

## Field Robot Event 2016 Results

Task	1. Prize	2. Prize	3.Prize
<b>Basic Navigation</b>	Zephyr Universität Siegen  (Germany)	Agronaut  Aalto University, Helsinki  (Finland)	The Great Cornholio  HS Osnabrück  (Germany)
<b>Advanced Navigation</b>	Agronaut  Aalto University, Helsinki  (Finland)	Zephyr  Universität Siegen  (Germany)	The Great Cornholio HS Osnabrück (Germany) <b>&amp;</b> Helios/FREDT TU Braunschweig (Germany)
<b>Weeding</b>	The Great Cornholio  HS Osnabrück  (Germany)	Eric  Harper Adams University  (England)	Beteigeuze/ Kamaro  Karlsruher Institut für Technologie  (Germany)
<b>Seeding</b>	Eric  Harper Adams University  (England)	Zephyr  Universität Siegen  (Germany)	Agrifac Bullseye  Wageningen University  (Netherlands)
<b>Overall</b>	The Great Cornholio  HS Osnabrück  (Germany)	Eric  Harper Adams University  (England)	Zephyr  Universität Siegen  (Germany)
<b>Freestyle</b>	Beteigeuze/ Kamaro  Karlsruher Institut für Technologie (Germany)	Helios/FREDT  TU Braunschweig  (Germany)	Agronaut  Aalto University,Helsinki  (Finland)
<b>Design Award</b>	Soifakischtle Schülerforschungszentrum Überlingen (Germany)		

## TASK 1 “Basic Navigation”

Team	Participated	Time (mm:ss)	Measured Distance (m)	Finish line reached	Bonus time (s)	Damaged plants	Total distance (m)	Total distance with time bonus (m)	Rank	Points
Agrifac Bullseye	<input checked="" type="checkbox"/>	03:00	16.75	<input type="checkbox"/>	0	7	9.75	9.75	14	15
Agronaut	<input checked="" type="checkbox"/>	03:00	105.4	<input type="checkbox"/>	0	0	105.4	105.4	2	28
Banat	<input type="checkbox"/>	03:00	0	<input type="checkbox"/>	0	0	N.P.	N.P.	N.R.	0
Beteigeuze/Kamaro Engineering e.V.	<input checked="" type="checkbox"/>	03:00	23.3	<input type="checkbox"/>	0	22	1.3	1.3	15	14
Cornstar	<input checked="" type="checkbox"/>	03:00	48.2	<input type="checkbox"/>	0	0	48.2	48.2	7	22
DTUni-Corn	<input checked="" type="checkbox"/>	03:00	60	<input type="checkbox"/>	0	5	55	55	6	23
Eric	<input checked="" type="checkbox"/>	03:00	69.2	<input type="checkbox"/>	0	0	69.2	69.2	4	25
FloriBot	<input type="checkbox"/>	03:00	0	<input type="checkbox"/>	0	0	N.P.	N.P.	N.R.	0
Helios/ FREDT	<input checked="" type="checkbox"/>	03:00	60	<input type="checkbox"/>	0	1	59	59	5	24
Innok TX	<input checked="" type="checkbox"/>	03:00	30	<input type="checkbox"/>	0	3	27	27	8	21
Plants with Benefits	<input checked="" type="checkbox"/>	03:00	15	<input type="checkbox"/>	0	2	13	13	13	16
Soifakischtle	<input checked="" type="checkbox"/>	03:00	14.45	<input type="checkbox"/>	0	0	14.45	14.45	12	17
TALOS	<input checked="" type="checkbox"/>	03:00	30	<input type="checkbox"/>	0	4	26	26	9	20
The Great Cornholio	<input checked="" type="checkbox"/>	03:00	75	<input type="checkbox"/>	0	0	75	75	3	26
Zephyr	<input checked="" type="checkbox"/>	03:00	137.3	<input type="checkbox"/>	0	4	133.3	133.3	1	30
ZukBot	<input checked="" type="checkbox"/>	03:00	15	<input type="checkbox"/>	0	0	15	15	10	19
Fredl	<input checked="" type="checkbox"/>	03:00	14.7	<input type="checkbox"/>	0	0	14.7	14.7	11	18

