OUR COMMITMENT TO
Sustainable
Agriculture Practices

Good for Business. Good for Society.
As one of the world’s largest food and beverage companies, we have some distinct challenges. We are committed to supporting economic development, working toward solutions to global nutrition challenges, establishing and maintaining a safe workplace, valuing our associates and helping to protect the earth’s natural resources.

Performance with Purpose is fundamental to our overall success. Financial performance can and must go hand-in-hand with sustainability. Our performance and our purpose are not separate—indeed, each is closely knitted with the other in all three of the areas that together form our purpose agenda: our products, our environment and our associates.

At PepsiCo, we rely on the earth’s natural resources to run our businesses. As we expand across many developed and developing markets, we are committed to minimizing the impact that our business has on the environment with practices that are socially responsible, scientifically based and economically sound.

We focus our environmental sustainability efforts on the areas where, because of our expertise, we can have the most impact: water, climate change, agriculture and packaging.

In addition to our own efforts, we rely on alliances that help us address the world’s most urgent environmental challenges. These relationships provide us with the perspective and knowledge to implement good ideas across our business and in the communities we serve.

As part of this approach, PepsiCo announced the “Promise of PepsiCo,” which includes a series of ambitious goals to improve our environmental performance, rethink our product portfolio and invest in our associates. Among these goals, we state that we strive to apply proven sustainable agriculture practices on our farmed land, and to provide funding, technical support and training to local farmers. Our growers, some of whom we have been working with for generations, will be important in helping us achieve our commitments.

We believe that PepsiCo’s Global Sustainable Agriculture Policy and Guiding Principles outlined in this brochure can help ensure long-term economic viability for our business and our growers.

Our relationship goes beyond farming. Whether we are helping a grower in India conserve water or a family in Mexico learn new practices for improving corn yields, PepsiCo’s commitment to our growers extends to every aspect of our business. Please join us in our quest to apply sustainable agriculture practices to farmed land while making a positive contribution to the world around us.
PepsiCo Sustainable Agriculture Policy

As a global food and beverage company, agriculture is one of the largest elements of our environmental footprint, so we work hard to continually improve our agriculture processes. PepsiCo also invests in new knowledge and innovation in farming practices, which can improve the welfare of our growers and those communities that are part of our agriculture supply chain.

As we continue our journey in sustainable agriculture, PepsiCo has launched its Global Sustainable Agriculture Policy—a policy grounded upon a set of principles developed to encourage our growers to operate in a way that protects their land and communities. Our decisions, our processes and our actions—and those of our growers—are intended to be guided by this global policy.

This policy is recognized throughout the PepsiCo supply chain and our growers are encouraged to adhere to the principles that directly relate to their geographic region and/or country government regulations.

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**Global Sustainable Agriculture Policy & Guiding Principles:**

**WATER MANAGEMENT**

PepsiCo aims to optimize the applied water footprint to crops and to reduce water waste during irrigation as well as responsibly manage runoff risks of pollution or contamination of ground or surface water with pesticides, nutrients or soil.

**SOIL CONSERVATION & PRESERVATION**

PepsiCo aims to preserve and improve soil fertility and nutrients, minimize soil loss through erosion and avoid soil damage due to disease and contamination.

**AGROCHEMICAL MANAGEMENT**

PepsiCo aims to optimize the use of pesticides, nutrients, and other agrochemicals. PepsiCo supports sustainable practices that substitute natural controls for some agrochemicals, foster ecosystem balance, reduce direct and indirect greenhouse gas emissions and reduce crop losses.

**ENERGY MANAGEMENT**

PepsiCo aims to optimize the use of energy in crop production and management of agriculture waste to improve economics for the farm and reduce both direct and indirect greenhouse gas emissions.

**FARM ECONOMICS & LAND MANAGEMENT**

PepsiCo supports sustainable agriculture practices that enable farmers to improve product value by maximizing the desired outputs of an agriculture system while minimizing the required inputs and avoiding any negative impacts to the farm and surrounding lands. PepsiCo aims to work with farmers that develop a long-term economic plan of efficient, responsible farm production.

**SOCIAL & COMMUNITY IMPROVEMENT**

PepsiCo aims to invest in new knowledge and innovations in farming practices which can improve both social and human capital of the local economies. Sustainable agriculture practices can help to make the best use of local and available resources to improve the welfare of communities supporting our agriculture supply chain.
PepsiCo has launched a number of initiatives that demonstrate the ways in which we apply our policy and guiding principles around the world.

