

Derivation & Packaging of Crop Estimation Information for Stakeholders

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SENTINEL 2 AGRICULTURE

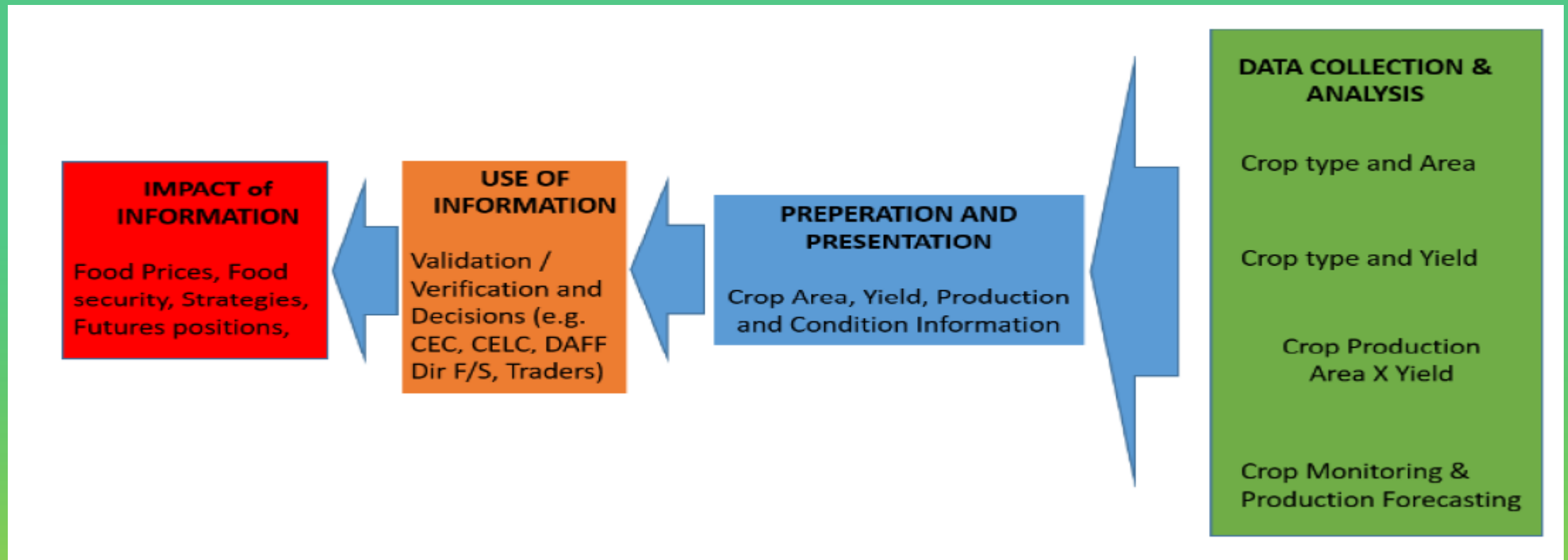
Crop monitoring system - Country based validation exercise

FEED BACK WORKSHOP

12 May 2017



THE CROP MONITORING STORY



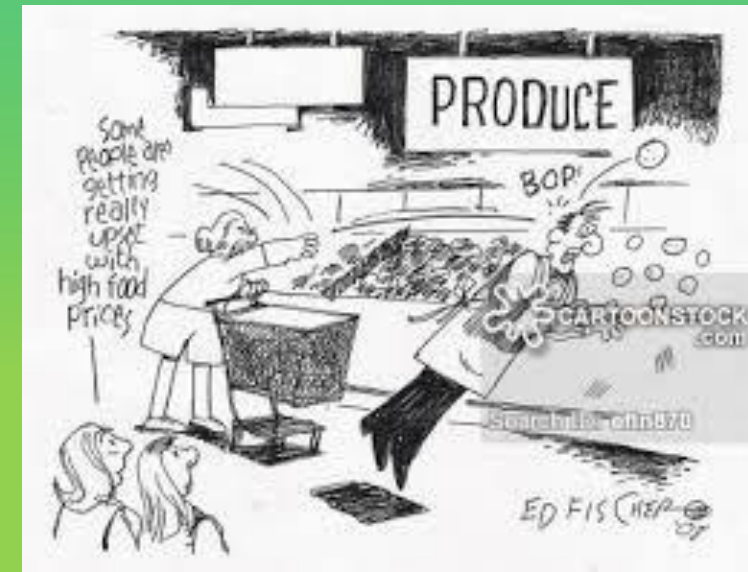
Why crop forecasting

- Early indication of expected production for decision makers
- Of critical importance to the grain industry
 - planning and informed decisions on
 - trading, transport, storage and marketing
- Ensures buyers and sellers have a level playing field
 - equal bargaining powers
 - eliminates unfair advantage
 - prevents the spreading of rumours & market manipulation
 - unfair price-influencing
- Exportable surplus or deficit



Implications of Estimation fluctuations (Initial under estimate corrected during season)

- The price on the futures market was held high anticipating shortage;
- Millers and processors bought maize at a higher price;
- Consumers paid for this through higher food prices and
- Export opportunities were lost.



