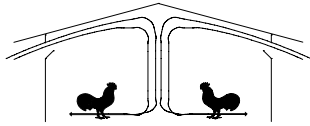




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Poultry Housing Tips

Best Performing Tunnel Fans - 2006

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As discussed in last May's issue of *Poultry Housing Tips* selecting the right tunnel fans when building a new house or retrofitting an older one for tunnel ventilation is one of the most important tasks a producer has. A house's fans are essentially the engine of the ventilation system and as a result have a significant effect on a producer's ability to keep their birds cool and energy costs to a minimum during hot weather. When purchasing tunnel fans it is crucial that a producer compares fans not just on price but on performance as well. The point is that a "cheap" fan can be a very costly fan.

Table 1 is an updated version of the list of the top performing fans tested by BESS Laboratory at the University of Illinois provided in the May, 2006 newsletter. The list is based on two criteria: energy efficiency rating at 0.10" static pressure of at least 20 cfm/watt and an air flow ratio of at least 0.73. Tunnel fans (48" or larger) that meet these two performance criteria represent the top 10% of those fans tested by the BESS Laboratory (www.bess.uiuc.edu). A more detailed explanation of the importance of knowing a tunnel fan's performance ratings can be found in the May 2006 issue of *Poultry Housing Tips*.

Though fan performance is of course very important, it is important to keep in mind that there are other factors to consider when purchasing a fan, such as quality of construction, local dealer reputation, warranty and type of shutter (some types significantly reduce cleaning requirements). Though it can be difficult balancing all the factors when it comes to purchasing fans for a tunnel-ventilated house, in the long run you will find that it is time well spent.

Michael Czarick
Extension Engineer
(706) 542-9041 542-1886 (FAX)
mczarick@enr.uga.edu
www.poultryventilation.com

