

**ARC-Small Grain False Armyworm moth numbers**  
Schuinsdrift, Koedoeskop and Beestekraal  
Week 30 - 31

Prepared by Goddy Prinsloo and Pinkie Radebe – ARC Small Grain



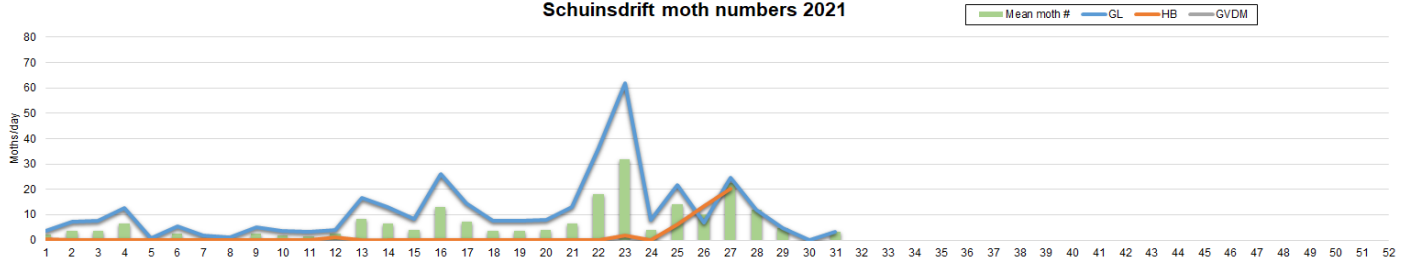
## 2021 Week numbers

<b>Week #</b>	<b>Begin</b>	<b>End</b>	<b>Week #</b>	<b>Begin</b>	<b>End</b>	<b>Week #</b>	<b>Begin</b>	<b>End</b>	<b>Week #</b>	<b>Begin</b>	<b>End</b>	<b>Week #</b>	<b>Begin</b>	<b>End</b>
<b>1</b>	03-Jan	09-Jan	<b>12</b>	21-Mar	27-Mar	<b>23</b>	06-Jun	12-Jun	<b>34</b>	22-Aug	28-Aug	<b>45</b>	07-Nov	13-Nov
<b>2</b>	10-Jan	16-Jan	<b>13</b>	28-Mar	03-Apr	<b>24</b>	13-Jun	19-Jun	<b>35</b>	29-Aug	04-Sep	<b>46</b>	14-Nov	20-Nov
<b>3</b>	17-Jan	23-Jan	<b>14</b>	04-Apr	10-Apr	<b>25</b>	20-Jun	26-Jun	<b>36</b>	05-Sep	11-Sep	<b>47</b>	21-Nov	27-Nov
<b>4</b>	24-Jan	30-Jan	<b>15</b>	11-Apr	17-Apr	<b>26</b>	27-Jun	03-Jul	<b>37</b>	12-Sep	18-Sep	<b>48</b>	28-Nov	04-Dec
<b>5</b>	31-Jan	06-Feb	<b>16</b>	18-Apr	24-Apr	<b>27</b>	04-Jul	10-Jul	<b>38</b>	19-Sep	25-Sep	<b>49</b>	05-Dec	11-Dec
<b>6</b>	07-Feb	13-Feb	<b>17</b>	25-Apr	01-May	<b>28</b>	11-Jul	17-Jul	<b>39</b>	26-Sep	02-Oct	<b>50</b>	12-Dec	18-Dec
<b>7</b>	14-Feb	20-Feb	<b>18</b>	02-May	08-May	<b>29</b>	18-Jul	24-Jul	<b>40</b>	03-Oct	09-Oct	<b>51</b>	19-Dec	25-Dec
<b>8</b>	21-Feb	27-Feb	<b>19</b>	09-May	15-May	<b>30</b>	25-Jul	31-Jul	<b>41</b>	10-Oct	16-Oct	<b>52</b>	26-Dec	01-Jan
<b>9</b>	28-Feb	06-Mar	<b>20</b>	16-May	22-May	<b>31</b>	01-Aug	07-Aug	<b>42</b>	17-Oct	23-Oct			
<b>10</b>	07-Mar	13-Mar	<b>21</b>	23-May	29-May	<b>32</b>	08-Aug	14-Aug	<b>43</b>	24-Oct	30-Oct			
<b>11</b>	14-Mar	20-Mar	<b>22</b>	30-May	05-Jun	<b>33</b>	15-Aug	21-Aug	<b>44</b>	31-Oct	06-Nov			