The How of Crop Forecasting

- Responsibility rests with CEC (DAFF)
- Receives inputs and works on convergence of evidence
- NCSC collects data, analysis and presents results
- Other sources also feed in data
- CEC works under lock up
- Releases estimates monthly (last week)
- National Production +/- 5% of final
- Provincial Production +/-10% of final



COMPOSITION OF THE CEC

- DEPARTMENT OF AGRIC, FORESTRY AND FISHERIES
 - Chairperson and Secretariat
- PROVINCIAL DEPARTMENTS OF AGRICULTURE
 - 9 Representatives
- ARC
 - ISCW
 - SGI
 - GCI
- STATS SA



PROCEDURES

	AREA	YIELD	PRODUCTION
A-line	NCSC: PICES Telephonic (subjective) survey	NCSC: Objective yield	SAGIS (end of season)
B-line	DAFF	Crop-Modelling (when updated with new variables)	SANSOR (more discussions needed)
C-line:	Agric Risk Specialists	DPO	Fertiliser Companies
		Financial Institutions	Forums
		Agbiz-grain	PDA's
			SACOTA
			Traders/ Reports

A-line: Determine the area and production/yield (90%)

B- and C-line: Evaluate/verify inputs from A-line



crop estimates committee oesskattingstokomitee

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Web page/Webblad: www.daff.gov.za/statistics and economic reports or
www.sagis.org.za/CEC Crop Estimates
EMBARGO: 15:30

The area planted estimate and third production forecast for summer crops for 2017 is hereby released.
Hiermee word die oppervlakte- en derde produksieskatting vir somergewasse vir 2017 vrygestel.

SUMMER CROPS – AREA PLANTED AND THIRD PRODUCTION FORECAST: 2017

SONMERGEWASSE – OPPERVLAKTE- EN DERDE PRODUKSIESKATTING: 2017

CROPS/GEWAS	Area planted/ Opp beplant	3 rd forecast/ 3 ^{de} skatting	2 nd forecast/ 2 ^{de} skatting	Area planted/ Opp beplant	Final crop/ Finale oes	Change/ Verandering
	2017 Ha (A)	2017 Tons (B)	2017 Tons (C)	2016 Ha (D)	2016 Tons (E)	% (B) + (C)
Commercial/Kommerisieel:						
White maize/Witmaïes	1 643 100	8 618 400	8 513 200	1 014 750	3 408 500	+1,24
Yellow maize/Gedmaïes	985 500	5 917 300	5 610 300	932 000	4 370 000	+1,84
Total Maize/Totale Maïes	2 628 600	14 535 700	14 123 500	1 946 750	7 778 500	+1,48
Sunflower seed/Sonneblomsaad	635 750	853 470	896 060	718 500	795 000	-4,75
Soybeans/Sojabone	573 950	1 233 130	1 162 425	502 800	742 000	+6,08
Groundnuts/Grondbone	56 000	86 600	86 600	22 600	17 680	-
Sorghum	42 350	153 480	153 480	48 500	70 500	-
Dry beans/Droëbone	45 050	67 150	65 275	34 400	35 445	+2,87
TOTAL/TOTAL	3 981 700	16 929 830	16 687 340	3 273 550	9 399 125	+1,45

Note: Estimate is for calendar year; e.g. production season 2016/17 = 2017
Nota: Skatting is vir kalenderjaar, bv. produksie-seisoen 2016/17 = 2017

The Crop Estimates Committee comprises officials of the following institutions:

Department of Agriculture, Forestry and Fisheries; Provincial Departments of Agriculture; various ARC-Institutes (Soil, Climate and Water; Small Grains Institute; and Grain Crops Institute); and Statistics SA.

