

Area Yield Index Insurance: Pakistan Agricultural Coalition's climate resilience solution for Pakistan's smallholder farmers

Pakistan's 7.4 million smallholder farmers face increasing risks due to the impacts of climate change. The changes include flux in average temperature and precipitation as well as increases in the variability of weather and climate events.

The type of crop insurance best suited for small farmers is Area Yield Index-based Insurance (AYII). In AYII, if the yield in a specified area goes a certain level below the area's historical average yield, then farmers in the area receive a pay out. By using statistical methods, satellite data, and crop cuts on a random selection of the area's farms to determine the average yield, AYII eliminates the administrative cost of going to each individual small farm for a survey which would be prohibitively expensive. Since AYII is linked to the average yield of the area, it allows for multiple factors that may affect crops such as heat waves, pest attack, diseases, etc.

AYII is also the recommended type of crop insurance by a Government of Pakistan crop insurance task force. Under the Government of Pakistan's National Financial Inclusion Strategy, a key goal is to launch a National Crop Insurance Scheme for all farmers. A government-notified task force led by SECP with participation of multiple federal and provincial government stakeholders (including the Federal Ministry of National Food Security and Research) recommended AYII in December 2020 as the mechanism of choice for reaching smallholder farmers across Pakistan. This was piloted by private sector partners by Pakistan Agricultural Coalition in 2021-22 and 2022-23 in four districts of Punjab.

The first pilot in the Rabi season of 2021-2022 on wheat crop as AYII provides better coverage and a higher chance of payout for small farmers. Bank of Punjab and HBL were the participating banks, and TPL Insurance was the insurance provider. TPL Insurance also had an insurer-reinsurer agreement with SCOR, a global reinsurer to split the insurance risk. The trigger in this pilot was a threshold of 70% yield of the average yield of the last 10 years in each target district. The advantage of AYII as compared to conventional crop loan insurance is that it is not dependent on declaration of a calamity to trigger a payout. The result was that from among the four districts in which AYII was piloted, District Sheikhpura's wheat yields were around 68% of the last 10-years' average yield due to the intense heat wave that affected wheat grain formation and the participating farmers from that district received a payout.

In the subsequent pilot in the 2022-23 wheat season, farmers got pay outs under AYII due to excessive rainfall across the border which led to overflow of the River Sutlej which caused extensive damage to crops.

These pilots have served as a proof-of-concept and have demonstrated the potential of crop insurance based on AYII successfully. Based on this success, the Government of Sindh has made an allocation for insurance premium subsidy to cover 80,000 small farmers of cotton and rice (hit the hardest by last year's devastating floods) as a pilot in FY24. It needs to be scaled up with government support for insurance premium.