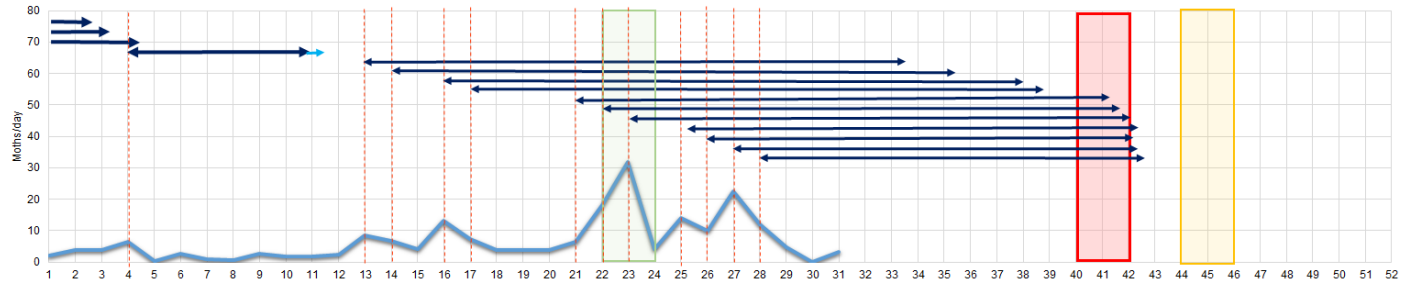
**Schuinsdrift moth traps**

- First graph indicates the original data received from the farmers.
- The second graph indicates the mean number of moths, while the dark blue arrows indicate the life cycles as forecasted by the average mean daily temperatures. Light blue arrow indicate the extension of lifecycle due to weather conditions
- The third graph includes the current climatic data as weekly total rainfall and weekly average temperature in relation to the mean moth number.
- The green blocks present the mean planting time and the yellow blocks the harvest time. The red block presents the critical time for presence of new moth activity.
- Moth peak numbers between week 21 and 28 could be responsible for moth flights during the critical period and probably larvae that could damage crop just before harvest.
- Table indicates the dates when larvae will be present (left) and when the new moth flights could happen.