WHITE AND YELLOW MAIZE – AREA PLANTED AND THIRD PRODUCTION FORECAST: 2017

WIT- EN GEELMAÏES – OPPERVLAKTE EN DERDE PRODUKSIESKATTING: 2017

Province/ Provinsie	Area planted/ Oppervlakte beplant 2017			3 rd forecast/ 3 ^{de} skatting 2017			Area planted/ Oppervlakte beplant 2016			Final crop/ Finale oes 2016		
	White/ Wit Ha	Yellow/ Geel Ha	Total/ Totaal Ha	White/ Wit Tons	Yellow/ Geel Tons	Total/ Totaal Tons	White/ Wit Ha	Yellow/ Geel Ha	Total/ Totaal Ha	White/ Wit Tons	Yellow/ Geel Tons	Total/ Totaal Tons
Western Cape/Wes-Kaap	200	2 000	2 200	2 000	20 000	22 000	500	4 000	4 500	5 000	40 000	45 000
Northern Cape/Noord-Kaap	3 500	45 000	48 500	43 750	643 500	687 250	3 750	50 000	53 750	35 000	675 000	710 000
Free State/Vrystaat	805 000	355 000	1 160 000	4 226 250	1 775 000	6 001 250	390 000	310 000	700 000	1 190 500	1 023 000	2 213 500
Eastern Cape/Oos-Kaap	4 400	9 500	13 900	26 400	57 000	83 400	2 000	12 000	14 000	10 000	66 000	76 000
KwaZulu-Natal	50 000	50 000	100 000	320 000	335 000	655 000	38 000	48 000	86 000	215 000	307 000	522 000
Mpumalanga	160 000	330 000	490 000	1 040 000	2 112 000	3 152 000	160 000	330 000	490 000	752 000	1 567 000	2 319 000
Limpopo	40 000	24 000	64 000	260 000	148 800	408 800	31 500	22 000	53 500	178 000	132 000	310 000
Gauteng	60 000	60 000	120 000	360 000	342 000	702 000	49 000	56 000	105 000	207 000	235 000	442 000
North West/Noordwes	520 000	110 000	630 000	2 340 000	484 000	2 824 000	340 000	100 000	440 000	816 000	325 000	1 141 000
Total/Total	1 643 100	985 500	2 628 600	8 618 400	5 917 300	14 535 700	1 014 750	932 000	1 946 750	3 408 500	4 370 000	7 778 500

SUNFLOWER SEED – AREA PLANTED AND THIRD PRODUCTION FORECAST: 2017

SONNEBLOMSAAD – OPPERVLAKTE EN DERDE PRODUKSIESKATTING: 2017

Province/ Provinsie	Area planted/ Opp beplant Ha 2017	3 rd forecast/ 3 ^{de} skatting Tons 2017	Area planted/ Opp beplant Ha 2016	Final crop/ Finale oes Tons 2016
Western Cape/Wes-Kaap	-	-	-	-
Northern Cape/Noord-Kaap	250	250	500	600
Free State/Vrystaat	330 000	462 000	400 000	440 000
Eastern Cape/Oos-Kaap	-	-	-	-
KwaZulu-Natal	300	300	-	-
Mpumalanga	2 200	2 420	4 000	4 400
Limpopo	90 000	81 000	65 000	48 750
Gauteng	3 000	3 000	4 000	4 000
North West/Noordwes	210 000	304 500	245 000	257 250
Total/Total	635 750	853 470	718 500	795 000

SOYBEANS – AREA PLANTED AND THIRD PRODUCTION FORECAST: 2017

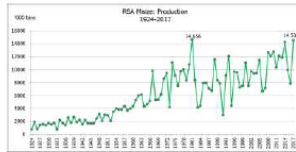
SOJABONE – OPPERVLAKTE EN DERDE PRODUKSIESKATTING: 2017

Province/ Provinsie	Area planted/ Opp beplant Ha 2017	3 rd forecast/ 3 ^{de} skatting Tons 2017	Area planted/ Opp beplant Ha 2016	Final crop/ Finale oes Tons 2016
Western Cape/Wes-Kaap	700	1 050	800	1 200
Northern Cape/Noord-Kaap	3 000	10 500	4 000	13 600
Free State/Vrystaat	240 000	480 000	174 000	148 000
Eastern Cape/Oos-Kaap	1 850	2 775	1 500	2 100
KwaZulu-Natal	30 500	86 925	28 000	66 000
Mpumalanga	241 000	506 100	240 000	408 000
Limpopo	8 500	28 900	16 000	38 400
Gauteng	25 400	68 580	23 000	50 600
North West/Noordwes	23 000	48 300	15 500	14 100
Total/Total	573 950	1 233 130	502 800	742 000

agriculture, forestry & fisheries

Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA

25 April 2017



Summer field crops – 2017

Commercial maize: The size of the expected commercial maize crop has been set at 14,536 mill. tons, which is 1,48% or 212 200 tons more than the previous forecast of 14,324 mill. tons. The area estimate for maize is 2,629 mill. ha, while the expected yield is 5.53 t/ha – the highest yield ever.

The estimated maize crop is 87% bigger than the 2016 crop, which was the smallest crop since 2007. The three main maize producing areas, namely the Free State, Mpumalanga and North West provinces are expected to produce 82% of the 2017 crop.

The area estimate for white maize is 1,643 mill. ha and for yellow maize the area estimate is 985 500 ha.

The production forecast of white maize is 8,618 mill. tons, which is 1,24% or 105 200 tons more than the 8,513 mill. tons of the previous forecast. The yield for white maize is 5,25 t/ha. In the case of yellow maize the production forecast is 5,917 mill. tons, which is 1,84% or 107 000 tons more than the 5,810 mill. tons of the previous forecast. The yield for yellow maize is 6,00 t/ha.

The yield per ha for the Mpumalanga province was based on scientific and objective results provided by the National Crop Statistics Consortium (NCSC), which is led by the ARC. Please note that the objective results for the Free State and North West provinces will be available in May 2017.