N.P. : Not Participated

N.R. : Not Ranked

## TASK 2 “Advanced Navigation”

Team	Participated	Time (mm:ss)	Measured Distance (m)	Finish line reached	Bonus time (s)	Damaged plants	Total distance (m)	Total distance with time bonus (m)	Rank	Points
Agrifac Bullseye	<input checked="" type="checkbox"/>	03:00	15	<input type="checkbox"/>	0	2	13	13	10	19
Agronaut	<input checked="" type="checkbox"/>	03:00	81.3	<input type="checkbox"/>	0	3	78.3	78.3	1	30
Banat	<input type="checkbox"/>	03:00	0	<input type="checkbox"/>	0	0	N.P.	N.P.	N.R.	0
Beteigeuze/Kamaro Engineering e.V.	<input checked="" type="checkbox"/>	03:00	15	<input type="checkbox"/>	0	4	11	11	12	17
Cornstar	<input checked="" type="checkbox"/>	03:00	15	<input type="checkbox"/>	0	0	15	15	7	22
DTUni-Corn	<input checked="" type="checkbox"/>	03:00	45	<input type="checkbox"/>	0	0	45	45	5	24
Eric	<input checked="" type="checkbox"/>	03:00	15	<input type="checkbox"/>	0	0	15	15	7	22
FloriBot	<input type="checkbox"/>	03:00	0	<input type="checkbox"/>	0	0	N.P.	N.P.	N.R.	0
Helios/ FREDT	<input checked="" type="checkbox"/>	03:00	60	<input type="checkbox"/>	0	0	60	60	3	26
Innok TX	<input type="checkbox"/>	03:00	0	<input type="checkbox"/>	0	0	N.P.	N.P.	N.R.	0
Plants with Benefits	<input checked="" type="checkbox"/>	03:00	15	<input type="checkbox"/>	0	4	11	11	12	17
Soifakischtle	<input checked="" type="checkbox"/>	03:00	15	<input type="checkbox"/>	0	3	12	12	11	18
TALOS	<input checked="" type="checkbox"/>	03:00	28	<input type="checkbox"/>	0	4	24	24	6	23
The Great Cornholio	<input checked="" type="checkbox"/>	03:00	60	<input type="checkbox"/>	0	0	60	60	3	26
Zephyr	<input checked="" type="checkbox"/>	03:00	75.15	<input type="checkbox"/>	0	3	72.15	72.15	2	28
ZukBot	<input checked="" type="checkbox"/>	03:00	15	<input type="checkbox"/>	0	0	15	15	7	22
Fredl	<input checked="" type="checkbox"/>	03:00	10.3	<input type="checkbox"/>	0	1	9.3	9.3	14	15

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N.R. : Not Ranked

## TASK 3 "Weeding"

Team	Participated	True positive (with acoustic signal)	True positive (without acoustic signal)	False positive	False negative	Damaged plants	Total Task Points	Rank	Points
Agrifac Bullseye	<input checked="" type="checkbox"/>	0	0	0	16	0	-32	9	20
Agronaut	<input checked="" type="checkbox"/>	0	0	0	25	0	-50	11	18
Banat	<input checked="" type="checkbox"/>	1	0	0	4	1	-4	6	23
Beteigeuze/Kamaro Engineering e.V.	<input checked="" type="checkbox"/>	12	0	6	1	6	52	3	26
Cornstar	<input type="checkbox"/>	0	0	0	0	0	N.P.	N.R.	0
DTUni-Corn	<input checked="" type="checkbox"/>	12	0	9	10	2	39	4	25
Eric	<input checked="" type="checkbox"/>	15	0	1	1	0	87	2	28
FloriBot	<input type="checkbox"/>	0	0	0	0	0	N.P.	N.R.	0
Helios/ FREDT	<input type="checkbox"/>	0	0	0	0	0	N.P.	N.R.	0
Innok TX	<input type="checkbox"/>	0	0	0	0	0	N.P.	N.R.	0
Plants with Benefits	<input checked="" type="checkbox"/>	0	0	0	7	0	-14	7	22
Soifakischtle	<input type="checkbox"/>	0	0	0	0	0	N.P.	N.R.	0
TALOS	<input checked="" type="checkbox"/>	5	0	1	10	0	9	5	24
The Great Cornholio	<input checked="" type="checkbox"/>	15	0	0	0	0	90	1	30
Zephyr	<input checked="" type="checkbox"/>	0	0	0	11	7	-36	10	19
ZukBot	<input type="checkbox"/>	0	0	0	0	0	N.P.	N.R.	0
Fredl	<input checked="" type="checkbox"/>	0	0	0	7	0	-14	7	22