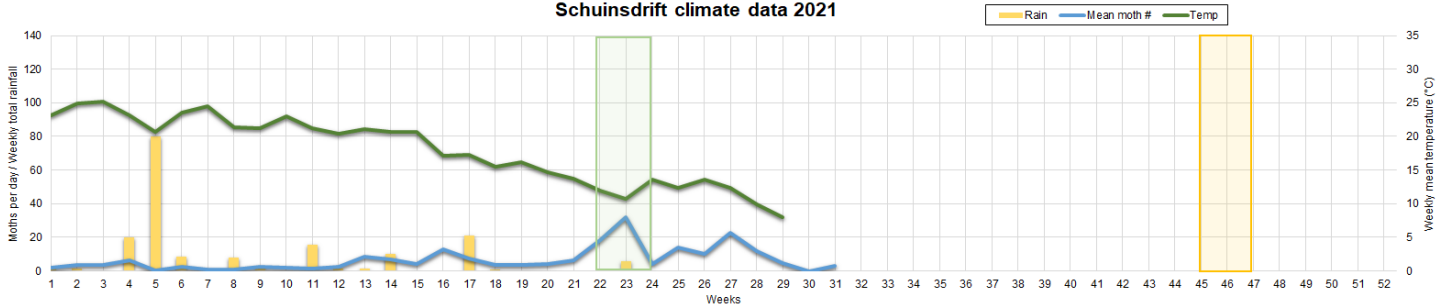
**Schuinsdrift moth numbers 2021**



**Schuinsdrift: Total life cycle (egg-adult)**



**Schuinsdrift climate data 2021**



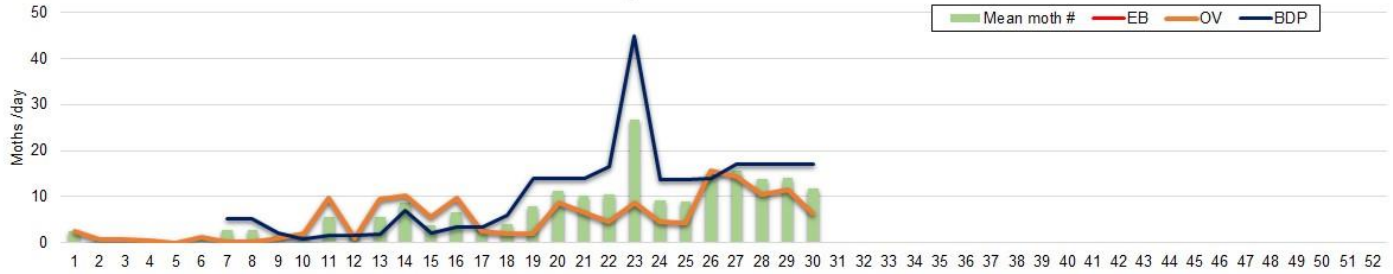
Skuinsdrift 2021 Larvae										
Week	Mean temperature				Real temperature				Difference	
	Start	Week	Larvae end	Days	Week	Start	Week	Larvae end		Days
4	24-Jan	7	18-Feb	26	4	24-Jan	7	19-Feb	27	1
13	29-Mar	18	05-May	38	13	29-Mar	18	06-May	39	1
14	04-Apr	20	16-May	42	14	04-Apr	20	16-May	43	1
16	18-Apr	25	23-Jun	67	16	18-Apr	27	04-Jul	78	11
17	25-Apr	29	19-Jul	86	17	25-Apr				-86
21	23-May	35	29-Aug	99	21	23-May				-99
22	30-May	35	03-Sep	97	22	30-May				-97
23	06-Jun	36	07-Sep	94	23	06-Jun				-94
25	20-Jun	36	11-Sep	84	25	20-Jun				-84
26	27-Jun	37	12-Sep	78	26	27-Jun				-78
27	04-Jul	37	14-Sep	73	27	04-Jul				-73
28	12-Jul	37	17-Sep	68	28	12-Jul				-68

Skuinsdrift 2021 New moth peaks										
Week	Mean temperature				Real temperature				Difference	
	Start	Week	New moths	Days	Week	Start	Week	New moths		Days
4	24-Jan	10	12-Mar	48	4	24-Jan	11	16-Mar	52	4
13	29-Mar	33	18-Aug	143	13	29-Mar				-143
14	04-Apr	35	31-Aug	150	14	04-Apr				-150
16	18-Apr	38	18-Sep	154	16	18-Apr				-154
17	25-Apr	38	23-Sep	152	17	25-Apr				-152
21	23-May	41	11-Oct	142	21	23-May				-142
22	30-May	41	13-Oct	137	22	30-May				-137
23	06-Jun	42	16-Oct	133	23	06-Jun				-133
25	20-Jun	42	17-Oct	120	25	20-Jun				-120
26	27-Jun	42	17-Oct	113	26	27-Jun				-113
27	04-Jul	42	18-Oct	107	27	04-Jul				-107
28	12-Jul	42	20-Oct	101	28	12-Jul				-101

