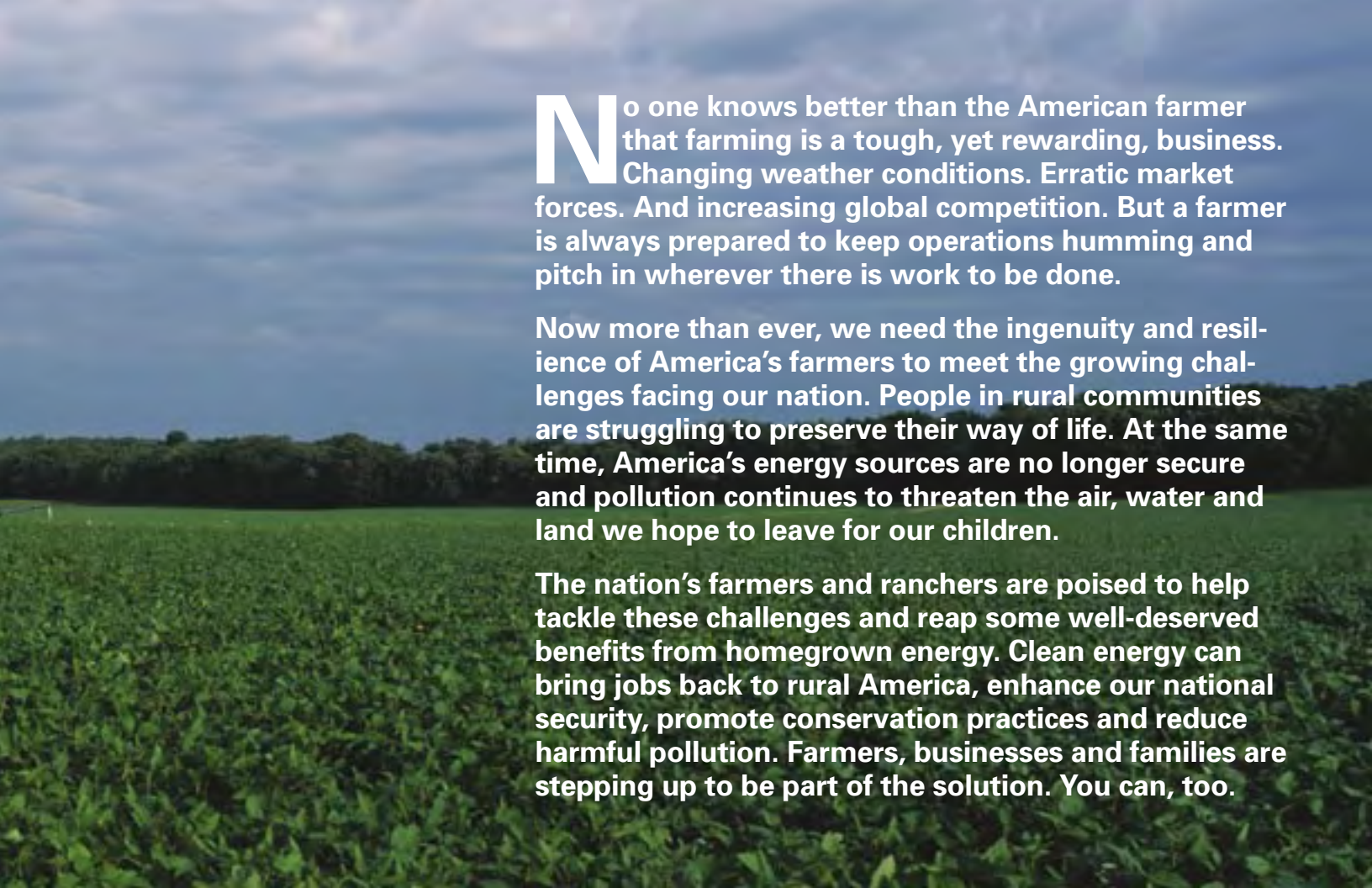




# Homegrown Energy: America's New Power Plants



A large field of green crops, likely corn, stretches across the foreground and middle ground. The sky above is filled with heavy, grey clouds, suggesting an overcast day. The overall scene is a rural landscape.

**N**o one knows better than the American farmer that farming is a tough, yet rewarding, business. Changing weather conditions. Erratic market forces. And increasing global competition. But a farmer is always prepared to keep operations humming and pitch in wherever there is work to be done.