WATER MANAGEMENT

Saving Water by Direct Seeding of Rice

India grows approximately 130 million tons of rice across roughly 108 million acres, making it one of the largest rice producers in the world. Traditionally, rice is cultivated by sowing seeds in a small nursery, where the seeds germinate into seedlings. The seedlings are then transferred manually into the main field and then grown with four to five inches of water at the base of the crop for the first six to eight weeks, mainly to prevent weed growth.

In India, a region that faces severe water shortages, an agriculture process called direct seeding of rice helps growers avoid three water-intensive steps: puddling, transplanting and standing water. After successful trials with direct seeding in PepsiCo’s research and development fields, the company has developed a direct seeding machine for its farmers. In 2010, PepsiCo expanded direct seeding and applied it to approximately 10,000 acres, saving more than 7 billion liters of water. And, because in direct seeding there is no water at the base of the crop, there is also a 70 percent reduction of greenhouse gas emissions.

FACTS

- Agriculture uses 70% of the world’s water.
- In developing countries, 80%—90% of fresh water is used for agriculture.
- Only 17% of all cropland is irrigated, but it provides 30%—40% of the world’s food production.
- More than 60% of the world’s irrigated area is in Asia, most of which is devoted to the production of rice.

ABOVE: PepsiCo introduced, for the first time in India, a special tractor with a direct seeding machine adjustable for seed variety, planting depth and plant-to-plant spacing. RIGHT: Direct seeding of rice technology is also reducing costs for farmers like this one in Punjab, India.
Growing Oats Protects the Soil

Oats provide excellent soil erosion control. In Canada, many areas of our supplies are planted with zero tillage, a way of growing crops from year to year without disturbing the soil through excessive use of cultivation practices. Advancements in machinery technology and weed control chemicals have made zero tillage a viable farmer practice that promotes soil, water and wind erosion reductions.

Oats have an extremely fibrous and prolific root system similar to, and in some cases, better than wheat and barley. Many farmers use oats in areas with soil erosion risks from other crops to control further damage and help stabilize the soil. The extensive root system of oats enables the crop to efficiently utilize available nutrients in the soil, resulting in a lower requirement for applied fertilizers than many other crops. Other than weed control, few to no chemical additives are required to grow oats, because the crop is resistant to many soil-borne diseases.

Compared to other crops including wheat, rice, corn and soy, oats serve as a premier rotation crop, and the straw and crop residues returned to the soil are viewed as good sources of crop nutrients.

In addition, Quaker Oats’ grains are grown from a select group of varieties that have been bred from a diverse germplasm to assure high productivity and optimal nutritional content.

**FACTS**

- Soil degradation has reduced global agriculture productivity by 13% in the last 50 years.
- Without innovative conservation and preservation techniques, 12 million hectares—or enough land to grow 20 million tons of grain—are lost to desertification each year. This annual loss is about the size of Greece or Nepal, and represents enough grain to feed over 6 million people per year.

Quaker Oats has worked with farmers for over 70 years and offers 100 percent North American-grown oats.
AGROCHEMICAL MANAGEMENT

Optimizing Agrochemical Application

PepsiCo has several ongoing projects to try to minimize fungicide usage in Russia, the UK and Egypt. One of these projects provides online data that advises growers on the correct type, amount, and time to apply fungicides for effective control of the late blight pathogen. These tools increase fungicide use efficiency and often lower the amount of active ingredient applied.

Pest management plans encourage the use of tools, such as weather monitoring, to predict the arrival of plant pathogens, which result in targeted pesticide applications.

PepsiCo is actively engaged in basic and applied research to control “Zebra Chip” (ZC), a disease resulting from bacterial infection in potatoes. This disease causes significant quality defects in potato chips in several countries across the globe, and is transmitted by the potato psyllid, an insect which is challenging to control.

Frito-Lay, with the industry’s support, introduced new science-based solutions to replace organophosphates and more effectively control the potato psyllid. This targeted approach to pest management can reduce risk to non-target organisms, such as pollinators and other beneficials. Pest management plans have led to increased scouting programs to monitor for the arrival of the potato psyllid. Through effective surveillance of the potato psyllid population, the total number of insecticide applications has been reduced.

ENERGY MANAGEMENT

Developing Sources of Low-Carbon Fertilizer

Tropicana Pure Premium orange juice is the first consumer product in the U.S. to obtain a carbon footprint certified by the Carbon Trust. The results found that almost 40 percent of the carbon footprint was from the growing of oranges, with the main contributor associated with the manufacturing process of standard fertilizers.

