

“WEDA innovation”- a cost effective system solution for feeding of Boar fattening

Carsten Bergstedt* and Andreas Hüttemeyer

WEDA Dammann & Westerkamp Gmbh

Am Bahnhof 10-49424 Lutten- Germany

* Corresponding author E-mail: c.bergstedt@weda.de

Journal of Livestock Science (ISSN online 2277-6214) 4: 22-30

Abstract

The cost effective solutions for feeding of boars is an urgent requirement of the boar industry. The innovations should be software based systems, low cost and easily used in the existing farm structures by the farmers. WEDA Dammann & Westerkamp Gmbh, Lutten- Germany has developed some innovative tools and products with an objective to Enable farmers of fattening units to feed boars in their already existing units and this in fact without costly conversions of animal house technology. The present paper describe some of these innovations for which WEDA has been awarded a meadl of the Germal Agricultural Association (DLG).

Key words: feeding, fattening, boar, WEDA, Germany

The message about the award of a medal of the German Agricultural Association (DLG) was received with great pleasure by the Lutten constructors of animal houses, are WEDA Dammanin & Westerkamp. “A small step for WEDA, – a great one for boar fattening”, is Andreas Hüttemeyer’s, – programmer at WEDA’s – reaction on this distinction. With this award-winning EuroTier novelty, the full-service providers from Lower Saxony have set an exclamation mark, especially as the innovation is arriving at just the right time because the current animal welfare debate on the castration of male pigs inevitably leads to the question, “how will boar fattening be organized in the future – especially so in already existing units?”

The cost-effective system solution was developed with the aim of enabling farmers of fattening units to feed boars in their already existing units – and this in fact without costly conversions of animal house technology. The functioning manner is fairly simple: in a stub, animals from a weight of 55 kg onwards can be fed with two different feed recipes, one each for female and one for male animals. This enables the provision of all animals with the necessary gender-specific energy. It is easy to retrofit already available units with this system as the solution for this is based on software. Accordingly, all WEDA units working with an M16 or a 4PX computer can be retrofitted. The only precondition is: the smallest portion which can be fed out in one stub has to be at least twice as large as the pipe content of the feed pipe. This would for example mean that in the case of a stub with a length of 50 meters and with a pipe diameter of 50 mm, at least 160 litres have to be dosed out per feeding block and meal. Thus, the system can already be employed for smaller amounts.



It is easy to retrofit already available units with this system as the solution for this is based on software.

For more than 70 years, WEDA’s name stands for innovation and reliability. Originally founded as an enterprise for the manufacture of wood gas generators, Dammann & Westerkamp GmbH (WEDA) have meanwhile become global market leaders in the domain of liquid feeding with more than 130 members of staff at their headquarters at Lutten. The WEDA company owns locations in almost 50 countries on all continents. In

their function as full providers in the field of modern pig managements, WEDA – besides the domains of feeding technology and house equipment – also attend upon the segments of ventilation technology and liquid manure treatment. WEDA possess more than two dozens of patents.

In 1996 – as the first enterprise of the branch – WEDA received the certification according to the international quality standards, DIN EN ISO 9000 ff. In 2001, the companies of WEDA and of Erich Stallkamp ESTA GmbH founded the WELTEC BIOPOWER GmbH enterprise.

WEDA-EUROTIER NOVELTY No. 1

Feeding Technology “SowDryComp”

Dry Feeding, Dosificated like Liquid Feeding

The new WEDA Feeding Unit, “SowDryComp” combines the advantages of dry and liquid feeding. The result: greatest feed accuracy and maximal hygiene security, as manual feeding steps become no longer necessary. Which feeding system offers more – dry feeding or liquid feeding? In sow managements, this question is frequently discussed, however, without a clear result. It seems that in future this cannot be answered with certainty, either. Each technology has its followers and its specific advantages. Thus, beside other factors, for instance the size of the agricultural enterprise or its structures play an essential role. With the new “SowDryComp” Feeding System, the full-line providers in the field of pig managements, WEDA Dammann & Westerkamp from Lower Saxonian Lutten, are now introducing a system which combines the advantages of liquid feeding with those of dry feeding systems. The “SowDryComp” is a dry mixer (feed amount: 500 kg), which fills up converted volume dosificators that are issued with automatic valves at the scales (with a 20 g resolution). Here, the exact feed amount for each individual animal is determined by the feeding computer due to the predetermined feed weight. The feed amount is not individually adjusted by the staff members; – the feed graph determines the amount. Furthermore, the personnel must not enter the pen for the feed passage, – an advantage which guarantees a high degree of hygiene security inside the animal house. Thus, with regard to the feeding technology, the dry feeding functions like a liquid feeding system. Especially useful: the converted volume dosificators are opened like normal dosificators after having been filled in order to enable all sows to feed at the same time. This way, the animals are clearly exposed to less stress.

