



Update Report on Fall Armyworm As at 17 February 2017

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Fall Armyworm and African Armyworm Outlook

- Both African Armyworm (*Spodoptera exempta*) and Fall Armyworm (*Spodoptera Frugiperda*) have caused damage, mostly on maize, sorghum and millet, and to a lesser extent on pasture grasses, in Zimbabwe this season. Fall Armyworm has also attacked some non-grass species.

African Armyworm:

- The **African Armyworm** has been associated with damage on pasture grasses in the northern parts of the country. Moth catches were frequently recorded in 30s to 50s, but no major outbreaks had been reported to date.

Fall Armyworm:

- Fall Armyworm was reported on maize crops under both irrigation and rain fed production. The pest had spread to an estimated 13 798 ha (Table 1 in Appendix 1). However, actual damage was still being assessed. Most of the maize crop at tasselling and cob formation stages had since recovered from the pest attack. However, most young maize crops below knee high were still being attacked by Fall Armyworm, with damage levels ranging from 1-30% in various fields.
- Monitoring still continues at the reproductive and seed feeling stages of maize.



African Armyworm (*Spodoptera exempta*) larva with black and brown stripe and a black head.



Fall Armyworm (*Spodoptera frugiperda*) larva showing the hairy back, brown and black stripes and black spots.

- The efficacy of chemicals used to control Fall Armyworm produced variable results (Table 2 in Appendix 1). This could have been a result of product application techniques by growers, coupled with heavy rains washing off chemicals before they took effect. Different pesticides were used by farmers at different doses which could have triggered some aspects of resistance.
- The Fall Armyworm burrows into maize whorls/ funnels and feeds while hidden initially, making chemical sprays ineffective due to reduced contact between the caterpillars and the insecticide. Therefore, removal of nozzles and direct application of the chemical into the funnels was recommended for effective control.
- In the on-going experiment to compare efficacy of different chemicals (Carbaryl 85 % WP, Lambda, Super Dash and Deltamethrin) potted maize plants have been artificially infested with 2nd to 3rd instar larvae reared in the laboratory. Each plant was infested with 5 caterpillars to allow them to cause damage before application of different chemical treatments.

Capacity Building of Provincial Task Forces and Field Extension Staff

- Capacity building training on identification and management of Armyworms was done in seven (7) Provinces that had experienced outbreaks. Provincial Task Force teams that included extension workers, in some cases, were targeted (Table 3 in Appendix 1). In areas where the pressure of Fall Armyworm was greater, extra training specifically targeted agricultural extension workers (AEWs) was conducted.
- Capacity building awareness materials, including brochures and posters, covering both Fall and African Armyworm, as well as stem borers such as *Chilo* spp., were distributed to all participants. Knapsack sprayers and chemicals were also distributed to the participating provinces.

Appendix 1: Update on Fall Armyworm

Table 1: Cumulative Area (ha) affected as at 14 February 2017

Province	Cumulative Area Affected (ha)
Mashonaland Central	3 161
Mashonaland East	428
Mashonaland West	3 491
Midlands	55
Masvingo	51
Manicaland	50
Matebeleland North	790
Matebeleland South	5 772
Total	13 798

Table 2: Fall Armyworm Report as at 14 February 2017

Province	District	Ward	Area Affected (ha)	Crop Stage	Insect Stage (Instar)	%Severity Damage	Chemical used	Rate	Remarks
Mash West	Ngezi	2-16	319	Early Veg.	1-4	1-10	Lambda	100mls/ha	Failure
							Fencure	300mls/15L	Success
							DDVP	300mls/15L	Success
	Sanyati	1-2	30	Early Veg.	2-4	1-5	Cypermethrine	300g/ha	Failure
	Zvimba	13-31	496	Early-Late Veg.	1-4	5	Carbaryl 85% WP	300g/15L	Success
Lambda							200mls/15L	Success	
Chegutu	21,23 24,28	308	Early Veg.	2-3	2	Carbaryl 85% WP	300g/15L	Success	
						Lambda	200mls/15L	Success	
Kariba	12,13	9	Early Veg.	3-4	5	Blast Super Desis	300g/15L 200mls/ha	Success Failure	

	Hurungwe		395				Cypermethrine Lambda	200mls/ha 300mls/ha	Failure Success
Total			1 557						
Mat South	Umzingwane	All	220	Early Veg.	3-4	1-15	None	None	None
	Matobo	All	3 200	Early Veg.	1-6	10	Carbaryl 85% WP	300g/15L	Failure
	Insiza	All	40	Early Veg.	1-6	5	Carbaryl 85% WP	400g/L	Failure
	Beitbridge	14.6	17	Early Veg.	1-6	4	Carbaryl 85% WP	400g/L	Failure
	Gwanda	1-23	405	Early Veg.	1-5		None	None	None
	Mangwe	ARDA	612	Cobs damaged	1-6	25	Amphligo Lambda	300mls/ha 200mls/ha	Success Success
	Bulilima		28			31			
Total			4 521						
Mash East	Chikomba	1-19	13	Early-Late	1-6	4	Carbaryl 85% WP Thionex 1%	300g/15L 4 kg/ha	Success Success
	Wedza	2	24	Late	1-3	4	Karate Zeon Carbaryl 85% WP	300g/15L	Success Success
	Goromonzi	9,17,23 ,25	10	Early-Late	1-6	5	Lambda Carbaryl 85% WP	200mls/ha 300g/15L	Success Success
	Marondera	2,3,5,7, 23	75	Early-Late	1-6	5	Carbaryl 85% WP Methomix plus Dipterex	200mls/ha	Success Success
	Seke	9,10,14 ,19,20	80	Early-Tasselling	2-5	6	Lambda Carbaryl 85% WP	300g/15L	Success Success
	Mutoko	5	2	Early-Late	2-3	1	Carbaryl 85% WP Dipterex	300g/15L 3kg/ha	Success Success
	Mudzi	3,9,11, 13	6	Early-Late	1-4	4	Carbaryl 85% WP	300g/15L	Success
Total			210						
Masvingo	Zaka		28				Carbaryl 85% WP	300g/15L	Success

	Chivi		10				Carbaryl 85% WP	300g/15L	Success
	Total		38						

Table 3: Capacity Building of Provincial Task Force and AEWs, Sprayers and Chemicals Distributed

Province	District	Task Force members	AEWs trained	Knapsack sprayers distributed	Chemical distributed	
					Carbaryl 85% WP, kg	Karate (Litres)
Mashonaland Central		49		166	240	50
Mashonaland West	Total	22		45	240	50
	Zvimba		84			
	Makonde		50			
Manicaland		45		60	240	50
Midlands		48		58	100	100
Masvingo		40		45	100	100
Matabeleland North		-	15	105	150	250
Matabeleland South		40		65	190	880
Grand Total		244	149	440	1 260	1 480

AEWs = Agricultural Extension Workers