Call for food revolution based on soil health

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Australia needs a nationwide effort to raise soil fertility, guarantee food security and a healthy diet - and lock up carbon.

The call comes from the Australian Soil Consortium (ASC), a group of leading farmers, agribusiness companies and scientists who are concerned for the future of one of the nation's most valuable assets.

"Improving our soil productivity could increase farm yields by 10-15%, adding around $5 billion a year to the nation's bottom line," says South Australian wheat farmer and ASC chair, David Shannon.

"Fertile soils naturally contain more carbon, so this is also a highly practical way to deliver on Australia's commitment to lower carbon emissions.

"At the same time it will underpin national food security and export earnings into the future, at a time of growing instability in world food production and prices."

Eminent soil scientist Professor Roger Swift said world demand for food was expected to increase by at least 50% in volume and 77% in value by 2050 - mainly in Asia.

"This is a once-in-a- generation opportunity for Australia to become a major supplier to one of the fastest growing and dynamic regions in the world. However, our farm productivity has been declining since the mid-1990s.

"If we fail to tackle this decline in the face of rising demand, it will result in:

• Higher food prices for all Australians.
• Lower profits for farmers.
• Heavier competition in our export markets from new players.
• Regional Australia missing out on a golden opportunity for economic growth."

"Soil is the primary asset for agriculture," Prof. Swift said. "A step-change in soil productivity will transform productivity across rural Australia. Improving soil health alone can increase productivity by around 10%, and combined with efficient new crop varieties can lift output even more.

"Healthy soils also mean healthier, more affordable food for city Australians – so the benefits are shared by the entire nation.

"Well-managed healthy soils can also lock up more carbon – and this is central to our national commitment to reduce emissions."

The Australian Soil Consortium is calling for a new national research effort, focussed on:

1. Engaging Producers, Consumers and Policy-Makers – new knowledge about the economic and societal factors that will shape consumer preferences, social acceptability and the adoption of innovation by producers.
2. Measuring and Monitoring Soil Health – defining appropriate thresholds, methods and technologies for more accurate and rapid monitoring of soil health to drive productivity.
3. Innovative Farm Practices and Technologies – new technology, methods and knowledge that drive input efficiencies within the farming

system.
4. Novel Soil-Plant Interfaces – new knowledge and models to identify plant traits for increased nutrient and water use efficiency.

Mr Shannon said "This is the soils revolution that farmers have been desperately waiting for since the Green Revolution forty years ago. It's open to Australia to become the world leader.

"Most people don't know it, but every meal they eat results in loss of topsoil. That applies worldwide. It means we are mining our planet in order to feed ourselves – and we urgently need to find better ways of doing it.

"We believe that by combining the skills of Australian farmers, the talent of our researchers and the expertise of agribusiness around soil, we can create a new, sustainable, revolution in food production that will benefit everyone – consumers especially.

"This will help keep the lid on rising world food prices, ensure a healthier and more reliable food supply, and also reduce the risks faced by food production from climate change. These are issues which concern not just farmers, but every Australian and, indeed, every person on the Planet."

Provided by Australian Soil Consortium