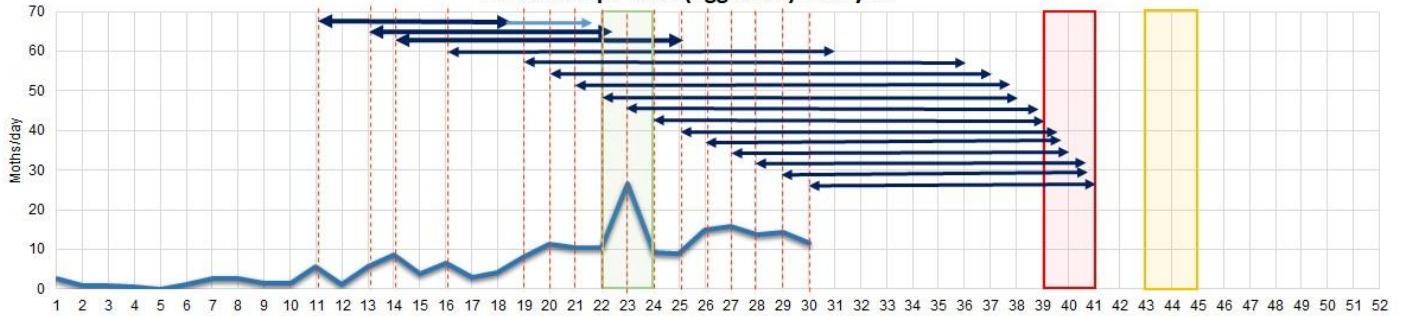
### Koedoeskop moth traps

- First graph indicates the original data recieved from the farmers.
- The second graph indicates the mean number of moths, while the dark blue arrows indicate the life cycles as forecasted by the average mean daily temperatures. Light blue arrow indicate the extension of lifecycle due to weather conditions
- The third graph includes the current climatic data as weekly total rainfall and weekly average temperature in relation to the mean moth number.
- The green blocks present the mean planting time and the yellow blocks the harvest time. The red block presents the critical time for presence of larvae
- Moth peak from week 24 onwards could give rise to high moth numbers during the critical period.
- Table indicates the dates when larvae will be present and when the new moth flights could happen.