Sunflower seed: The production forecast for sunflower seed is 853 470 tons, which is 4,75% or 42 590 tons less than the 896 060 tons of the previous forecast. The area estimate for sunflower seed is 635 750 ha, while the expected yield is 1,34 t/ha.

Other crops: The production forecast for soybeans is 1,233 mill. tons, which is 6,08% or 70 705 tons more than the 1,162 mill. tons of the previous forecast. It is the largest soybean crop produced in the history of SA. The estimated area planted to soybeans is 573 950 ha and the expected yield is 2,15 t/ha.

The expected groundnut crop remained unchanged at 86 600 tons. The area estimate is 56 000 ha and the expected yield is 1,55 t/ha.

The production forecast for sorghum also remained unchanged at 153 480 tons, whilst the area estimate for sorghum is 42 350 ha. The expected yield is 3,62 t/ha.

In the case of dry beans, the production forecast is 67 150 tons, which is 2,87% or 1 875 tons more than the 65 275 tons of the previous forecast. The area estimate of dry beans is 45 050 ha, with an expected yield of 1,49 t/ha.

Please note that the fourth production forecast for summer field crops for 2017 will be released on 26 May 2017.

The intentions to plant winter cereals for the 2017 production season is hereby released. / Hiermee word die voorneme om wintergewasse te plant vir die 2017 produksie-seisoen vrygestel.

WINTERGEWASSE – VOORNEEME OM TE PLANT: 2017

WINTER CERERALS – INTENTIONS TO PLANT: 2017

GEWAS/CROP	Voorneme/ Intentions*	Opp beplant/ Area planted	Finale skatting/ Final estimate	Verandering/ Change
	2017 Ha (A)	2016 Ha (B)	2016 Tons (C)	% (A) + (B)
Koring/Wheat	496 350	508 365	1 909 540	-2,36
Moutgat/Maltng barley	96 000	88 695	354 065	+8,24
Kamels/Carola	90 000	68 075	105 460	+32,21
Totaal/Total	682 350	665 135	2 369 065	+2,59

* Based on conditions at the middle of April 2017 / Gebaseer op toestande soos teen middel April 2017.

KORING – VOORNEEME OM TE PLANT: 2017

WHEAT – INTENTIONS TO PLANT: 2017

Province/ Provinsie	Voorneme/ Intentions Ha 2017	Opp beplant/ Area planted Ha 2016	Finale skatting/ Final estimate Tons 2016
Wes-Kaap/Western Cape	325 000	323 000	1 098 200
Noord-Kaap/Northern Cape	35 500	35 000	266 000
Vrystaat/Free State	90 000	110 000	308 000
Oos-Kaap/Eastern Cape	1 900	2 200	11 000
KwaZulu-Natal	7 500	6 500	37 050
Mpumalanga	3 300	2 300	13 800
Limpopo	20 000	17 000	103 700
Gauteng	350	365	2 190
Noordwes/North West	12 800	12 000	69 600
Totaal/Total	496 350	508 365	1 909 540

* Based on conditions at the middle of April 2017 / Gebaseer op toestande soos teen middel April 2017.

Somerewasse – 2017

Kommerisieel maïes: Die grootte van die verwagte kommersiële maïe-oes is op 14,536 milj. ton gestel, wat 1,48% of 212 200 ton meer is as die vorige skatting van 14,324 milj. ton. Die skatting van die oppervlakte onder maïes is 2,629 milj. ha, terwyl die verwagte opbrengs 5,53 t/ha is – die hoogste opbrengs ooit.

Die geskatte maïe-oes is 87% groter as die 2016-oes, wat die kleinste oes was sedert 2007. Die drie belangrikste maïe-produiserende gebiede, nl. die Vrystaat, Mpumalanga en Noordwes provinsies, gaan na verwagting 82% van die 2017-oes produseer.

Die oppervlakte onder witmaïes is 1,643 milj. ha en vir geelmaïes is die oppervlakte 985 500 ha.

Die produksieskatting van witmaïes is 8,618 miljoen ton, wat 1,24% of 105 200 ton meer is as die 8,513 milj. ton van die vorige skatting. Die opbrengs van witmaïes is 5,25 t/ha. In die geval van geelmaïes is die produksieskatting 5,917 milj. ton, wat 1,84% of 107 000 ton meer is as die 5,810 milj. ton van die vorige skatting. Die opbrengs van geelmaïes is 6,00 t/ha.

Die opbrengs-bepaling per ha vir die Mpumalanga provinsie is gebaseer op wetenskaplike en objektiewe resultate verstrekk deur die Nasionale Oesskattingstokomitee, geleë deur die LNR. Neem kennis dat die objektiewe resultate vir die Vrystaat en Noordwes provinsies, in Mei 2017 gerapporteer sal word.

Sonneblomsaad: Die produksieskatting vir sonneblomsaad is 853 470 ton, wat 4,75% of 42 590 ton minder is as die 896 060 ton van die vorige skatting. Die oppervlakte skatting vir sonneblomsaad is 635 750 ha, terwyl die verwagte opbrengs 1,34 t/ha is.