The advantages of the system at a glance:

- The dosificator can also be placed at unfavourable positions
- Advantages in conversion costs
- Greatest accuracy
- Variable mixtures possible
- Quantity adjustments according to feed graph
- No more manuar adjustments of feed amounts by staff
- Personnel do not have to enter the pen any more (hygiene advantage)
- Dosification errors caused by untrained personnel do not occur any more
- Feed passage not necessary any more.

WEDA-EUROTIER NOVELTY No. 2

Feeding Technology “Double Feed”

Competitive Feeding Technology for Small-Scale Businesses

For small-scale enterprises with up to 200 animals, WEDA have developed a new kind of liquid feeding. The owners of animal houses will receive a compact, cost-effective and easy installable system with “Double Feed”. The structural change in the agrarian sector and its effects are more and more frequently made the subject of discussion. Here, the unit sizes plays an essential role because the development towards increasingly larger pig management units has inexorably progressed in recent years. Nevertheless, there is a considerable number of enterprises with pig managements which are rather positioned on a family basis and thus only possess limited possibilities to enlarge their available animal stock. These units, too, are economically successful and have to rely on modern technology. WEDA Dammann & Westerkamp, global market leaders in the domain of liquid feeding systems, have developed a new feeding system, “Double Feed” especially for these unit sizes which work in closed systems with 100-200 sows. The innovation of this unique liquid feeding systems is the fact that sows, fattening animals and baby piglets can be provided with liquid feed from only one mixing container. The core is the QXS container, from which two extraction systems with two different pipe diameters are operating. The 32-pipe feeds A respective 50- and 63-line feeds sows and fattening pigs. Due to the QXS container and due to special valves which are attached directly at the container, there are no residual amounts or feed-mixing of piglet and sows’ feed.



Double Feed: Especially for units operating in closed systems with 100-200 sows, WEDA have developed a new feeding system.

With “Double Feed”, operators of sow units possess a competitive feeding technology which is compact, cost-effective and easy to install. This is not only an economic advantage for the farmers in question but also an active contribution towards the conservation of grown farming structures which have a high degree of public acceptance.

WEDA-EUROTIER NOVELTY No. 3

Feeding Technology, “Fast Line”

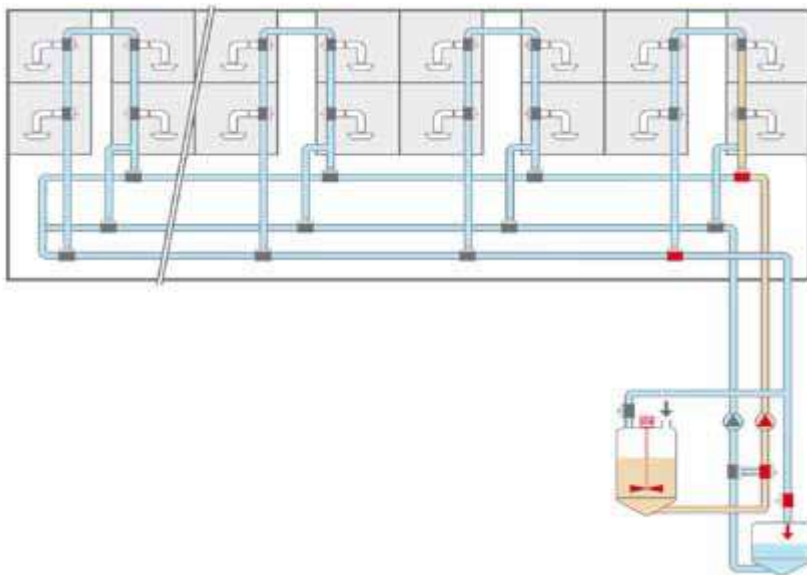
Exact Feed Amount, Short Paths

In order to be able to supply large animal stocks efficiently with large amounts of feed, WEDA Dammann & Westerkamp have developed a tailor-made solution for any kind of

animal stock. The result is an optimal feed flow in all pipe conducts. Modern liquid feeding units like WEDA's Non-Residue Feeding "BW+" fulfils all necessary demands on modern pig managements, for example that various animal stock sizes can each be optimally supplied. Beside these advantages, however, the systems become slower if several strands are to receive identical feed amounts. The time expenditure for the staff inside house will then increasingly become larger. With "Fast Line", their new feeding system, WEDA Dammann & Westerkamp are solving this problem. The new feeding method was especially developed as an addition for the "BW+" units of WEDA. A separate service water conduit in the joining element enables an optimal and considerably faster forward feed of the feed soup. The possibility to switch over service water not only in the feed preparation but also directly in front of the division, speeds up the feed flow in the system.

