

SMI - PRODUCT INFORMATION

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Background

The landscape for agricultural input finance in South Africa is changing from traditional collateral-based lending to off-balance sheet lending. The main difference between the two concepts lies in the nature of the collateral used as risk mitigators. Off-balance sheet finance no longer utilizes fixed assets as collateral. Instead, the crop itself, and its associated income stream, serve as collateral. Input finance is short-term loans provided by lenders on a seasonal basis to cover the input cost for cash crop production, mainly grain. Within the framework of the agreed lending criteria and policy, the lender will advance money in a phased process during the production season based on the achievement of agreed milestones. Because the off-balance sheet lending concept no longer relies on fixed assets as collateral to loans, it is important to ensure that the entire supply chain is adequately de-risked within the three main risk areas of the farming operation:

Production Risk can be mitigated through various crop insurance products such as hail, drought, and index-based insurance.

Price Risk can be mitigated through grain offtake agreements, forward contracts, and other hedging instruments acquired on the stock exchange, also known as SAFEX.

Management Risk can be mitigated through skillful management and controls supported by physical and remote sensing monitoring programs as well as other technology-based tools such as platforms where production-related activities are recorded and monitored for optimal real-time observations.

The risk of adverse planting conditions. Crops must be planted within a specified calendar window. For planting to commence, the soil moisture levels in the ground must be conducive for seeds to germinate and emerge. In case conditions are not conducive for planting by the planting cut-off date for the specific crop, and the farmer decides to continue planting, the crop is likely to fail. This poses a financial risk for multiple supply chain stakeholders, including lenders and other input providers, because a substantial amount of the funds have already been spent on soil preparation and the acquisition of input supplies such as seed, fertilizer, and chemicals. In this instance, Agnovate's SMI provides protection against losses incurred before the crop, which is supposed to serve as collateral, is planted.

The mid-summer drought period, which can occur from early January to the middle of March, is well-known to all summer crop producers. During this period, the plant's demand for water is very high in order to sustain its physiological development needs in terms of its advanced growth stage. In case of a severe mid-summer drought, a shortage of soil moisture leads to plant stress and eventually a decline in potential yield.

Agnovate's SMI provides protection against a potential loss of revenue because of subsequent yield loss as a result of drought-related stress.





How does SMI work?



Risk Area

Soil moisture is measured on an index basis in an index area called a grid cell. Each grid cell is approximately 10km x 11km in size.

Soil Moisture Data

The soil moisture data is provided by the European Space Agencies' Copernicus program with a specialized range of satellites. The data in each area is analyzed over a long term of multiple decades to establish the average soil moisture for each risk period in each grid cell as well as the standard deviations (anomalies). This analysis forms the basis of the insurance model, including the insurance rate, the point at which the policy will trigger, and the values used to calculate loss payments.

Risk Period

A range of pre-determined risk periods is available per grid cell. The insured can select the risk period for which cover is required, for example, a multiple-week planting period applicable for the region in which the grid cell is located. The insured can select a single risk period or multiple risk periods according to his risk appetite.

Insured Value

The insured value is a discretionary monetary value based on the insured risk appetite. For example, the cost of soil preparation prior to planting plus an amount required for cash flow can be covered to sustain the business' running cost until the start of the next season, in case the drought persists, and planting could not commence.

Flexibility

Agnovate's SMI quoting mechanism provides extreme flexibility to meet client needs in terms of (1) levels of cover, (2) risk period, and (3) affordability.



Soil moisture is observed throughout the risk period

The insurer will observe the soil moisture levels throughout the risk period. A claim will trigger when the average soil moisture level (anomaly) for the risk period drops below the trigger point, as measured against the long-term average (norm) for the risk period.

Claims Payout Process

The observation and administration process of Agnovate's SMI is based on real-time technology which supports a quick and easy loss payment process.



Pitfalls

No correlation with crop yield:

Although crop yield is highly correlated with rainfall and soil moisture, Agnovate's SMI does not provide correlations between soil moisture, rainfall, and crop yield, or with any other measurement. With Agnovate's SMI, the client deliberately ensures stand-alone soil moisture as a tangible asset.

Index area:

Soil moisture is measured on an index area basis and not on a farm or field basis. Likewise for claim calculations.





Summary of SMI



ESTEEMED DATA SOURCE

Agnovate's SMI utilizes open-source data provided by an independent and reputable data source.



QUICK & TRANSPARENT PROCESS

Agnovate's SMI is almost 100% technology based with a quick and transparent process.



FLEXIBLE

Agnovate's SMI provides extreme flexibility to meet client cash flow and risk appetite needs.



A PERFECT FIT

Agnovate's SMI is not only applicable for use by the primary producer (farmer). Agnovate's SMI is a perfect fit for several role players in the supply chain such as financiers, processors, storage facilities, and off-takers.



TAILORED COVER

Agnovate's SMI can be tailored to cover any rainfed production sector, including natural grazing.



UNCONVENTIONAL

Agnovate's SMI is a new-generation insurance product that requires a mind shift away from traditional products.



Contact us for more information



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