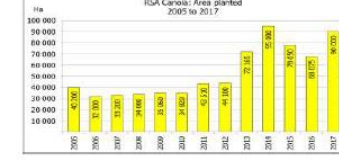
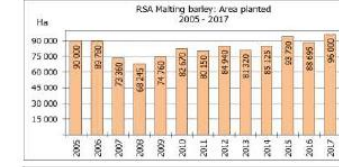
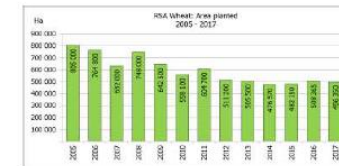
Ander gewasse: Die produksieskatting van sojabone is 1,233 milj. ton, wat 6,08% of 70 705 ton meer is as die 1,162 milj. ton van die vorige skatting. Dit is die grootste sojaboon-oes nog geproduseer in die geskiedenis van SA. Die geskatte oppervlakte beplant met sojabone is 573 950 ha en die verwagte opbrengs is 2,15 t/ha.

Die verwagte grondbone-oes is onveranderd geel op 86 600 ton. Die oppervlakte skatting is 56 000 ha, terwyl die verwagte opbrengs 1,55 t/ha is.

Die produksieskatting van sorghum is ook onveranderd geel op 153 480 ton, terwyl die oppervlakte skatting vir sorghum 42 350 ha is. Die verwagte opbrengs is 3,62 t/ha.

In die geval van droëbone is die produksieskatting 67 150 ton, wat 2,87% of 1 875 ton meer is as die 65 275 ton van die vorige skatting. Die oppervlakte beplant met droëbone is 45 050 ha, en die verwagte opbrengs is 1,49 t/ha.

Neem asseblief kennis dat die vierde produksieskatting vir somerewasse vir 2017, op 26 Mei 2017 vrygestel sal word.



OUTPUT



agriculture, forestry & fisheries

Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA

Information is available on the internet at
<http://www.daff.gov.za/links/crop-estimates> or
<http://www.sagis.org.za>, as from 15:30 on the date of the relevant meeting of the Crop Estimates Committee.



CROP MONITOR FOR AMIS

NO. 39

May 2017

The Group on Earth Observations' Global Agricultural Monitoring (GEOGLAM) initiative developed the Crop Monitor whose objective is to provide AMIS with an international and transparent multi-source, consensus assessment of crop growing conditions, status, and agro-climatic conditions, likely to impact global production. This activity covers the four primary crop types (wheat, maize, rice, and soy) within the main agricultural producing regions of the AMIS countries (G20+7). The Crop Monitor reports provide cartographic and textual summaries of crop conditions as of the 28th of each month, according to crop type. There is another Crop Monitoring initiative called the Early Warning Crop Monitor (geoglam-crop-monitor.org/), which has grown out of this initiative.



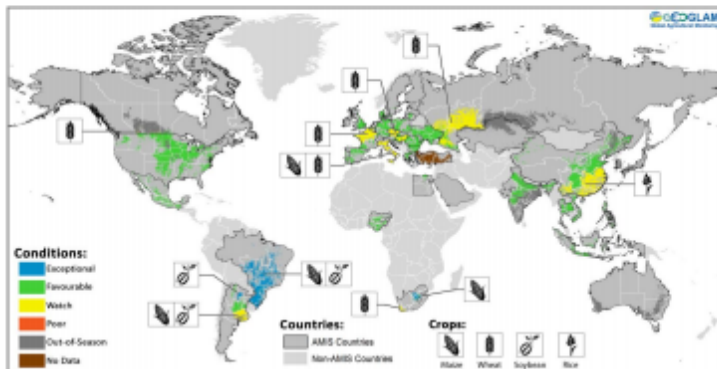
Agricultural Market Information System



GROUP ON EARTH OBSERVATIONS



Conditions at a glance for AMIS countries (as of April 28th)



Crop condition map synthesizing information for all four AMIS crops as of April 28th. Crop conditions over the main growing areas for wheat, maize, rice, and soybean are based on a combination of national and regional crop analyst inputs along with earth observation data. Crops that are in other than favourable conditions are displayed on the map with their crop symbol.

Conditions at a glance

Wheat - In the northern hemisphere, winter wheat conditions are mixed as dry or cold weather is observed in areas within Europe, Canada, and the Russian Federation. Spring wheat sowing has begun.

Maize - Overall conditions in the southern hemisphere are favourable to exceptional with very good production prospects. In Brazil, harvest of the spring-planted crops is wrapping up under exceptional conditions. While in Argentina, harvesting has been delayed. In the northern hemisphere, maize sowing is proceeding under generally favourable conditions.

Rice - The secondary rice season is currently ongoing in the majority of AMIS countries in Asia with the exception of Indonesia, where the wet-season crop is

being harvested. Crop conditions in Asia are generally favourable, with the exception of China where rainy weather is affecting early rice in the south central regions.