PUTTING KNOWLEDGE TO WORK

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BESS Test #	Fan	Cone	Shutter Type	Cfm @0.05"	Cfm/watt 0.05"	Cfm @0.10"	Cfm/watt 0.10"	AFR	Fan Size
98178	Acme BDR54J1-C	Y	A	27,700	23.5	26,300	20.9	0.82	54
98185	Acme BDR54J-A	N	A	23,400	22.1	22,100	20.2	0.80	54
98179	Acme BDR54J-C	Y	A	25,500	25.5	24,100	22.8	0.79	54
98181	Acme BDR54J-C	Y	A	25,200	25.1	23,600	22.1	0.77	54
245	Acme BDR54J-C	Y	A	26,100	24.2	24,500	21.4	0.79	54
2209	Acme BDRV54J1-C2	Y	A	27,100	24.0	25,500	21.1	0.77	54
2215	Acme BDRV54J1-C3	Y	A	27,000	23.8	25,000	20.7	0.74	54
2207	Acme BDRV54J2-C2	Y	A	27,400	25.5	25,800	22.5	0.79	54
2217	Acme BDRV54J2-C3	Y	A	27,100	25.2	25,400	22.2	0.79	54
2210	Acme BDRV54J-C2	Y	A	26,100	25.8	24,400	22.4	0.77	54
2214	Acme BDRV54J-C3	Y	A	25,900	25.3	24,200	22.2	0.76	54
4300	Acme BDRV54J-CB	Y	B	26,200	23.6	24,100	20.3	0.76	54
98111	Acme DDPG48J1-C	Y	A	22,500	22.2	21,300	20.0	0.81	48
4278	Acme DDPGV54J-C	Y	A	26,500	25.2	24,700	21.8	0.76	54
98142	Acme DDPS48J1-C	Y	A	21,400	23.2	20,300	20.9	0.83	48
207	Acme DDPS48J-C	Y	A	20,400	23.9	19,100	21.3	0.77	48
98175	Acme DDPS50J1-CR	Y	R	24,900	22.8	23,700	20.6	0.82	50
98162	Acme DDPS50J-C	Y	A	23,900	22.9	22,700	20.5	0.80	50
252	Acme DDPS50J-C	Y	A	23,800	22.0	22,600	20.0	0.79	50
4274	Acme DDPSV54J-C	Y	A	25,500	25.4	23,800	22.1	0.77	54
3148	Aerotech WF501T1CP	Y	P	23,900	22.5	22,400	20.1	0.75	50
6149	Aerotech WF5415T1CEJ	Y	A	30,300	22.2	28,600	20.0	0.81	54
6141	Aerotech WF541T1CEJ	Y	A	27,800	25.0	26,000	22.3	0.77	54
6139	Aerotech WF541T1CEP	Y	P	27,400	24.2	25,600	21.7	0.76	54
6115	Aerotech WF541T1CJ	Y	A	27,300	23.6	25,400	20.9	0.77	54
6113	Aerotech WF541T1CP	Y	P	27,400	23.3	25,500	20.6	0.76	54
1093	American Coolair FGBRE52M	Y	A	28,000	23.3	26,400	20.7	0.80	52
1216	American Coolair MNBRC52L	Y	A	25,900	24.6	24,300	21.7	0.77	52
1209	American Coolair MNBRC52M	Y	A	27,600	22.5	26,000	20.1	0.81	52
5235	American Coolair MNBRRD52L	Y	B	25,100	24.2	23,500	21.4	0.78	52
5234	American Coolair MNBRRD52L	Y	B	24,900	23.8	23,100	20.9	0.77	52
5236	American Coolair MNBRRD52LE	Y	B	24,100	26.1	22,200	22.8	0.76	52
5233	American Coolair MNBRRD52LE	Y	B	23,900	25.4	22,100	22.3	0.76	52
1232	American Coolair MNEFC52M	Y	A	27,000	21.6	25,500	20.2	0.75	52
66	Canarm FG150W27H61	Y	P	24,100	23.5	22,400	20.5	0.75	50
4321	Chore-Time 48318-225	Y	P	20,700	23.2	19,200	20.2	0.75	48
4322	Chore-Time 48318-235	Y	P	19,400	25.1	18,000	21.8	0.73	48
4336	Chore-Time 49451-22	Y	B	21,200	24.8	19,700	21.6	0.76	48
4337	Chore-Time 49451-23	Y	B	20,100	26.8	18,700	23.4	0.75	48
5192	Chore-Time 49511-22	Y	B	26,400	23.9	24,600	21.2	0.76	52
4326	Chore-Time 49515-22	Y	B	21,100	24.4	19,600	21.3	0.77	48
4325	Chore-Time 49515-23	Y	B	20,000	26.5	18,600	23.2	0.75	48
5186	Chore-Time 49519-22	Y	B	26,400	23.6	24,500	20.8	0.76	52
4334	Chore-Time 49740-22	Y	B	27,000	23.5	24,900	20.8	0.73	52
4343	Hired Hand 6603-0606	Y	A	27,000	23.3	25,300	20.8	0.78	52
98197	Hired Hand 6603-6010	Y	R	25,700	23.1	24,200	20.4	0.81	48
5337	Hired Hand 6603-6502	Y	B	26,000	24.2	24,000	21.0	0.73	52
5340	Hired Hand 6603-6505	Y	B	25,900	25.2	23,800	21.7	0.73	52
4354	Hired Hand 6603-7021	Y	A	23,400	23.0	21,500	20.3	0.74	48
2460	Hired Hand 6603-7401	Y	R	27,900	23.2	26,400	20.7	0.82	52
2461	Hired Hand 6603-7401	Y	A	27,400	22.2	25,900	20.0	0.82	52
4321	Pro Terra A48318-225	Y	P	20,700	23.2	19,200	20.2	0.75	48
4322	Pro Terra A48318-235	Y	P	19,400	25.1	18,000	21.8	0.73	48
4336	Pro-Terra A49451-22	Y	B	21,200	24.8	19,700	21.6	0.76	48
4337	Pro-Terra A49451-23	Y	B	20,100	26.8	18,700	23.4	0.75	48
5192	Pro-Terra A49511-22	Y	B	26,400	23.9	24,600	21.2	0.76	52
4326	Pro-Terra A49515-22	Y	B	21,100	24.4	19,600	21.3	0.77	48
4325	Pro-Terra A49515-23	Y	B	20,000	26.5	18,600	23.2	0.75	48
5186	Pro-Terra A49519-22	Y	B	26,400	23.6	24,500	20.8	0.76	52
6247	Pro-Terra A50817-22	Y	B	26,800	23.3	24,600	20.2	0.73	52
99075	Pruden Ventilation PFFG48C	Y	A	20,700	22.8	19,300	20.1	0.77	48
6064	Schaefer 523CFB1A	Y	B	26,900	23.1	24,800	20.2	0.76	52
6065	Schaefer 523CFB1E	Y	B	26,600	23.0	24,700	20.2	0.76	52
6085	Schaefer 526CFB1	Y	B	26,100	23.0	24,600	20.5	0.75	52
5200	Val-Co HGS48G340MGA	Y	A	23,600	22.8	22,200	20.3	0.81	48
5141	Val-Co HGS48G340N_A(NC)	Y	A	23,200	23.0	21,600	20.6	0.78	48
5121	Val-Co HGS54G340MGA	Y	A	28,400	23.3	26,500	20.6	0.76	54
2349	Val-Co PM48W340M_A(SG)	Y	A	23,400	22.4	21,900	20.0	0.77	48
2228	Val-Co PM50W340M_A (CN)	Y	A	25,400	22.8	23,800	20.4	0.76	50

Table 1. Alphabetical listing of best performing tunnel fans as tested by BESS Labs (11/22/06)
(A= Aluminum Shutter, G= Galvanized Shutter, P= Plastic Shutter, R= Roll Seal Shutter, B= Butterfly Shutter)

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