



South Sudan Crop Watch Overview of cereal production in 2017

Highlights

- In 2017 rainfall was favourable in terms of amount and distribution, over most of the cropping areas. In addition to the endemic presence of common pests there was a newly detected outbreak of Fall Armyworm which caused mild to average damage on maize and sorghum crops in more than 20 counties.
- The net cereal production in 2017 (taking into consideration post-harvest losses and seed use) in the traditional sector is estimated at 764 107 tonnes, which is a decrease of 7.5 percent from 2016. It is also 14 percent below the average of the previous five years, showing the smallest output since the start of the conflict.
- With a projected population of about 11.4 million in mid-2018, the overall cereal deficit in the January-December 2018 year is estimated at about 482 000 tonnes, 26 percent above the deficit estimated for 2017.
- The poor performance of the 2017 cropping season is due to the combination of reduced number of farming households and lower than average area planted per household as a result of the increased intensity and scale of the conflict. The most significant reductions of harvested area occurred in Central Equatoria (-48 percent) and Western Bahr el Ghazal (-28 percent).
- Livestock body conditions were generally good due to adequate pasture and water availability following favourable seasonal rains. As during the previous three years, widespread events of cattle raiding and altered trading and migration routes occurred in most areas due to increased active fighting and insecurity.
- Inflation significantly declined from the peak reached in September 2016, mainly due to the winding down of monetary expansion policies, but remains very high, with the year-on-year inflation rate estimated in December 2017 at 188 percent.
- Cereal prices declined in the second semester of 2017 as newly harvested crops entered markets, but in late 2017 they were still up to twice the levels of 12 months earlier and more than seven times higher than 24 months earlier. This is related to limited supplies, insecurity related market disruptions, high inflation and a weak local currency.
- The number of internally displaced persons (IDPs) in the country stood at about 1.9 million in November 2017. The number of refugees in neighbouring countries was close to 2.1 million, of which over 1.6 million new arrivals were recorded since July 2016, when the conflict spread into the Greater Equatoria region.

Overview

An FAO/WFP Crop and Food Security Assessment Mission (CFSAM) visited South Sudan from 4 to 14 December 2017 to estimate cereal production during 2017 and assess the overall food security situation. The CFSAM reviewed the findings of several crop assessment missions conducted at planting and harvest time in the different agro-ecological zones of the country from May to December 2017. As during 2014, 2015 and 2016, all assessment missions were carried out by a Task Force team that comprised staff from the Ministry of Agriculture and Food Security (MAFS) drawn from national and state offices, the National Bureau of Statistics (NBS) and the Food and Agriculture Organization of the United Nations (FAO). Task Force team members have been trained in the past years to conduct rapid assessments using established protocols and techniques, such as driving and walking transects, evaluating standing crops according to yield and livestock according to body condition, perform key informant interviews and farmer case studies. In addition, supported by the FAO, 39 County Crop Monitoring Committees (CCMCs) have been formed in 2016 and 2017, with a view to extending the responsibility of collecting more objective data at local level.

Building on the successful experience of the new assessment format introduced in 2014, the 2017 annual crop assessment in South Sudan was also planned to follow a year-long roadmap, with a series of assessments at State level from planting to harvesting, to be conducted by Task Force teams. Overall, nine planting assessment and fourteen harvest missions (23 in total) were conducted in Western, Central and Eastern Equatoria, Northern Bahr el Ghazal, Lakes, Warrap, Upper Nile, Jonglei and Western Bahr el Ghazal states. Unfortunately, due to severe insecurity - prevailing since July 2016 - the full execution of the plan was not possible, resulting in a reduction of fieldwork activities. For example, the whole of Unity, most of Central, Eastern and Western Equatoria, and parts of Jonglei States were inaccessible for the assessment teams both at planting and harvesting times. In all visited areas, concerns over security prohibited driving transects, resulting in assessments being done mainly through walking distances and transects to assess yields. In addition, 966 farmer case studies and 73 interviews with key informants (1 039 in total) were conducted between May and December 2017.

Using standard CFSAM procedures with regard to secondary sources of information, the Task Force team reviewed and commented on factors affecting crop performance during the 2017 production year, estimated national cereal production during the year and assessed the overall food security situation. Where risks to teams' safety, as a result of insecurity were considered to be too severe to allow access, "remote" assessments - based on telephone interviews with key informants - were used to derive estimates. Also, information from CCMCs operating in those inaccessible areas were sent to the crop assessment team in Juba through various means.

