

Weighers and how to use the

Advice to weigh birds is easily given and most producers understand the reasons why. But the question remains, how to weigh the birds and with what kind of weigher?

By Wiebe van der Sluis

Body weight is one of the most important bits of information a flock manager needs to efficiently manage his birds. Weight, and especially weight changes, basically tells a lot about the physical condition of the flock and its future performance. Without knowing broiler weights, it is very difficult to know when to start the use of quantitative feed control, either by the use of light programmes or emptying the feeders. This is important for the very fast growing strains in order to slow down their growth, and allows them to develop a better heart, blood system and strong



Manual weighers are a real help to monitor weight gain in a flock.

leg bones. Weighing just before the birds are ready to go to market is critical, especially in progressive countries that have processing plants with a very tight range

of acceptable live weight at the killing plant. The birds on either side of this range (under or over the weight limit) will have their revenue penalised in the

Table 1 - Bird weighers by company and weigher type

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Agro Logic LTD	PO Box 39781, Ramat Aviv 61397, Israel. Tel: +972 9862 6089 Fax: +972 9862 6087 Email: info@agrologic.com	Chick Scale 102	10	E (by PC printer port)	1	X	M (weigher from up to 9 different batches)	Bre/Bro and P
		Chick scale 205	10	S/E (or printer)	2 (weighing plate)	X	F / HP	Bre/Bro / T and P
		Chick scale 850	10	E (or printer or stand alone)	8	X	F / HP	Bre/Bro/T and P
DACS	Teglvaersvej 3 8766 Norre Snede, Denmark Tel: +45 7577 1922 Fax: +45 7577 1918 Email: nd@dacs.dk Web: www.dacs.dk	ACS5 -LW1 Double Up	20	E	2	X	F	Bre/Bro and T
Fancom	P.O.Box 7131, 5980 AC Panningen, The Netherlands. Tel: +31 77 3069600 Fax: +31 77 3069601 Email: fancom@fancom.com Web: www.fancom.com	Fancom F47	100	E	2	No	F/HP	Bro/T
		Fancom 747	100	E	8	X	F/HP	Bre/Bro/R/T
Hotraco	Stationsstraat 142, 5963 AC Horst (L), The Netherlands Tel: +31 77 389 3611 Fax: +31 77 398 6835 Email: info@hotraco.com	DSW-1N	8	E	2-8 (dep. on software program)	X	F	Bre, Bro, R/P
		DWS-3	100	E	2-8	X	HP	T
		DWS-4	35	E	2-8	X	HP	Bre, Bro, R/P
		DWS-5	50	E	2-8	X	HP	Bre, R/P
Intertec	Avenue de la Croix Verte BP 35336, 35653 Le Rheu Cedex, France. Tel: +33 2 99 148866. Fax: +33 2 99149422. Email: intertec@wanadoo.fr	Spot		E (by antenna)	6	X	F	Bre/Bro



Floor weighers are available with either round or square platforms.

European systems. In order to achieve optimum performance, pullets and breeders must be grown to specific bodyweight standards. This varies between breed

types and seasons. Without knowledge of bodyweight gain, it is very difficult to allocate the correct amount of feed and the flock will stand a good chance of not

achieving target. Muscle development is very important especially in the yield type broiler breeders. By weighing the birds, this muscle development can be assessed and at the same time, achieve good uniformity of bodyweight.

When to weigh and how many

Generally birds should be weighed weekly starting from the first week. During the first two weeks collective weighing can be made in batches of 5 or 10 chicks using a bucket. After this, birds should be weighed individually. When weighing manually one has to corner birds by using lightweight catching screens in two or three places randomly chosen over the entire house. As a rule of thumb 2-5% of a flock and never less than 75 birds should be weighed on the same day of the week, at the same time. Weighing a sufficient amount of birds, and all birds penned, is the only way of assessing uniformity. Sufficient in this respect means, according to Ken Laughlin, who was with Cobb and recently joined Aviagen, you have to weigh birds until the addition of one extra bird does not change the cumu-