To reduce the carbon footprint of this product, PepsiCo launched a three-year, 7,200-tree pilot project in Florida in 2010, which is designed to compare low carbon fertilizers with standard fertilizer and measure the impact on tree and soil health and quality of juice. The first year results look encouraging. As a result of this work, Tropicana plans to deploy the best fertilizer solutions across their Florida supply base and globally to citrus and other crop production.

Reducing Irrigation Water While Increasing Potato Yields

For three years, PepsiCo has been evaluating the impact of drip irrigation technology on water and chemical use efficiency and its effect on the energy footprint of potato production. In the U.S., a study showed success in reducing irrigation water by more than 20 percent, with an average yield increase of 19 percent. By utilizing drip irrigation to deliver crop inputs, the number of tractor passes through the field can be reduced while optimizing timing and accuracy of delivery. Nitrogen was applied several times in smaller targeted amounts, optimizing nutrient uptake and avoiding leaching versus conventional fertilizer application that applies the entire amount at the beginning of the season. This application method resulted in improved plant health and better crop yield, and saved one tractor pass that equates to a savings of $15 per acre.

FACTS

- In 2009, weeds, pathogens and insects caused approximately $225 billion in lost food value in the U.S. alone.
- Crop rotation and other prevention tactics being used in the UK to control pests without the use of chemicals are now being shared across our global programs.

- New types of fertilizer—due to different manufacturing processes and chemical composition—emit less carbon.
- New methods, such as precision agriculture, are helping farmers around the world to more precisely evaluate crops and their requirements to produce optimum yields.
Pioneering Crop Initiatives in Desert Conditions

PepsiCo China developed a highly productive method of growing potatoes, wheat and corn in Inner Mongolia. This is a tangible demonstration to both the Chinese government and local farmers of technologies to improve low productive soils and models to improve soil stability in areas ravaged by sand storms. PepsiCo has installed the necessary infrastructure (roads, electric supply), water-conserving pivot irrigators and sand dune stabilizing crops (sand willows, trees) to protect soil from erosion caused by sand storms.

Partnerships with local farmers in other areas of China have introduced pivot irrigation as an alternative to traditional flood irrigation with an initial water savings of 30 percent. This enables PepsiCo to rotate commercially viable crops, including winter wheat, potato, sorghum and corn. PepsiCo is moving one step further by developing drip irrigation, with the aim of conserving 50 percent of the water used as compared to traditional farming methods.

PepsiCo-managed potato farms in China annually supply over 40,000 tons of potatoes. Beyond farming, PepsiCo is also helping to enhance the social development of farmers and their families. For example, PepsiCo builds libraries in local communities to promote literacy and education for children of the local farmers.

Creating Sustainable Corn Initiative in Developing Communities

Sabritas, PepsiCo’s snack business in Mexico, was awarded a high honor from the President of Mexico for its commitment to support farming through the Educampo program. Educampo contributes to the overall development of low-income farming families in corn-producing communities, while also guaranteeing high-quality seeds for our snacks production in Jalisco. This is an example of how our company and the community’s interests intersect.

Educampo was established through an alliance between Sabritas Foundation and the Mexican Foundation for Rural Development (FUNDAR), an organization dedicated to promoting progress in poor farming communities. This program promotes the creation of small sustainable agriculture businesses and positively impacts people’s lives. Between 2008 and 2010, the program had impressive results:

- Total surface managed: 1,827 hectares
- Corn purchased by Sabritas: 9,500 tons
- Corn yield: Doubled from 2.5 tons/hectare to 5.2 tons/hectare increasing their average crop yield by 108 percent

FACTS

- The program impacted nearly 300 small farmers and their families through technical support and 12,237 hours of education.
- Land productivity in targeted areas increased by 80% and income increased by 300%.
- The impact of the program was felt by 1,200 indirect beneficiaries including producers’ families.
ABOUT PEPSICO

PepsiCo offers the world’s largest portfolio of billion-dollar food and beverage brands, including 19 different product lines that generate more than $1 billion in annual retail sales each. Our main businesses—Quaker, Tropicana, Gatorade, Frito-Lay, and Pepsi Cola—also make hundreds of other enjoyable and wholesome foods and beverages that are respected household names throughout the world. With net revenues of approximately $60 billion, PepsiCo’s people are united by our unique commitment to sustainable growth by investing in a healthier future for people and our planet, which we believe also means a more successful future for PepsiCo. We call this commitment Performance with Purpose: PepsiCo’s promise to provide a wide range of foods and beverages for local tastes; to find innovative ways to minimize our impact on the environment, including by conserving energy and water usage, and reducing packaging volume; to provide a great workplace for our associates; and to respect, support, and invest in the local communities where we operate. For more information, please visit www.pepsico.com.