Now more than ever, we need the ingenuity and resilience of America's farmers to meet the growing challenges facing our nation. People in rural communities are struggling to preserve their way of life. At the same time, America's energy sources are no longer secure and pollution continues to threaten the air, water and land we hope to leave for our children.

The nation's farmers and ranchers are poised to help tackle these challenges and reap some well-deserved benefits from homegrown energy. Clean energy can bring jobs back to rural America, enhance our national security, promote conservation practices and reduce harmful pollution. Farmers, businesses and families are stepping up to be part of the solution. You can, too.

# Homegrown Energy Is Reviving Rural Communities

The way we farm is rapidly changing rural America and agricultural policy must adapt to new social, economic and environmental forces. Smart policy can rejuvenate rural communities by creating high-paying jobs, boosting local tax revenues, creating partnership opportunities for local businesses and cleaning up the environment. Leading the way are clean, renewable biofuels.

The U.S. ethanol fuel industry is booming. It took 10 years for industry to produce a billion gallons per year. It took 10 more years to increase production to 2 billion gallons per year. Yet in the last two years, production has increased to 3 billion gallons annually. This is a testament to the will and dedication of responsive growers who are sparking capital investment, economic development and job creation in their communities.

*"The promotion of farm and forestry bioenergy will assist in the creation of new economic opportunities, within our rural communities, while rural areas benefit from cleaner and more sustainable energy sources."*

Sharon Ruggi  
President  
National Association of  
Resource Conservation &  
Development Councils





# Homegrown Energy Can Make America More Secure

America consumes more than 20 million barrels of oil every day to power our cars, trucks, tractors and homes, yet we have less than 3 percent of all known oil reserves. That means we have to import more than half of our oil from regions of the world such as the Middle East—leaving us dangerously dependent on a single energy source to keep our economy moving. Farmers can help solve America's energy problems by producing clean, renewable energy sources. Through the production of domestic liquid fuels, such as ethanol and biodiesel, from a range of crop and biomass

sources, we can stretch our nation's fuel supplies and reduce the amount of imported oil by millions of barrels each day. Through digesters that convert methane from animal waste to electricity, we can also reduce our overall demand for energy. Through the production of wind and solar energy, we can diversify America's energy sources even more. Renewable fuels produced right here at home ensure a safe, reliable source of energy while generating significant economic benefits to the nation.



**Corn Ethanol.** Today's biofuels are largely produced from corn, which is a great start for the biofuels industry. Modern biorefineries can make plastic and high-quality animal feed from corn after making ethanol.

**Biodiesel.** Made in America, mainly from soybean oil, biodiesel can be mixed directly with petroleum diesel to offset diesel consumption and lower emissions from all diesel engines, including farm equipment.



**Ethanol from Biomass.** New technologies are making it possible to also produce ethanol from a wider range of materials. Examples include corn stover, wheat straw and other agricultural and forestry residues, as well as dedicated energy crops such as switchgrass. Bioengineered enzymes and microorganisms break down the cellulose in these materials to yield fermentable sugars that produce ethanol.



**Wind Energy.** Wind power works well with farms because wind turbines need only a small area of land, can operate alongside everyday farming operations and can provide farmers with lucrative royalties or rent payments.

**Energy Efficiency.** Farming operations require a significant amount of energy. Energy efficiency on farms is a critical way for agriculture to reduce energy costs and improve the bottom line. Energy efficiency also contributes to energy independence and helps to reduce global warming emissions.



**Biodigesters.** Dairy farms and other livestock operations can capture methane, a greenhouse gas, from animal waste storage. Farmers can use the methane to meet on-farm energy needs and sell excess electricity to the local utility. Odor control is another significant benefit methane digesters offer for farms and ranches.