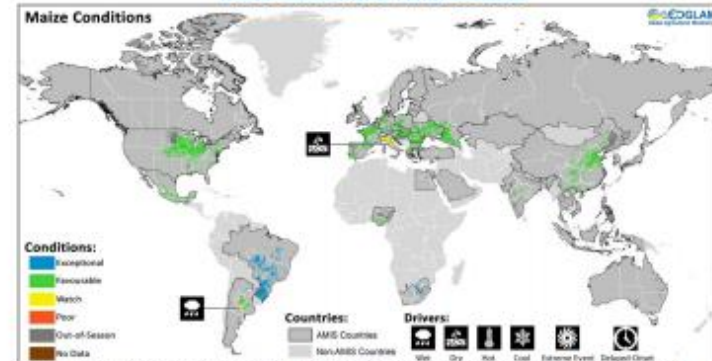
Soybeans - In the southern hemisphere, harvesting is proceeding under exceptional conditions in Brazil. In Argentina, harvest conditions continue to be favourable with some minor areas in the south confronting floods. In the northern hemisphere, sowing is beginning with the US expecting planted area to be at a record high.

PRESS STOP (1 May 2017)

The impact of the recent snowstorm which hit parts of the US Plains winter wheat belt will be discussed in the June report as the cut-off date for production of this month's report was 28 April.

* Assessment based on information as of April 28th

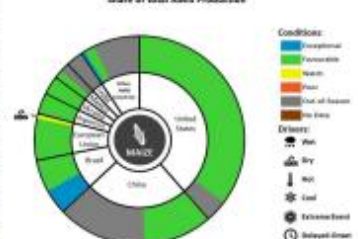
Maize Conditions for AMIS Countries



Maize crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of April 28th. Where crops are in other than favourable conditions the climatic drivers responsible for those conditions are displayed. Crop Season Specific Maps can be found in Appendix 2.

Maize: Overall conditions in the southern hemisphere are favourable with very good production prospects while sowing begins in the northern hemisphere. In Brazil, the spring-planted crop harvest is coming to a close under exceptional conditions with increased production prospects. The summer-planted (larger) crop is under favourable conditions. In Argentina, harvesting of the early-planted crop has been delayed due to the beginning of the soybean harvest. Crop conditions remain favourable with no major losses expected from the recent flooding. In South Africa, conditions are exceptional as wet conditions during most of the summer season have boosted production prospects for this year. In Mexico, autumn-winter maize has entered the vegetative stage under favourable conditions and the sowing of spring-summer maize has begun. In the US, sowing is now progressing throughout the country under favourable conditions. In China, sowing of the spring-planted crop has begun under favourable conditions. In the EU, conditions are generally favourable with the exception of dry weather delaying sowing in northern Italy.

Share of total AMIS Production



For detailed description of the pie chart please see box below.

* Assessment based on information as of April 28th



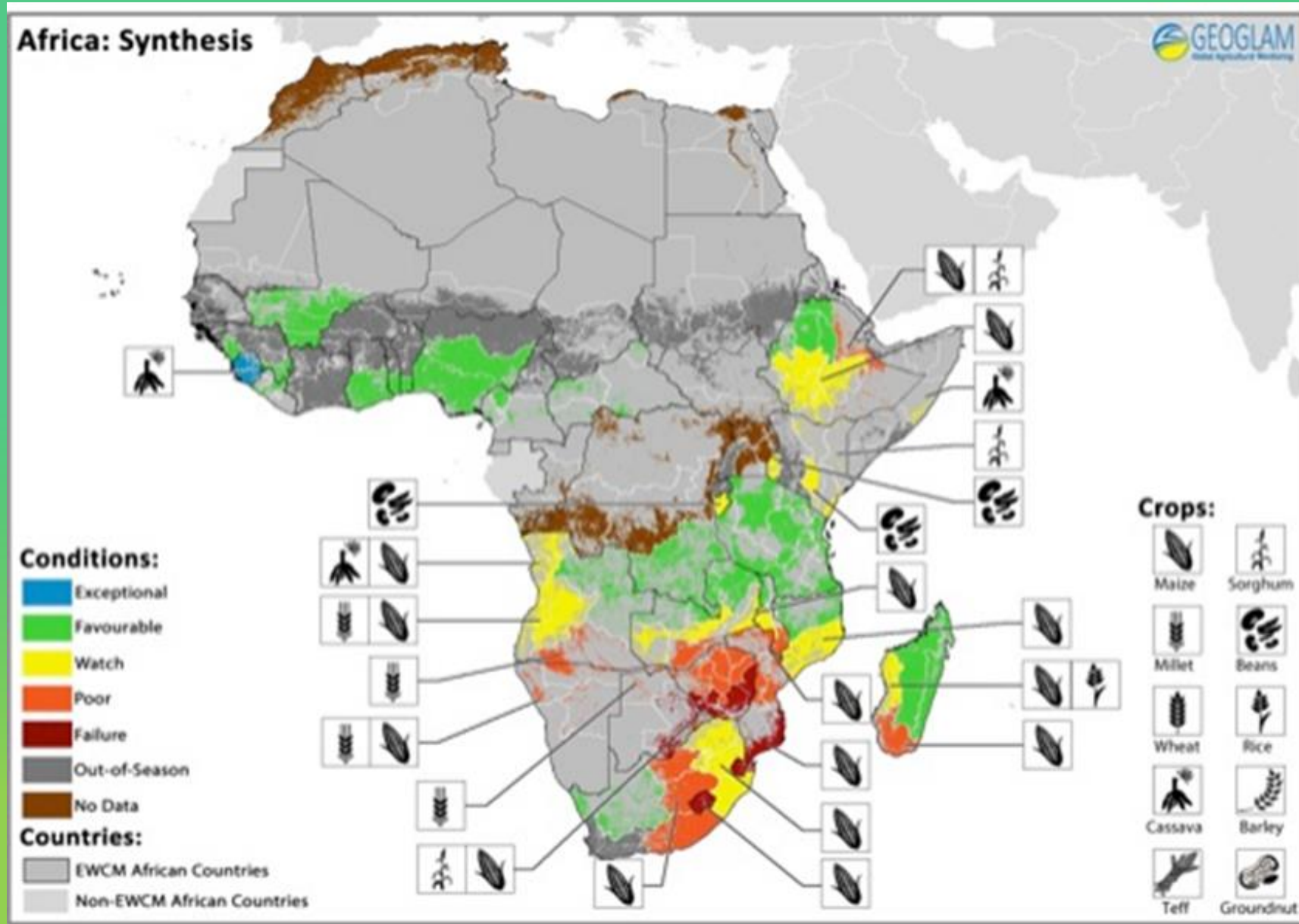
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Excellence in Research and Development