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Opticon Agri Systems	PO Box 3164, 5902 RD Venlo The Netherlands Tel: +31 77 3231 200 Fax: +31 77 3873 306 Email: hf_electronics@planet.nl Web: www.opticon-agri.com	DWS-10	N/A	E (modem or network)	8	No	HP	T
		DWS-20	N/A	E (modem or network)	4	No	HP or perch	T/Bre/Bro/Layers
		OPT 82	150	E	4 at DWS-20	X	HP (suspending)	T
		OPT 83	50	E	4	X	HP (suspending)	Bre/Bro
		OPT 84	50	E	4 at DWS-20	X	HP (suspending)	Bre/Bro/layers breeders
		OPT 85	35	E	4 at DWS-20	X	Platform on perch	Bro/rearing layers
Reliable Scale	520 Moraine Road NE Calgary, Alberta T2A 2P2, Canada Tel: +1 403 272 8784 Fax: +1 403 273 9818 Email: info@reliablescale.com Web: www.reliablescale.com	RCS 580	15	S	1	X	F	Bre/Bro
Rotem	23 Efal St PO Box 3392, Kiriat Arie Petach-Tikva 49511, Israel Tel: +972 3924 9712 Fax: +972 3924 9834 Email: rotemcc@ibm.net Web: www.rotam.com	RPBS-1	10/30	E	2	X	F	Bre/Bro
Salter Weigh-Tronix	George Street, West Bromwich West Midlands B70 6AD, UK. Tel: +44 121 553 1855 Fax: +44 121 553 0494	Model 235-6	5-100	A	1	-	M	
		Model 233-10	5-300	A	1	-	M	
Scandinavian Electronics Systems	PO Box 128, 28422 Perstorp Sweden Tel: +46 435 34150 Fax: +46 435 34160 Email: scandinavian@telia.com	Peckcode	-	E	4	X	F	Bre/Bro and/T
		Basic Weighing	-	E (antenna is optional)	4	X	F	Bre/Bro and T
		System Master Weighing		E (antenna is optional)	8	X	F	Bre/Bro and T
		System LW1 Double Up	10	E	2	X	F	Bre/Bro

lative average. If a feeding program is applied (skip-a-day, etc...) you can weigh them on the no-feed day but also in the afternoon of the on-feed day. Some prefer this moment since there is no dramatic change in weights when transferred to every day feeding in production, and birds are not bothered on the off-feed day.

Manual or automatic

It has long been believed that manual weighing is more accurate than automatic weighing. Today we know that it is not always true, at least not when using modern electronic weighers properly. In areas where labour is cheap and there is no interest in daily weight gains, one can efficiently make use of manual weighers. But you have to make sure that no errors are being made during reading of the scale and successive data processing. Electronic weighers connected with data processors don't have that weakness and provide good arguments to make use of these automatic systems.

Automatic scales save labour, especially when using more than one platform, and offer the key to light and feed control. Experience in the field has taught that during the first five weeks automatic weighers provide very accurate average weights of broilers. Later differences may occur due to bird behaviour. Young birds



Automatic hanging platform weighers can weigh large numbers of both small and big birds on a daily basis.

are active and easily step on the platform, but older and thus heavier birds show less activity and therefore not enough birds may step on the weigher to obtain a reliable figure of the average flock weight. Broilers with a lower weight show more activity and may therefore step onto the platform more frequently, creating an incorrect impres-



sion of the actual average weight of all birds. To avoid this problem of selective weighing, some producers make use of catching screens in the last one or two weeks of the growing period. The broilers that randomly walk into the screened area can be weighed by means of the electronic weighing scale or a manual weigher.

