

Morocco

Policy action for productive and sustainable agriculture

Context

Agriculture plays an important socioeconomic role in Morocco, representing 15% of the country's gross national product in 2022 (11% for agriculture in the primary sector and 4% for the agrifood sector) and 14% of the value of total exports in 2022, and employing approximately 38% of the population. The Green Morocco Plan 2008–2020 has worked towards strengthening agricultural sectors, increasing productivity and exports. Climate change, characterized by



insufficient rainfall and high temperatures, has impacted the productivity of major crops. In addition, the increase in population generates a growing demand for agricultural products, which, combined with geopolitical factors such as the war in Ukraine, has impacted the availability and price of cereals and oilseeds. Consequently, Morocco is compelled to develop a more resilient agriculture to ensure it can meet essential needs in cereals, legumes, meats, fruits and vegetables.

Key agricultural research under the **Generation Green strategy (2020–2030)** involves several programmes for innovative, productive and resilient agriculture. This note focuses on approaches to incentivize soil health for sustainable production. It is well established that the practice of conservation agriculture (no-till system) improves soil health by maintaining water in the soil, preserving soil organic matter and biodiversity, reducing erosion, sequestering carbon and using less energy than conventional tilling. As a result, adopting a conservation agriculture approach can lead to higher crop yield (on average by 30%) compared to conventional tilling, increased carbon sequestration, from less than 1.5% to over 2% of organic matter and 13% after 10 years (-67 t/ha eq CO₂), 60% savings in production costs and 50% reduction in soil erosion (-15 t/ha/yr).

For these reasons, the Moroccan Ministry of Agriculture plans to transition 1 M ha, of the 4 M ha rain-fed area dedicated to cereals, from conventional tilling to conservation agriculture.

Rationale

The behaviour shift entails farmers transitioning from conventional to conservation agriculture. This shift requires investments from the government and other stakeholders in seeders as an

incentive for farmers not yet adopting conservation agriculture. It also needs a large programme of public extension services, capacity building and research.

Approach

The government is subsidizing the purchase of no-till system seeders. Seventy seeders were acquired in 2022, and an additional 130 seeders will be acquired in 2023. These seeders will be made available to small farmers through cooperatives. On average, each seeder will cover 400 ha per year.

In addition to implementing conservation agriculture approach, measures are being taken to address the challenge of drought. There are programmes in place to develop resilient varieties of cereals and legumes as well as to improve water use efficiency through irrigation techniques such as drip irrigation and supplementary irrigation.

Results achieved

The implementation of direct seeding to address drought and soil health issues has been successfully launched since 2020/21 aiming to cover 1 M ha by 2030. The plan is ongoing, the table below presents the realizations in 2020/21, 2021/22, 2022/23 and the plan in the following years.

CA	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30
Ha	15,000	38,000	53,000	85,000	200,000	300,000	400,000	540,000	730,000	895,000	1,000,000

Lessons learned

The plan to implement conservation agriculture will require a continued commitment from the government to support small farmers with seeders and potentially assist in the purchase of feed for animals, as conservation agriculture requires farmers to leave staple crops in the field and not let animals feed on them.

All stakeholders, including extension services, farmers' associations, research and development institutions and funders, are contributing to the success of this initiative.

Finally, the adoption of conservation agriculture will enhance yields. When combining this practice with other actions, such as utilizing drought-tolerant varieties, it will contribute to the development of resilient agriculture, leading Morocco towards food security.

This is one in a set of country case studies demonstrating policy action that individual countries are taking with the aim of transition to sustainable agriculture. They are country owned and do not represent wider views of the Policy Dialogue participants.