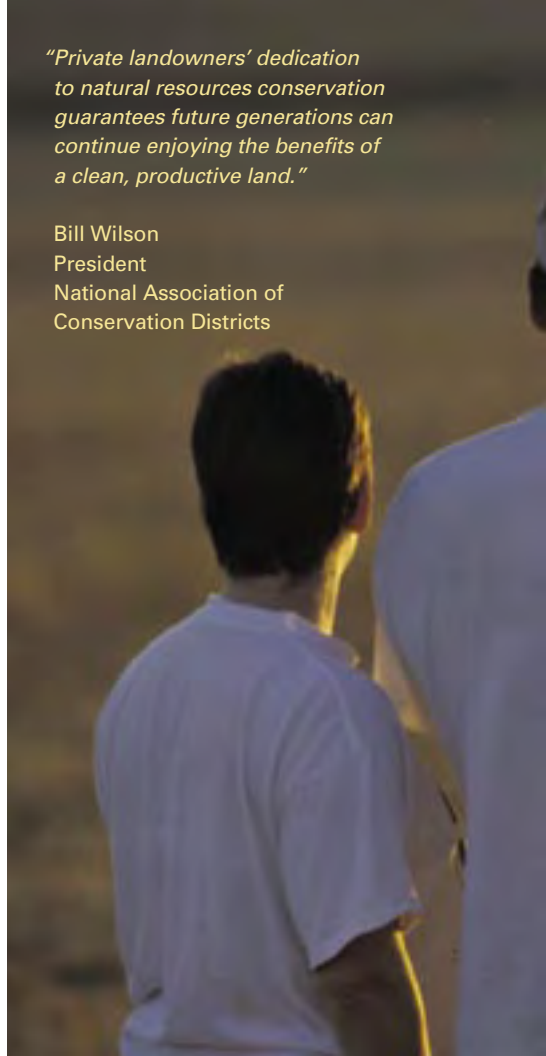
# Homegrown Energy Will Leave a Better World for Our Children

Many farmers today are practicing conservation methods that reduce fuel use and store carbon in the soil. But more can be done. By using fertilizers more efficiently and adopting less intensive, low-tillage techniques, farmers can not only save energy, but also reduce nitrous oxide emissions. Increasing the use of ethanol and biodiesel makes good economic sense, helps reduce America's dependence on oil, and curbs greenhouse gas emissions and other pollution.

Wind energy helps reduce emissions from the electricity sector. And solar energy can fuel things such as dryers, pumps and electric fencing. By producing renewable energy and using conservation best management practices, farmers can generate new revenue and help leave a cleaner, healthier world for the next generation.

*"Private landowners' dedication to natural resources conservation guarantees future generations can continue enjoying the benefits of a clean, productive land."*

Bill Wilson  
President  
National Association of  
Conservation Districts







### **Global Warming Has Local Consequences**

Global warming occurs through the build up of excess heat-trapping gases in the atmosphere as a result of burning fossil fuels and from some land-use activities. Farming is at risk from more unpredictable weather, more pests and diseases, and longer and more intense droughts. Fortunately, local action can make a difference.

Farmers and ranchers are already helping by implementing conservation practices, such as conservation tillage and buffers, planting trees, and producing biofuels and other renewable energy. Policies that reduce greenhouse gas emissions could reward farmers for continuing these practices and create new markets that strengthen the future of farming in America.

# It's in Our Hands

**In today's complex world of market fluctuations, national security risks and global politics, we cannot sit back and hope things turn out for the best. We must take matters into our own hands. We need to bring jobs back to rural America, enhance our national security, and reduce the causes of global warming—and our national, state and local governments should do their part—so our children and their children can have a future of opportunity.**

## **Here are a few ways that you can help:**

- Consider whether homegrown energy solutions such as wind energy and anaerobic digesters make sense for your farm.
- Use conservation best management practices to improve soil health and productivity, which also reduces energy use and global warming pollution.
- Support your local biodiesel or ethanol facility and help reduce America's dependence on oil.
- Support policies that fund pioneering research to advance renewable energy such as ethanol, biodiesel and biodigesters.
- Ask your elected officials to set policies that recognize the climate benefits of soil conservation, carbon sequestration and the use of alternative energy sources that will open new markets for homegrown energy.





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The NACD is a nongovernmental nonprofit organization representing nearly 3,000 soil and water conservation districts and their state associations in the 50 states, Puerto Rico, the Virgin Islands, Guam/Micronesia, Republic of Palau, and the District of Columbia. The primary function of NACD is to serve the member districts and associations as one voice utilizing the force of local initiative and self-government in the conservation and development of natural resources.



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The NARC&DC is a nonprofit organization representing the 375 Resource Conservation & Development Councils (RC&D) across the nation including Guam, American Samoa, Mariana Islands, Puerto Rico and the Virgin Islands. The purpose of the RC&D Program is to encourage and improve the capability of volunteer, locally elected, and civic leaders in designated RC&D areas to deliver coordinated resource conservation and rural development assistance throughout rural America.



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The Natural Resources Defense Council (NRDC) is a nonprofit organization that uses science, advocacy, and the support of more than 700,000 members to protect the world's natural resources, public health, and the environment. We work on a nonpartisan basis at the national, state, and local levels to achieve these goals by supporting legislation, enforcing existing laws, educating the public and collaborating with business groups and communities to develop innovative approaches to environmental problems.