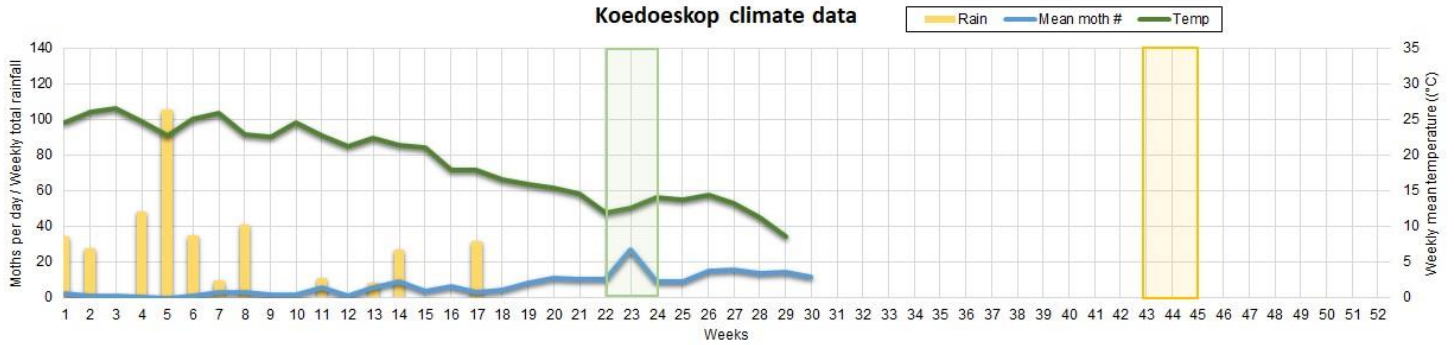
### Koedoeskop moth numbers 2021



### Koedoeskop: Total (egg-adult) life cycle



### Koedoeskop climate data

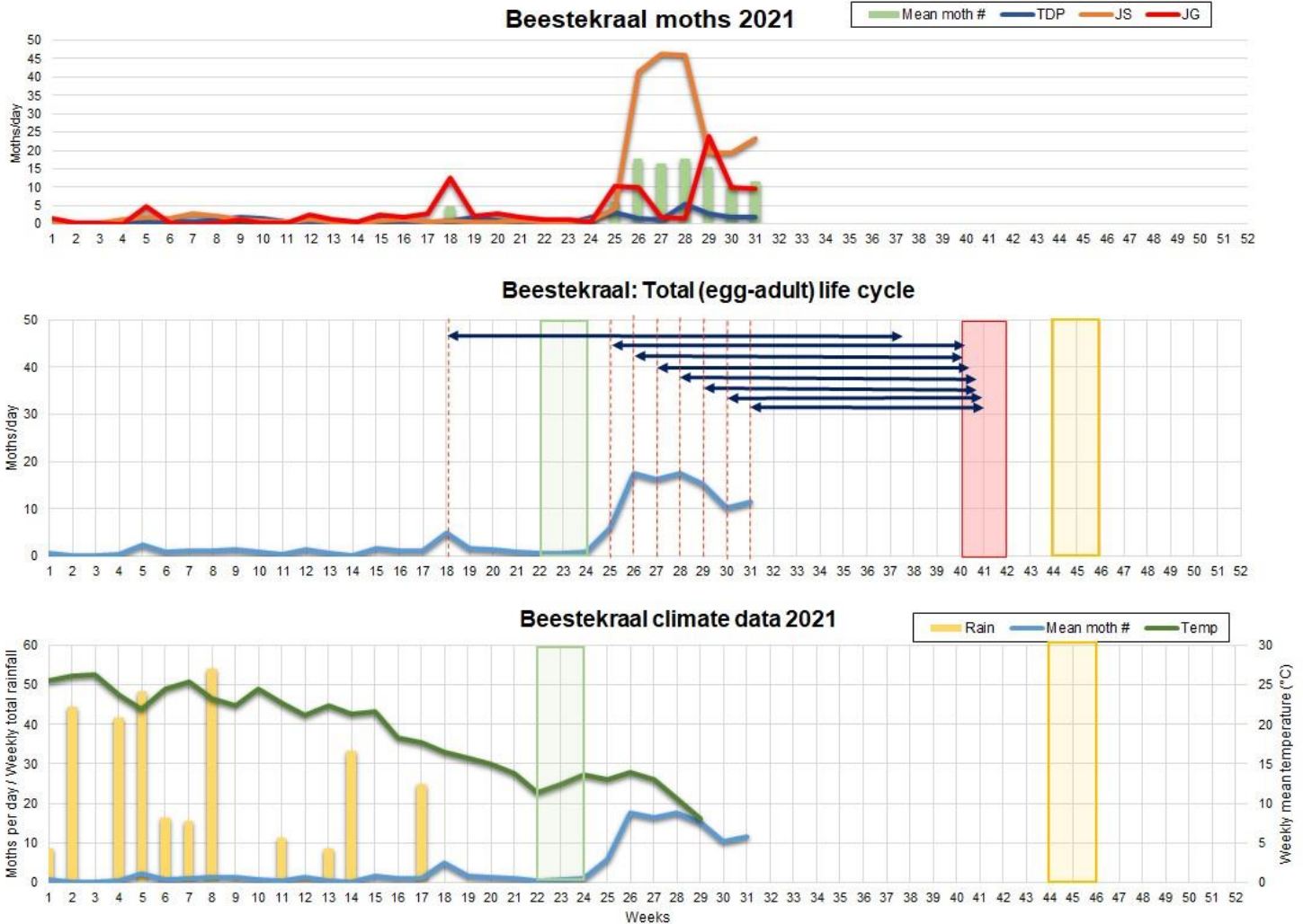


Koedoeskop 2021 Larvae										
Week	Mean temperature				Real temperature				Difference	
	Start	Week	Larvae e	Days	Week	Start	Week	Larvae end		Days
11	15-Mar	14	08-Apr	25	11	15-Mar	15	12-Apr	29	4
13	29-Mar	17	25-Apr	28	13	29-Mar	18	01-May	34	6
14	05-Apr	18	05-May	31	14	05-Apr	19	14-May	40	9
16	19-Apr	21	24-May	36	16	19-Apr	25	19-Jun	62	26
19	10-May	26	02-Jul	54	19	10-May				-54
20	17-May	28	13-Jul	58	20	17-May				-58
21	24-May	30	29-Jul	67	21	24-May				-67
22	31-May	32	07-Aug	69	22	31-May				-69
23	07-Jun	33	15-Aug	70	23	07-Jun				-70
24	14-Jun	34	22-Aug	70	24	14-Jun				-70
25	21-Jun	34	26-Aug	67	25	21-Jun				-67
26	28-Jun	35	30-Aug	64	26	28-Jun				-64
27	05-Jul	35	03-Sep	61	27	05-Jul				-61
28	12-Jul	36	08-Sep	59	28	12-Jul				-59
29	19-Jul	36	10-Sep	54	29	19-Jul				-54
30	26-Jul	37	12-Sep	49	30	26-Jul				-49