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Skov	Hedelund 4, Glyngore DK-7870 Roslev, Denmark Tel: +45 7217 5555 Fax: +45 7217 5959 Email: skov@skov.com	DOL 95 Platforms DOL 97 DOL98B	30 5	E	2	X	F	Bre/Bre and T
Star Agri	PO Box 112, 660 AC Wijchen The Netherlands. Tel: +31 24 648 7222 Fax: +31 24 648 7223 Email: star.agri@wxs.nl Web: www.staragri.nl	EMPS APWS	- -	S S/E	1 1-2	X X	M HP	Bre/Bro Bre/Bro and T
Stienen	Hulsenweg 11, 6031 SP Nederweert, The Netherlands Tel: +31 495 63 2956 Fax: +31 495 63 2981 Email: info@StienenBE.com Web: www.StienenBE.com	SW-2000	50-100	E	2	X	HP	Bre / Bro and T
Tuffigo	Z.I. De Troyalac 'H, 29170 Saint-Évarzec, Quimper France Tel: +33 2 98946700 Fax: +33 2 98946911 Email: contact@tuffigo.com Web: www.tuffigo.com	Avipes Top 2 Top control	30 30	S E E	1 2 4	X X X	M/F F F	Bre/Bro Bre/Bro Bre/Bro
Weltech	5 Stephenson Road, St. Ives, Huntington Cambridge PE27 3WJ England Tel: +44 1480 461611 Fax: +44 1480 301010 Email: sales@weltech.co.uk	BW 1050 8000 SP-1/SP-2	10 10 10	S E E	1 2 1	X X X	M F F	Bre/Bro Bre/Bro Bre/Bro

Note: Although much work has been done to make this list as complete as possible, the author apologises for possible omissions. Additions to the list are welcome and can be sent to the author by email: wiebe.van.der.sluis@reedbusiness.nl



Weighing birds in cages can be done by means of a perch since they take less floor space.

Learn to rely on it

The use of automatic scales in pullets and breeders saves labour too, but may not be sufficient or accurate enough for some to rely on. For that reason it is often advised to weigh manually and compare this with the automatic weighers. This provides better insight into the accuracy of the electronic system and helps you understand and trust it. One can never rely on one scale in a poultry house of tens of thousands of birds, so two or three platforms placed at different locations will provide a more realistic flock weight.

Once males are mixed with females, the automatic scale, which is able to differentiate between males and females, is as good as the flock manager. If he or she realises how to set the range to incorporate the true male weight, then it can work. The main advantage, even if the weight is not correct, is that the manager can see if the flock is gaining weight or not every day. Many flock specialists suggest to still manually weigh breeder flocks until the peak, at least every two weeks, to be sure that the data given by the automatic weighers still match with the true birds weight. Despite their scepticism they would be watching the daily weight gain registered by the automatic scale very carefully and would rely completely on these weighers as soon the birds reach the production peak.

Management support

One can conclude that either system, mechanical or electronic, is acceptable for measuring the weight of birds. Electronic automatic weighers have the major advantage of being capable of weighing hundreds to thousands of birds per day and immediately process the data. One can weigh the birds every minute of the day or specific hours of the day.

An important thing to remember is, when you use one system for a flock, you

should not change to another, as results will vary. All equipment, no matter whether electronic or manual, should be calibrated regularly to ensure accuracy, since over a period of time all equipment loses its precision.

In recent years, an increasing number of manufacturers have introduced a hanging platform to replace the floor scale. The main reason for this has to do with accuracy. Floor scales in some cases may show problems due to accumulation of dirt. Besides, these scales usually have a small platform, which attracts fewer birds to step onto it. Hanging platforms or swings seem to be more appreciated. They have a big platform surface and allow several birds to rest on it at a time. These scales also will have good records on male weights and have proven to be excellent for weighing turkeys.

Unique is the perch weigher made by Opticon. This weigher can be used in cages and alternative housing systems. They require little floor space and invite birds to rest.

Experience has taught that automatic scales are very powerful and ease the life of the farm manager when making his management decisions. These automatic systems save labour and time but should not stop the farm manager from visiting the flock regularly, flesh the birds and test weigh manually every now and then. One can use it as a tool to provide more time for flock inspection and improve flock performance. ■