Regarding the traditional sector, the aggregate cereal harvested area in 2017 is estimated at 863 000 hectares, about 8.1 percent below the previous year's level, due to the combination of reduced number of farming households and smaller than average area planted per household, following the increase in intensity and scale of the conflict since July 2016, which had disrupted farming activities. The most severe contraction in the harvested area is reported in the key-producing areas of Central Equatoria where a 47 percent reduction was observed and in Western Equatoria where a reduction of 47 percent and 11 percent were reported, respectively and in Western Bahr el Ghazal where a 28 percent reduction was observed. By contrast, the area harvested has slightly increased in Upper Nile (10 percent), Unity (9 percent) and Lakes state (7 percent) following the return of some previously displaced households. As rainfall in 2017 has been mostly favourable in terms of amounts and distribution (except in some areas of Eastern Equatoria and Jonglei states) and crop losses due to pests and diseases have been mild (except in areas affected by Fall Armyworm), the most significant driver for yield reduction is attributed to insecurity resulting in displacement of farmers and limiting farmers' access to their farmlands.

Net cereal production in 2017 from the traditional sector, taking into consideration post-harvest losses and seed use, is estimated at about 764 107 tonnes, which shows a reduction of 7.5 percent from 2016 and is 14 percent below the average of the previous five years. It is also the smallest output since the start of the conflict. The decrease in estimated national production of 2017 is attributed to the impact of the conflict on the area planted and yields, especially in Greater Equatoria and in Western Bahr el Ghazal states. In particular, a dramatic reduction in production is estimated in Central Equatoria state, where the output contracted by 48 percent from the levels of the previous year. By contrast, production is estimated to increase in Upper Nile and Unity states by 18 and 9 percent, respectively. Moderate increases of 6 percent are also estimated in Lakes and Jonglei states, although the output still remains well below the pre-conflict levels of production. With a mid-2018 projected population of about 11.4 million people, consuming on average about 110 kg of cereals/capita/year, the cereal requirement in 2018 is estimated at about 1.246 million tonnes. Accordingly, an overall rounded cereal deficit of 482 000 tonnes is estimated in the traditional sector for the 2018 January-December year, 25.5 percent above the deficit estimated for 2017.

Net cereal production from the mechanized sector in Upper Nile State plus the Tony Chol sorghum scheme in Northern Bahr el Ghazal State is estimated at 87 127 tonnes. Although part of this production is expected to be traded across the border in the Sudan, some quantities are likely to be marketed locally offering options for local purchases by the Government of South Sudan and humanitarian agencies. The country is facing a protracted macro-economic crisis, with contraction of domestic output, very high inflation rates and spiralling parallel exchange market premiums. After two years of moderate growth in 2013 and 2014, the country's Gross Domestic Product (GDP) contracted by about 11 percent in 2015 and 2016 and by a further 6.6 percent in 2017, particularly as a result of conflict, reduction in export revenues from the oil sector as well as government fixed investments. Inflation significantly declined after reaching its peak in September 2016 - when the year-on-year inflation rate was estimated at 550 percent - mainly due to the winding down of monetary expansion policies. Inflation remains very high with the year-on-year inflation rate estimated in December 2017 at 188 percent.

Prices of cereals which started to soar in late 2015 reached record levels in mid-2017 on account of ongoing local currency devaluation, the general economic downturn and widespread insecurity -. Subsequently, in the capital Juba, prices of sorghum and maize declined by 12-13 percent between June and December as 2017 harvests entered markets. Similarly, prices of sorghum in Aweil, Wau, and Bentiu markets declined by 20-50 percent between August and October. Despite the recent declines, cereal prices in late 2017 were still up to twice the levels of 12 months earlier and more than 7 times higher than 24 months earlier. Across the country, trade flows and market activities are at lower levels than before the start of the conflict in 2003, as widespread insecurity is constraining trade flows and households' physical access to markets.