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## TASK 4 "Seeding"

Team	Participated	Seeded Area [m <sup>2</sup> ]	Navigating and stopping autonomously to the refill station	Commanding refill station to ask seed refill wirelessly	Correct filling of the seeds, all seeds went into the hopper	Navigating from refill station to region	General navigation and turning	Seed spatial distribution	Seed soil coverage	Total Task Points	Rank	Points
								Jury Average	Jury Average			
Agrifac Bullseye	<input checked="" type="checkbox"/>	5	0	2	2	2	0	8	0	19	3	26
Agronaut	<input type="checkbox"/>	0	0	0	0	0	0	N.P.	N.P.	N.P.	N.R.	0
Banat	<input type="checkbox"/>	0	0	0	0	0	0	N.P.	N.P.	N.P.	N.R.	0
Beteigeuze/Kamaro Engineering e.V.	<input checked="" type="checkbox"/>	1.85	0	2	2	0	0	5	0	10.85	4	25
Cornstar	<input type="checkbox"/>	0	0	0	0	0	0	N.P.	N.P.	N.P.	N.R.	0
DTUni-Corn	<input checked="" type="checkbox"/>	0	2	0	0	2	0	0	0	4	6	23
Eric	<input checked="" type="checkbox"/>	10	2	0	2	2	2	9	0	27	1	30
FloriBot	<input type="checkbox"/>	0	0	0	0	0	0	N.P.	N.P.	N.P.	N.R.	0
Helios/ FREDT	<input checked="" type="checkbox"/>	0	0	0	2	0	0	0	0	2	7	22
Innok TX	<input type="checkbox"/>	0	0	0	0	0	0	N.P.	N.P.	N.P.	N.R.	0
Plants with Benefits	<input type="checkbox"/>	0	0	0	0	0	0	N.P.	N.P.	N.P.	N.R.	0
Soifakischtle	<input type="checkbox"/>	0	0	0	0	0	0	N.P.	N.P.	N.P.	N.R.	0
TALOS	<input type="checkbox"/>	0	0	0	0	0	0	N.P.	N.P.	N.P.	N.R.	0
The Great Cornholio	<input checked="" type="checkbox"/>	0	2	2	0	2	0	0	0	6	5	24
Zephyr	<input checked="" type="checkbox"/>	10	2	0	2	2	0	9	0	25	2	28
ZukBot	<input type="checkbox"/>	0	0	0	0	0	0	N.P.	N.P.	N.P.	N.R.	0
Fredl	<input type="checkbox"/>	0	0	0	0	0	0	N.P.	N.P.	N.P.	N.R.	0

N.P. : Not Participated  
N.R. : Not Ranked

## FRE 2016 Overall Ranking

Team	Task 1 Points	Task 2 Points	Task 3 Points	Task 4 Points	Total Points	Rank
Agrifac Bullseye	15	19	20	26	80	6
Agronaut	28	30	18	0	76	7
Banat	0	0	23	0	23	15
Beteigeuze/Kamaro Engineering e.V.	14	17	26	25	82	5
Cornstar	22	22	0	0	44	12
DTUni-Corn	23	24	25	23	95	4
Eric	25	22	28	30	105	2
FloriBot	0	0	0	0	0	17
Helios/ FREDT	24	26	0	22	72	8
Innok TX	21	0	0	0	21	16
Plants with Benefits	16	17	22	0	55	10
Soifakischtle	17	18	0	0	35	14
TALOS	20	23	24	0	67	9
The Great Cornholio	26	26	30	24	106	1
Zephyr	30	28	19	28	105	3
ZukBot	19	22	0	0	41	13
Fredl	18	15	22	0	55	10