience

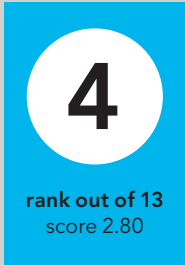
Access to Seeds Index

## Corporate data

Headquarters: Wilmington, Delaware, United States of America  
Ownership type: Listed  
Group revenue (2017): USD 14,342,000,000  
Seed revenue (2017): USD 8,250,322,000

www.corteva.com

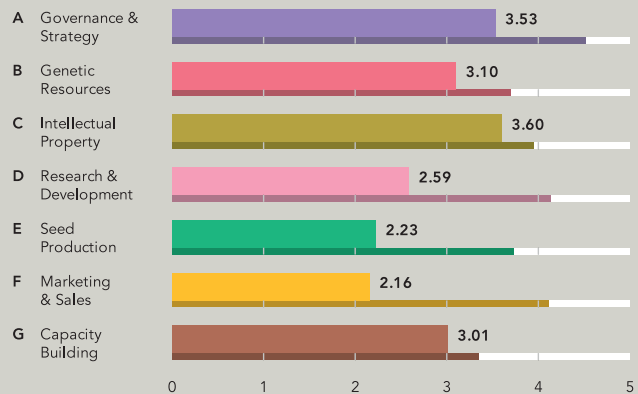
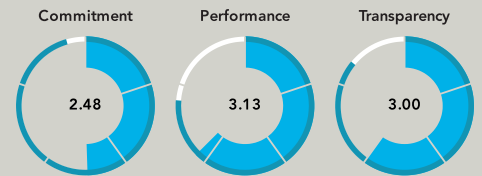
Corteva Agriscience™ (Corteva™) is the agriculture division of DowDuPont. DowDuPont was formed by the merger of Dow and DuPont, which was completed on August 31, 2017. The two companies merged their agriculture, materials science and specialty product portfolios. Corteva™ was established by combining DuPont Crop Protection, DuPont Pioneer and Dow AgroSciences and will separate from DowDuPont to become a publicly traded company in June 2019. It supplies a diverse range of field crop hybrids and varieties alongside crop protection products. In all index regions, the company primarily works through its Pioneer brand, with maize, rice and millets considered its main crops, while in Africa, Pannar is considered a significant maize brand.



## 2019 Index - Global Seed Companies

Corteva Agriscience ranks fourth in the 2019 Index. The company's strong performance in Governance & Strategy is attributable to its commitment to the Sustainable Development Goals and improving access to seeds for smallholder farmers and a focus on improving the enabling environment for the seed sector.

Its high score in Intellectual Property is the result of favorable company-wide positions regarding smallholder farmers and the licensing of its cutting-edge CRISPR-Cas technology. The company's hybrid maize adoption programs in Ethiopia, Ghana and Zambia are leading Capacity Building initiatives. A lower score in Marketing & Sales is due to the narrow geographic scope of activities reported, particularly with respect to demonstration programs and affordability schemes, while the absence of seed production locations in the index countries of Latin America and Western and Central Africa as well as a lack of a formal commitment to engaging smallholder farmers affects the company's score in Seed Production.



## Leading practices

■ Corteva Agriscience has licensed proprietary transformation and CRISPR-Cas gene editing technologies to a number of research organizations for the purpose of collaborating on improvements on food security crops. In its sustainability report, the company highlights the first use of the technology in a joint agreement with the International Maize and Wheat Improvement Center (CIMMYT) to combat maize lethal necrosis in sub-Saharan Africa.

■ The company has a comprehensive approach to tackling fall armyworm, combining classical breeding, transgenics, entomology and insecticides to address the insect pest that predominantly affects index countries, particularly in sub-Saharan Africa.

■ The company partners with the Government of Ethiopia and the United States Agency for International Development (USAID) on the Advanced Maize Seed Adoption Program (AMSAP), which aims to improve the productivity of smallholder farmers by providing training in the use of adapted hybrid maize varieties. The company reports that by 2016, 250,000 smallholders had realized average yield gains of 300%. Another 200,000 farmers are projected to be reached by the end of 2018.

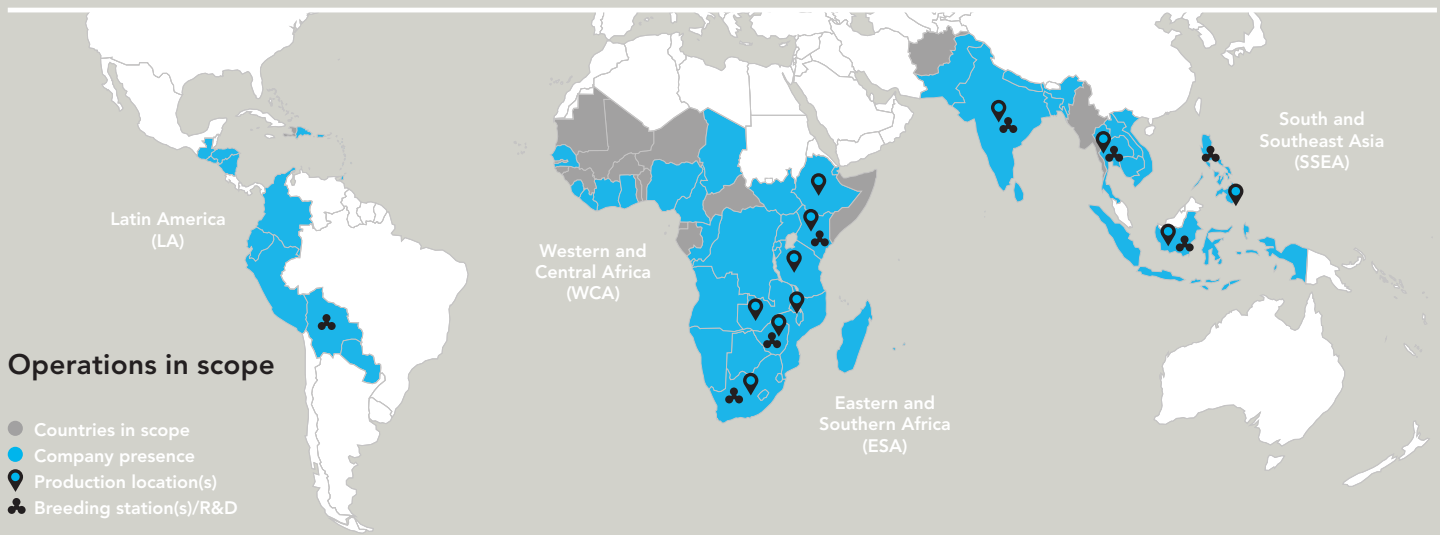
■ Alongside AMSAP, the company has successfully rolled out and replicated its maize adoption programs in Ghana (GAMSAP) and Zambia (ZAMSAP). Smallholders in Ghana have been given access to improved technology and improved their productivity, while Zambian farmers, over 60% of which are women and youths with limited resources and minimal access to output markets, received agronomic, financial and literacy training. The company also contributed to demonstration plots at 11 schools across northern Zambia.