Estimated cereal harvested area, yield, production, consumption and balance (traditional sector)							
State/ County	Cereal area 2017 (ha)	2017 gross yield (t/ha)	2017 gross cereal production (t)	2017 net cereal production (t)	Population mid-2018	2018 cereal req't (t)	2018 surplus/ deficit (t)
Central							
Equatoria	59 862	1.3	77 942	62 354	1 073 942	137 532	-75 178
Juba	14 950	1.20	17 940	14 352	392 525	54 954	-40 602
Kajo Keji*	10 034	1.50	15 051	12 041	113 385	13 606	-1 566
Lainya*	4 637	1.30	6 028	4 822	95 321	11 439	-6 616
Morobo*	5 921	1.60	9 473	7 578	148 959	17 875	-10 297
Terekeka	15 771	1.00	15 771	12 617	162 289	19 475	-6 858
Yei*	8 550	1.60	13 679	10 943	161 463	20 183	-9 240
Eastern							
Equatoria	107 406	1.1	116 991	93 593	994 188	123 483	-29 889
Budi	15 660	1.10	17 226	13 781	93 524	11 223	2 558
Ikotos	20 602	1.20	24 722	19 778	123 547	15 443	4 334
Kapoeta East	10 764	0.70	7 535	6 028	163 386	20 423	-14 395
Kapoeta North	6 540	0.80	5 232	4 186	103 508	12 939	-8 753
Kapoeta South	3 842	0.60	2 305	1 844	67 706	8 802	-6 958
Lafon	12 334	1.10	13 567	10 854	102 514	12 302	-1 448
Magwi	20 844	1.50	31 266	25 013	185 027	22 203	2 809
Torit	16 820	0.90	15 138	12 110	154 976	20 147	-8 037
Jonglei	54 398	0.8	45 715	36 572	1 776 432	199 333	-162 761
Akobo	5 615	1.00	5 615	4 492	171 042	18 815	-14 323
Ayod	1 008	0.70	706	565	171 324	18 846	-18 281
Bor South	8 567	0.85	7 282	5 825	239 321	27 522	-21 696
Duk	2 212	0.70	1 548	1 239	115 794	12 737	-11 499
Fangak	2 336	0.70	1 635	1 308	216 488	23 814	-22 506
Khorflus/ Pigi/Canal	1 214	0.63	765	612	98 636	10 850	-10 238
Nyirrol	4 168	0.80	3 334	2 667	174 578	19 204	-16 537
Pibor	7 964	1.00	7 964	6 371	191 272	22 953	-16 582
Pochalla	5 994	1.10	6 593	5 275	81 519	9 782	-4 508
Twic East	6 287	0.70	4 401	3 521	120 140	13 216	-9 695
Uror	9 034	0.65	5 872	4 698	196 318	21 595	-16 897
Lakes	124 531	1.1	140 472	112 377	1 224 831	134 733	-22 356
Awerial	13 910	1.00	13 910	11 128	125 132	13 764	-2 637
Cueibet	25 843	1.20	31 011	24 809	187 348	20 608	4 201
Rumbek Centre	13 257	1.10	14 583	11 666	259 744	28 573	-16 906
Rumbek East	18 678	1.20	22 413	17 931	211 556	23 271	-5 341
Rumbek North	4 269	1.20	5 123	4 098	61 174	6 729	-2 631
Wulu	10 516	1.10	11 568	9 254	70 209	7 723	1 531
Yirol East	14 493	1.10	15 942	12 753	135 929	14 953	-2 199
Yirol West	23 566	1.10	25 922	20 738	173 739	19 112	1 626
N. Bahr el Ghazal	152 555	1.1	161 396	129 117	1 401 961	154 215	-25 098
Aweil Centre	11 681	1.10	12 849	10 279	109 954	12 095	-1 816
Aweil East	56 544	0.90	50 889	40 711	550 956	60 605	-19 893
Aweil North	35 251	1.05	37 014	29 611	280 284	30 831	-1 220
Aweil South	16 287	1.24	20 244	16 195	149 849	16 483	-288
Aweil West	32 792	1.23	40 400	32 320	310 919	34 201	-1 881
Unity	17 601	0.7	11 923	9 538	1 067 043	91 449	-81 910
Abiemnhom	615	0.50	307	246	23 659	2 010	-1 765
Guit	486	0.60	292	233	48 722	4 141	-3 907
Koch	2 403	0.80	1 922	1 538	138 628	11 783	-10 246
Leer	752	0.70	526	421	138 755	11 795	-11 375
Mayendit	1 343	0.70	940	752	107 228	9 115	-8 363
Mayom	3 979	0.63	2 507	2 005	193 524	16 449	-14 444
Panyijar	2 892	0.50	1 446	1 157	92 132	7 831	-6 675
Pariang	4 519	0.80	3 615	2 892	249 534	21 211	-18 319
Rubkona	613	0.60	368	294	74 860	7 112	-6 817