GEOGLAM CROP EARLY WARNING MONITOR



USERS OF CROP ESTIMATES INFORMATION

- Ministry and Management of the DAFF
- Provincial Departments of Agriculture
- Other Government Departments and parastatals
- Financial Institutions (Banks / Insurance)
- Agri-businesses (former Co-ops)
- Traders/Millers/Processors
- Analysts (Economists)
- Producers & Producer organisations
- Supply & Demand Estimates Committee
- Regional Early Warning Unit of SADC
- International Companies
- Media houses
- Universities & Researchers

USES

- Food Security planning
- Import / Export decisions
- Logistics planning
 - Rail, ships, storage
- Futures trading
- Stock management
- Production decisions
- Crop selection
- Pricing
- National Security (Migration)
- Disaster management planning
- Water Management(Irrigation)
- Financial Decisions
 - Insurance, Surety

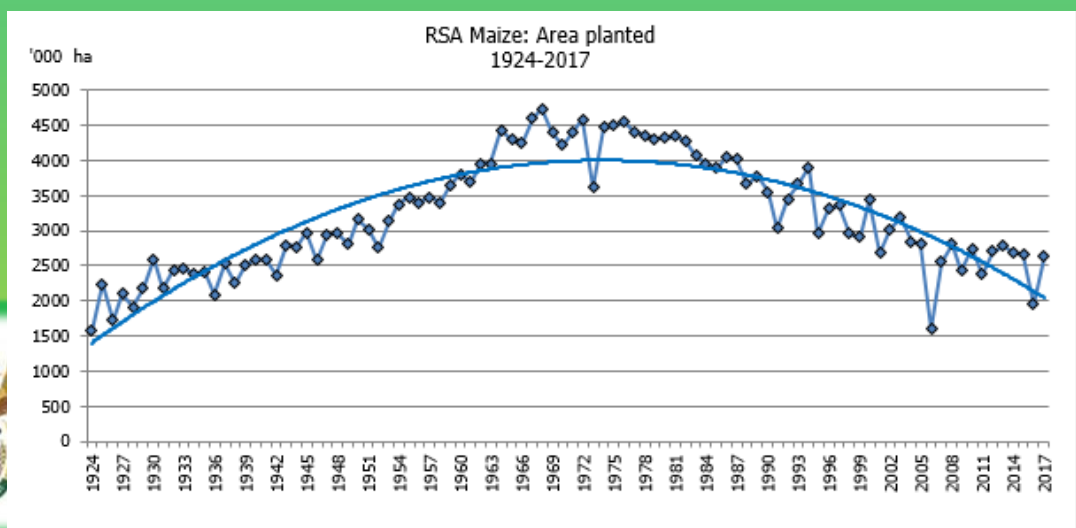
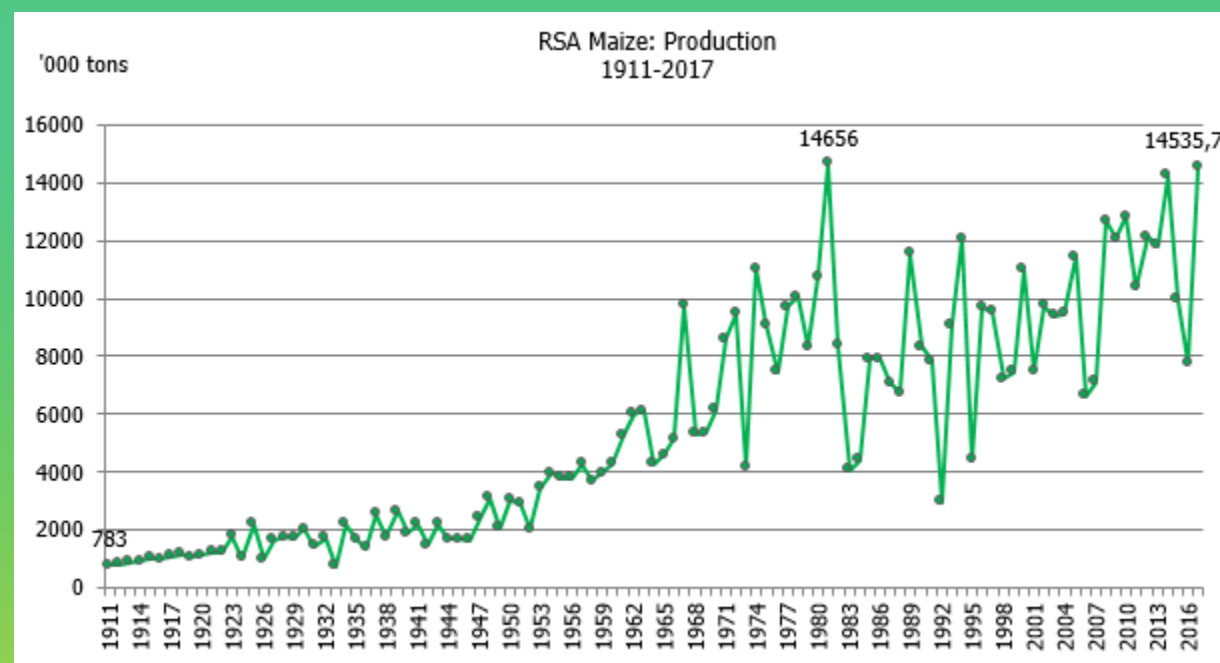
