Shooting Tests on Backstopp Netting (4 Base Types) Date: **11th June 2010**

Location:	Rossach, Fa. Bearpaw; 3D - Parcours, Warmup Shooting range
Tests conducted:	from 14:30 PM to 21:30 PM
Weather:	Sunny, Temperature approx. 25 °C
Wind at shooting range:	Zero to 1;

Bow 1:	Field Star Recurve Take Down: **30 lbs** at 29.5 inch draw length
Bow 2:	Quick Stick Langbogen: **50 lbs** at 29.5 inch draw length

	Arrow#:	Weigth in grain	in gramm	Speed*) in ft/sec.	in m/sec.
Arrows for Bow 1: **)	1	232	15,0	173,8	53,0
Carbon Impact	2	231	15,4	171,8	52,4
Traditional Hunter Extra Light	3	232	15,5	177,0	53,9
Plastic Fletches 3 "	4	230	15,3	170,3	51,9
Shaft / Tip Dia.: 5,66 mm	5	231	15,4	175,5	53,5
Tip Bullet Form					
	Av. Value	231,2	**15,3**	173,7	**52,9**

Average Kinetic Energy: = 1/2 m * v2 **21,5** Joule (Ws)

Arrows for Bow 2:		1	350	22,7	190,6	58,1
Gold Tip, Expetition Hunter		2	347	23,1	186,4	56,8
Hardwood Green 500 28"		3	353	23,5	194,6	59,3
4"5 Saubuckel		4	353	23,5	194,0	59,1
Bearpaw Natural Feathers		5	358	23,9	188,2	57,4
Shaft / Tip Dia.: 7,92 / 4,38 mm						
Tip 3D - Combo / Step Tip	Av. Value		352,2	**23,3**	190,8	**58,1**

Average Kinetic Energy: = 1/2 m * v2 **39,5** Joule (Ws)

***)** Arrow Speed measured with **Easton Easton Bow Force Mapper** - Speed measurement device;
Measurements conducted before shooting on test objects!

****)** Some **arrows were replaced** during the shooting event because of destroyed fletches

Test Shooters:	Henry Bodnik Christoph Unger
Filming / Interviews:	Markus Flach
Documentation:	Harald Fischer

Shooting Distances:
10 m
15 m — not all nets were tested in that range
18 m
30 m
50 m

Shooting Frequence: each bow: 15 shoots on net at each distance; making total 30 shots per distance; total each net has seen at least 120 hits!

Target area:
eye hight (1.7 m from Ground)
middle of net from both sides apart

Shooting:
Shooters always pulled the full draw length acc. speed measurement base settings!
Shooting breaks were built in to maintain these critical base parameters!
Always shooting run of 5 shoots (3 times totally) were done and the results were documented each time;
totally 15 shoots on each net at each distance with each bow were done!

Test Evaluation
3 Categories were determined:

Pass 1: (P1)	Arrow was stopped by the net, did not penetrate it and dropped before the net to the ground
Pass 2: (P2)	Arrow did penetrate the net; but still sticked into it
Failure: (F)	Arrow was shot through net

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Parameter of Tested Nets

item #	Backstopp Net Types		Net Dimensions in m High	Width	Distance bottom edge from ground in m	Sewing structure holes	Hole Diameter in mm
1	Bearpaw Products Net	green	3,00	3,00	0,30	slightly oval	2.0 / 2.5
1a	Bearpaw Products Net - treated	white	3,35	4,00	0 *)	slightly oval	2.0 / 2.5
2	German Producer	light green	2,80	3,15	0,50	tight net	na
3	American Supplier	white	3,20	3,00	0,10	oval	1.9 / 2.9
4	European Supplier	green	3,15	5,00	0,15	oval	2.2 / 2.5

Mounting of Nets: Nets were hocked up with standard plastic hocks; on coated steel wire; standard item in industry
Nets were generally not stretched in length, hanging with natural folds

*) touching ground

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Test Results

	Net 1			Net 1a			Net 2			Net 3			Net 4		
10 m	**P1**	**P2**	**F**	**P1**	**P2**	**F**	**P1**	**P2**	**F**	**P1**	**P2**	**F**	**P1**	**P2**	**F**
Bow 30 lbs	2	1	2	na	na	na	4	0	1	0	2	3	3	2	0
	2	1	2	na	na	na	5	0	0	0	0	5	1	2	2
	1	2	2	na	na	na	2	1	2	1	3	1	1	3	1
Bow 50 lbs	4	0	1	na	na	na	1	2	2	2	0	3	3	0	2
	4	0	1	na	na	na	0	0	5	2	0	3	4	0	1
	4	0	1	na	na	na	2	1	2	1	0	4	3	0	2
Summery	**17**	**4**	**9**	**0**	**0**	**0**	**14**	**4**	**12**	**6**	**5**	**19**	**15**	**7**	**8**