State/ County	Cereal area 2017 (ha)	2017 gross yield (t/ha)	2017 gross cereal production (t)	2017 net cereal production (t)	Population mid-2018	2018 cereal req't (t)	2018 surplus/ deficit (t)
Upper Nile	53 312	0.8	43 593	34 874	1 055 944	91 132	-56 258
Baliet	105	0.60	63	50	7 924	674	-623
Fashoda*	110	0.60	66	53	13 979	1 188	-1 136
Longochuk	3 316	0.60	1 990	1 592	74 473	6 330	-4 738
Luakpiny/Nasir	9 977	0.85	8 481	6 785	297 365	25 276	-18 491
Maban	15 047	0.80	12 037	9 630	203 803	17 323	-7 693
Maiwut	1 859	0.65	1 209	967	41 501	3 528	-2 561
Malakal	484	0.70	339	271	74 113	7 040	-6 769
Manyo	701	0.85	596	477	17 190	1 461	-984
Melut	5 065	1.00	5 065	4 052	75 298	6 400	-2 348
Panyikang	665	0.80	532	426	24 473	2 080	-1 654
Renk	12 086	0.90	10 877	8 702	127 069	11 436	-2 735
Ulang	3 897	0.60	2 338	1 870	98 756	8 394	-6 524
W Bahr al Ghazal	36 791	1.1	40 872	32 698	542 049	61 499	-28 802
Jur River	14 985	1.10	16 484	13 187	158 252	17 408	-4 221
Raga	4 025	1.20	4 830	3 864	98 181	9 818	-5 954
Wau	17 780	1.10	19 558	15 647	285 616	34 273	-18 627
Warrap	155 676	1.1	178 331	142 665	1 486 351	143 495	-830
Abyei	7 557	1.10	8 313	6 650	78 984	7 108	-458
Gogrial East	10 916	0.90	9 824	7 859	120 591	11 456	-3 597
Gogrial West	51 623	1.25	64 529	51 623	360 369	37 839	13 784
Tonj East	9 829	0.80	7 863	6 291	130 816	13 082	-6 791
Tonj North	24 985	1.00	24 985	19 988	240 704	24 070	-4 082
Tonj South	18 979	1.30	24 672	19 738	129 348	11 641	8 097
Twic	31 787	1.20	38 144	30 516	425 538	38 299	-7 783
Western Equatoria	101 077	1.4	137 898	110 319	755 340	109 524	794
Ezo*	9 215	1.50	13 823	11 058	105 422	15 286	-4 228
Ibba*	7 825	1.30	10 173	8 138	30 675	4 448	3 691
Maridi*	11 530	1.30	14 989	11 991	76 568	11 102	889
Mundri East*	3 339	1.10	3 673	2 938	67,675	9 813	-6 875
Mundri West*	3 000	1.20	3 600	2 880	54 321	7 877	-4 996
Mvolo	4 517	0.80	3 613	2 891	85 353	12 376	-9 485
Nagero	1 273	1.10	1 401	1 121	11 010	1 596	-476
Nzara*	16 097	1.60	25 754	20 604	56 101	8 135	12 469
Tambura*	21 868	1.40	30 615	24 492	74 326	10 777	13 715
Yambio*	22 412	1.35	30 256	24 205	193 889	28 114	-3 909
SOUTH SUDAN	863 208	1.1	955 134	764 107	11 378 080	1 246 395	-482 287