## Areas for improvement

■ The company has seed production activities across index regions, particularly in Africa, in which it engages smallholder farmers. It is encouraged to formalize its commitment to engaging smallholder farmers in these activities as a means to enhance corporate accountability and to govern its relationship with smallholders therein.

■ The company reports on demonstration and promotion strategies targeting smallholder farmers in Ethiopia, India, the Philippines and Zambia, representing a small proportion of the countries in which it is present. Building on its experience in these countries, the company is encouraged to scale up its activities to other index countries.

■ The company lags behind its global peers when it comes to the use of ICT in its adoption and capacity building efforts. Although the company's subsidiary Pannar makes use of an app to disseminate variety and agronomic information, the benefit for smallholder farmers is unclear. With no further reported ICT-related programs or collaborations, the company is encouraged to explore the opportunities such technologies can offer with respect to improving the yields and productivity of smallholder farmers in index countries.



### Index crops in portfolio

	Sales				Seed type			Source		
	LA	WCA	ESA	SSEA	Hybrid	OPV	GM	Own breeding program	Public research institute	Licensed from other company
<b>Field Crops</b>										
Beans, dry			●			●		●		
Maize	●	●	●	●	●		●	●	●	
Millet				●	●			●		
Rice, paddy				●	●			●		●
Sorghum	●	●	●		●			●	●	
Soybean		●	●			●		●		
Sunflower	●		●		●			●		
Wheat			●			●		●		

### Local crops in portfolio

	Sales			
	LA	WCA	ESA	SSEA
Mustard				●

### Notable findings

■ Corteva Agriscience reports that 80% of its clientele in index regions - or 8,725,750 farmers - are smallholders

■ The company recently signed a memorandum of understanding with USAID as part of the agency's focus on increasing private sector partnerships. The five-year agreement will allow USAID's food security initiative Feed the Future and Corteva Agriscience to build on existing programs to scale agricultural technology for smallholder farmers in Africa.

■ The company has committed to improving the livelihoods of at least 3 million farmers and their rural communities by the end of 2020. It reports having already reached more than 2.8 million farmers through extension services or training.

■ The company has pledged to conserve and make available crop diversity by financially supporting the Global Crop Diversity Trust's projects and crop germplasm bank operations.

■ The company participates in product testing consortia with the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) for millet and the International Rice Research Institute (IRRI) for rice in South and Southeast Asia, in order to evaluate germplasm for biotic and abiotic stress traits and yield potential across several different testing environments. The company is also working with ICRISAT on a project to target rancidity pathways in millets, with the goal of reducing consequential postharvest storage losses.

■ The company breeds and tests for a number of pests and diseases within its crop portfolio, including leaf blight, bacterial stalk rot and fusarium rot in maize, brown plant hopper and false smut in rice and downy mildew and blast in millet.

■ The company has an ongoing research collaboration with the NGO Africa Harvest, the Kenya Agriculture Livestock Research Organization (KALRO) and the Institute for Agricultural Research in Nigeria to develop micronutrient-rich (iron, zinc and vitamin A) sorghum.

■ The company collaborates with CIMMYT in the Heat Tolerant Maize for Asia project in India, Nepal, Bangladesh and Pakistan.

■ The company's Child Labor Prevention Program and Contract Core Values, initiated in 2011, reflect its commitment to addressing five main elements in its seed supply chain: forced labor (including child labor), health and safety, living conditions and minimum wages. The company reports that it continues to take a community-based and multi-stakeholder approach to implementation, monitoring and auditing of the programs. The programs also include risk assessment, education, training and potential incentives and disincentives at the local level.

■ The company engages approximately 1,000 third parties to organize seed production activities in India, through which it uses long-term contracts to solidify its relationships with 58,000 seed producers, of which 80% are estimated to be smallholder farmers.

■ The company's programs in Ethiopia (AMSAP), Ghana (GAMSAP) and Zambia (ZAMSAP) encompass activities related to reducing postharvest losses and increasing access to credit, inputs and markets. In Ethiopia, new seed and grain warehouse facilities were built in local communities for postharvest grain storage, reducing losses by 30%.