Koedoeskop 2021 New moth peaks										
Week	Mean temperature				Real temperature				Difference	
	Start	Week	New moth	Days	Week	Start	Week	New moth		Days
11	15-Mar	18	04-May	51	11	15-Mar	21	26-May	73	22
13	29-Mar	22	31-May	64	13	29-Mar				-64
14	05-Apr	25	19-Jun	76	14	05-Apr				-76
16	19-Apr	31	01-Aug	105	16	19-Apr				-105
19	10-May	36	04-Sep	118	19	10-May				-118
20	17-May	37	11-Sep	118	20	17-May				-118
21	24-May	37	16-Sep	116	21	24-May				-116
22	31-May	38	19-Sep	112	22	31-May				-112
23	07-Jun	38	22-Sep	108	23	07-Jun				-108
24	14-Jun	38	25-Sep	104	24	14-Jun				-104
25	21-Jun	39	28-Sep	100	25	21-Jun				-100
26	28-Jun	39	30-Sep	95	26	28-Jun				-95
27	05-Jul	40	03-Oct	91	27	05-Jul				-91
28	12-Jul	40	06-Oct	87	28	12-Jul				-87
29	19-Jul	40	07-Oct	81	29	19-Jul				-81
30	26-Jul	40	09-Oct	76	30	26-Jul				-76

## Beestekraal moth traps

- First graph indicates the original data recieved from the farmers.
- The second graph indicates the mean number of moths, while the dark blue arrows indicate the life cycles as forecasted by the average mean daily temperatures. Light blue arrow indicate the extension of lifecycle due to weather conditions
- The third graph includes the current climatic data as weekly total rainfall and weekly average temperature in relation to the mean moth number.
- The green blocks present the mean planting time and the yellow blocks the harvest time. The red block presents the critical time for presence of new moth activity.
- Current moth activity may result in high moth numbers in the critical period.
- Table indicates the dates when larvae will be present (left) and when the new moth flights could happen.



Beestekraal 2021 Larvae										
Week	Mean temperature				Real temperature				Difference	
	Start	Week	Larvae end	Days	Week	Start	Week	Larvae end		Days
18	03-May	29	21-Jul	80	18	03-May				-80
25	21-Jun	35	31-Aug	72	25	21-Jun				-72
26	29-Jun	35	03-Sep	67	26	29-Jun				-67
27	05-Jul	36	05-Sep	63	27	05-Jul				-63
28	12-Jul	36	07-Sep	58	28	12-Jul				-58
29	19-Jul	36	09-Sep	53	29	19-Jul				-53
30	26-Jul	37	11-Sep	48	30	26-Jul				-48
31	02-Aug	37	14-Sep	44	31	02-Aug				-44

Beestekraal 2021 New moth peaks										
Week	Mean temperature				Real temperature				Difference	
	Start	Week	New moths	Days	Week	Start	Week	New moths		Days
18	03-May	37	13-Sep	134	18	03-May				-134
25	21-Jun	39	02-Oct	104	25	21-Jun				-104
26	29-Jun	40	03-Oct	97	26	29-Jun				-97
27	05-Jul	40	04-Oct	92	27	05-Jul				-92
28	12-Jul	40	06-Oct	87	28	12-Jul				-87
29	19-Jul	40	06-Oct	80	29	19-Jul				-80
30	26-Jul	40	08-Oct	75	30	26-Jul				-75
31	02-Aug	41	10-Oct	70	31	02-Aug				-70