Cereal harvested area and net production (rounded) in the traditional sector

Zone/State	2013			2014			2015			2016			2017		
	Area (000 ha)	Net Prod. (000 t)	Net Yield (t/ha)	Area (000 ha)	Net Prod. (000 t)	Net Yield (t/ha)	Area (000 ha)	Net Prod. (000 t)	Net Yield (t/ha)	Area (000 ha)	Net Prod. (000 t)	Net Yield (t/ha)	Area (000 ha)	Net Prod. (000 t)	Net Yield (t/ha)
Upper Nile	254	136	0.53	82	50	0.61	108	68	0.63	118	73	0.62	124	82	0.65
Upper Nile	84	40	0.48	36	19	0.53	45	27	0.53	48	30	0.63	53	35	0.65
Unity	54	26	0.48	15	8	0.53	16	9	0.55	16	9	0.56	18	10	0.54
Jonglei	116	70	0.60	31	23	0.74	47	32	0.76	54	34	0.63	54	37	0.68
Bahr el Ghazal	451	310	0.69	415	403	0.97	440	379	0.86	480	416	0.87	470	417	0.89
N. Bahr el Ghazal	115	85	0.74	128	113	0.88	147	114	0.84	157	124	0.79	153	129	0.85
W. Bahr el Ghazal	62	50	0.81	69	75	1.06	65	58	0.89	51	45	0.88	37	33	0.89
Lakes	107	75	0.70	94	92	0.99	97	94	1.01	117	106	0.91	125	112	0.90
Warrap	167	100	0.60	124	123	0.99	131	113	0.9	155	141	0.91	156	143	0.92
Greater Equatoria	468	445	0.95	517	562	1.09	467	465	1.00	346	336	0.97	268	266	0.99
Central Equatoria	160	150	0.94	199	223	1.12	197	216	1.19	117	120	1.03	60	62	1.04
Eastern Equatoria	139	116	0.83	151	142	0.94	139	116	0.98	116	99	0.85	107	94	0.87
Western Equatoria	169	179	1.06	167	197	1.19	131	133	1.00	113	117	1.04	101	110	1.09
South Sudan	1 173	892	0.76	1 014	1 015	1.00	1 015	912	0.90	940	826	0.88	863	764	0.89

Recommendations for 2018

The conflict has profoundly disrupted the functioning of all economic sectors in the country, including agriculture and livestock with dramatic repercussions on household food security. It has affected nearly all communities of South Sudan, either directly or indirectly, through loss of human lives and assets, impoverishment, restrictions on movements, and loss of personal safety and security, including significant crop and livestock losses. Moreover, the macro-economic collapse has drastically curtailed trade and markets in 2016 and 2017. As a result, the aggregate cereal gap has increased compared to the previous year and the commercial and humanitarian mechanisms put in place to fill that gap are facing serious challenges. Expanding domestic food production in 2018 is, therefore, essential to prevent escalating food insecurity in 2018 and beyond.

Achieving a stable and lasting peace is the paramount recommendation in order to progress in terms of agricultural development and improving food security. While understanding the complexities of the prevailing situation during the process of reconciliation and peace-building, the following recommendations are made with hopes that the national peace deal will progress successfully for a better future of the South Sudanese people.

In order to strengthen domestic food production and reduce the food gap in 2018 the following recommendation are made according to the followings sectors:

Agriculture sector

- Provide support for 2018 cereal production by timely provision of agricultural inputs and seed fairs, together with the necessary technological packages and farmer training;
- In addition to provision of seeds and tools for agricultural production, there should also be a focus on supporting specially targeted farmers to use improved cultural practices like good land preparation, proper weeding, Integrated Pest Management (IPM) especially for Striga weed and Fall Armyworm, and soil fertility maintenance practices, among others;
- Address the main challenges of Fall Armyworm since the magnitude of damage is expected to increase in 2018;
- Provide coordinated support to the displaced populations as they start returning to some conflict-affected areas to reconstruct their livelihoods by facilitating access to land and agricultural inputs, while ensuring adequate food assistance to meet short-term needs;
- Strengthen farmer and pastoral field schools to support the adoption and utilization of sustainable agro-pastoral production systems;
- Continue improving crop assessment tools and methodology, with particular emphasis on strengthening assessment skills of agricultural officers at county level by broadening the involvement of local government officers and NGOs in the annual crop assessment and seasonal monitoring exercise and by providing them with specific training;
- While strengthening the county-based CCMCs, there is a need for establishing strong linkages between the counties and state agriculture offices.

Livestock sector

- Deepening and expanding animal health interventions in particular: (1) to train animal health professionals and to allow them to move freely in order to discharge their duties in all states; (2) to review vaccination campaigns and procedures according to established vaccination calendars; (3) to expand coverage of vaccination programmes, avoiding incorrect vaccine protocols and sub-optimal vaccination;
- Facilitate access to seasonal grazing areas and routes that have been disrupted since the start of the conflict by supporting a process of negotiation amongst various herding groups;
- Rollout a livestock information system to monitor key indicators, including animal production, marketing, migration and health.

Markets and trade sector

- Closely monitoring food stocks and trade behaviours in the main markets and facilitating the distribution of food from surplus to deficit areas, taking into consideration local market dynamics, as well as along the main corridors for both commercial and humanitarian commodities;
- Maintain and strengthen the market and price monitoring system in order to inform on the food availability and price situation in different markets across the country and allow timely intervention;
- Expand the use of Cash Based Transfers (CBTs) in areas where markets are functioning to encourage supply and greater market stability through demand side stimulation.