

SAFE-World Project/Initiative Summary

Country: Senegal

Project/Initiative Title: Rodale Regenerating Agriculture Center

Nos. farmers: 2000

Hectares:2000

Agro-Ecological Zone: II

Improvement types

1x	2	3x	4	5x	6x	7	8	9
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A. Key Impacts

A1 - Productivity

	Before/Without	After/With	% change
Sorghum/millet	340 kg/ha	600-1000kg/ha	76-195%

A3 - Impacts on local community (social capital)

59 farmers' groups formed

B. Types of Sustainable Agriculture Improvements

Type 1: Better use of available renewable natural capital

Type 2: Intensification of single sub-component of farm system

Type 3: Diversify by adding new productive natural capital and regenerative components

Type 4: Better use of non-renewable inputs and technologies

Type 5: Social and participatory processes leading to group action for making better use of natural capital

Type 6: Human capital building through training-learning programmes

Type 7: Access to Finance

Type 8: Add value by processing to reduce losses and increase returns

Type 9: Add value by direct or organised marketing of produce to consumers

	Yes/No	Narrative
Type 1	x	Water harvesting, composting
Type 2		
Type 3	x	Rock phosphate
Type 4		
Type 5	x	59 farmers' groups formed
Type 6	x	
Type 7		
Type 8		
Type 9		

D. Contact Point for Project/Initiative

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E. Project Narrative

Senegal: Rodale Regenerative Agriculture Research Center

In Sahelian countries, the major constraints to food production are related to soils, most of which are sandy and low in organic matter. Where they are heavier and better in quality, they are subject to intensive use and so exposed to erosion by water and wind. In Senegal, soil erosion and degradation threaten large areas of agricultural land. Since 1987, the Rodale Institute Regenerative Agriculture Research Center has worked closely with farmers associations and government researchers to improve the quality of soils in Senegal by using agroecological methods.

Regenerative agriculture in the peanut basin has resulted in positive biophysical, environmental, social and economic benefits. The primary cropping system of the region is a millet-groundnut rotation. Fields are cleared by burning, and then cultivated with shallow tillage using animals. But fallow periods have decreased dramatically, and the use of inorganic fertilizers and pesticides is rare amongst smallholders, owing to high prices. It has also been well-established that inorganic fertilizers do not return expected yields unless there is concurrent improvements in organic matter – nutrients are washed away by the first rains, or are taken up by soil microbes and weeds. Soils low in organic matter also do not retain moisture well.

The RARC works with about 2000 farmers in 59 groups to improve the soil quality, integrate stall-fed livestock into crop systems, add legumes and green manures, improve the use of manures and rock phosphate, incorporate water harvesting systems, and develop effective composting systems. The result has been a 75-195% improvement in millet yields – from 330 to 600-1000 kg/ha, and in groundnut yields from 340 to 600-900 kg/ha. Yields are also less variable year on year, with consequent improvements in household food security. As Amadou Diop has put it: *“crop yields are ultimately uncoupled from annual rainfall amounts. Droughts, while having a negative effect on yields, do not result in total crop failure”*.

Sources: Amadou Diop; Diop, 2000

Data for this project is in hard copy format and is not currently available electronically. If you would like further information please contact Amadou Diop at the above address.