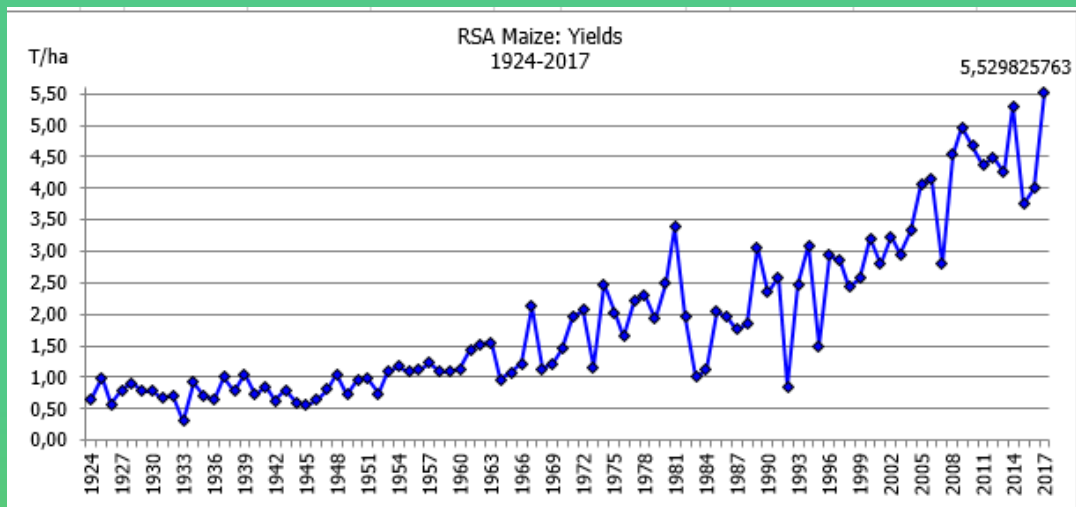
Crop Estimates Liaison Committee

- Chamber of Milling,
- Dry Bean Producers' Organisation,
- Grain South Africa,
- Seed companies,
- South African Future Exchange (SAFEX),
- SA Grain Information Service (SAGIS),
- Chamber of Bakers,
- Grain Silo Owners Organization,
- South African Cereals and Oilseeds Trade Association (SACOTA),
- CEC Members
- DAFF.

Function of the CELC is to Recommend

- Role and functions of CEC
- Composition of the CEC
- Current methodologies for crop estimation
- New methodologies for crop estimation
- Research and
- Evaluate results of CEC estimates

Historical Maize production in South Africa



CONCLUSIONS

- Crop forecast information serves a wide range of stakeholder in many different ways
- Accuracy, timeliness, reliability are critical factors in the system
- “Official” branding gives credibility
- Awareness and accessibility add value to the effort