	Net 1			Net 1a			Net 2			Net 3			Net 4		
15 m	**P1**	**P2**	**F**	**P1**	**P2**	**F**	**P1**	**P2**	**F**	**P1**	**P2**	**F**	**P1**	**P2**	**F**
Bow 30 lbs	2	3	0	2	1	2	2	0	3	1	4	0	2	2	1
	3	2	0	0	5	0	2	2	1	0	3	2	1	3	1
	2	3	0	3	2	0	3	0	2	0	4	1	2	3	0
Bow 50 lbs	1	0	4	3	0	2	0	1	4	1	0	4	3	0	2
	3	0	2	3	0	2	0	1	4	1	0	4	3	0	2
	4	1	0	3	0	2	0	0	5	4	0	1	2	0	3
Summery	**15**	**9**	**6**	**14**	**8**	**8**	**7**	**4**	**19**	**7**	**11**	**12**	**13**	**8**	**9**

	Net 1			Net 1a			Net 2			Net 3			Net 4		
18 m	**P1**	**P2**	**F**	**P1**	**P2**	**F**	**P1**	**P2**	**F**	**P1**	**P2**	**F**	**P1**	**P2**	**F**
Bow 30 lbs	3	1	1	2	2	1	4	0	1	2	3	0	0	3	2
	4	0	1	1	4	0	4	1	0	1	3	1	0	2	3
	2	3	0	3	2	0	5	0	0	1	3	1	3	0	2
Bow 50 lbs	5	0	0	3	1	1	1	0	4	4	0	1	2	0	3
	5	0	0	4	0	1	1	0	4	3	0	2	2	0	3
	4	1	0	4	0	1	1	2	2	2	0	3	5	0	0
Summery	**23**	**5**	**2**	**17**	**9**	**4**	**16**	**3**	**11**	**13**	**9**	**8**	**12**	**5**	**13**

	Net 1			Net 1a			Net 2			Net 3			Net 4		
30 m	**P1**	**P2**	**F**	**P1**	**P2**	**F**	**P1**	**P2**	**F**	**P1**	**P2**	**F**	**P1**	**P2**	**F**
Bow 30 lbs	2	3	0	na	na	na	4	0	1	1	4	0	2	3	0
	1	4	0	na	na	na	2	0	3	1	4	0	1	3	1
	3	2	0	na	na	na	4	0	1	2	3	0	2	1	2
Bow 50 lbs	5	0	0	4	0	1	2	0	3	2	1	2	1	0	4
	4	0	1	4	0	1	1	2	2	3	2	0	4	0	1
	5	0	0	4	0	1	0	1	4	1	0	4	4	0	1
Summery	**20**	**9**	**1**	**12**	**0**	**3**	**13**	**3**	**14**	**10**	**14**	**6**	**14**	**7**	**9**

	Net 1			Net 1a			Net 2			Net 3			Net 4		
50 m	**P1**	**P2**	**F**	**P1**	**P2**	**F**	**P1**	**P2**	**F**	**P1**	**P2**	**F**	**P1**	**P2**	**F**
Bow 30 lbs	3	2	0	na	na	na	3	0	2	2	3	0	1	3	1
	2	3	0	na	na	na	5	0	0	0	5	0	1	4	0
	2	3	0	na	na	na	4	0	1	0	5	0	3	2	0
Bow 50 lbs	5	0	0	na	na	na	1	0	4	4	0	1	4	0	1
	5	0	0	na	na	na	2	0	3	3	0	2	4	0	1
	3	1	1	na	na	na	2	0	3	4	0	1	4	0	1
Summery	**20**	**9**	**1**	**0**	**0**	**0**	**17**	**0**	**13**	**13**	**13**	**4**	**17**	**9**	**4**

TOTAL:	**80**	**27**	**13**	**29**	**9**	**7**	**60**	**10**	**50**	**42**	**41**	**37**	**58**	**28**	**34**
total failure rate:			**11%**			**NA**			**42%**			**31%**			**28%**