The Advantage of the System at a Glance:

- cost-effective
- no unnecessary forward feeds any more
- no unnecessary waiting times during feeding control for accompanying staff
- shorter distances to the feed valves
- more accurate dosification
- „thicker feeding”
- lower wear
- large-scale units could possible dispense with satellite preparation rooms
- saving of energy.



A separate service water conduit in the joining element (blue) enables an optimal and considerably faster forward feed of the feed soup.

WEDA-EUROTIER NOVELTY No. 4

Feeding Technology “Boar Stub”

WEDA-Innovation: “Boar Stub” feed sexes according to recipe

The current animal health debate on the castration of male pigs inevitably leads to the question how boar fattening is going to take place in future, - in particular in the case of already existing units. With their innovation, „Boar Stub“, WEDA Dammann & Westerkamp from Lower Saxonian Lutten, provide the market with a new system solution. In a stub line, animals from a weight of 55 kg onwards can be fed with two different recipes for female and male animals. That makes it possible to provide all animals with the necessary gender-specific energy. The system can simply be retrofitted in the case of already existing units, as this is the case of a software-based solution. Almost all WEDA units working with an M16 or with a 4PC computer can be retrofitted. The only precondition: the smallest portion to be fed out in a stub has to be at least twice as large as the pipe contents of the feeding pipe. For example, this would mean that in the case of a stub of a length of 50 m, and with a pipe diameter of 50 mm, at least 160 l per feeding block and meal have to be dosed out. This means, the system can already be employed for smaller amounts.

WEDA-EUROTIER NOVELTY No. 5

Feeding Technology: “SowComp Demand Feeding Station – Twin”

A Case for Two: A WEDA Demand Feeding Station for Small Groups

Especially for smaller units, it is worthwhile if several groups have access to one demand feeding station. “SowComp Demand Feeding Station – Twin” of WEDA offers pig farmers access to two groups of gestating sows at one feed trough.

The amendments in the management of gestating sows which will enter into force with the beginning of 2013, are a challenge especially for pig farmers with smaller units. That way, a large number of family farming units with pig managements in the south of Germany have decided not to enter intensive farming due to their cultural landscape structures. For these managements which normally work in small and firm groups and which do not, however, wish to refrain from the technological advantages of a demand feeding station, there is now the innovation of “SowComp Demand Feeding Station – Twin” for them. The station allows two accesses for two groups of gestating sows but requires only one trough. By means of the ESF Twin, the entire functions of a standard demand feeding station are possible, for example the training function, the choice between dry and liquid feeding, and the award-winning WEDA process visualization. Due to the spatial separation within the demand feeding station, it cannot give rise to erroneous selections or mixings of the both groups. For this reason, the “SowComp Demand Feeding Station – Twin” is well suited for two groups each of up to 25 animals. This does not only answer the demands of the pig farmers but is also an important contribution towards the preservation of traditional agricultural structures.



“SowComp Demand Feeding Station – Twin” of WEDA offers pig farmers the access of two groups of gestating sows to one feed trough.

WEDA-EUROTIER NOVELTY No. 6

Feeding Technology: “WD 15-4” New WEDA Valve System:

More Hygiene, less Feed Losses

A new WEDA system with innovative valve arrangement offers a high level of hygiene and at the same time minimizes feed losses. With regard to feeding, the problem of larger residual amounts in the extraction systems frequently occurs. On the one hand, hygiene deficiencies take place here, and on the other hand, feed is wasted. In modern pig managements, both factors do not have to play a role anymore. The problem is solved by the new WEDA system. Due to the sophisticated arrangement of the valves directly on the pump, no mixing in the extraction system can take place anymore. When switching over from feed to water, a clear medium is situated in the pump and not – as until now – a mixture of water and feed which pollutes and soils the pipes. This raises the state of hygiene. Furthermore, there will be no more waste of feed: the saving of feed compared with other system ranges at more than 1,300 kg per month, if one takes 5.79 l of residue, 10 feedings, and 3 recipes as a basis. This means, that in practice quite greater saving of feed is possible, which is an important issue in the light of constantly high feed prices.



WD 15-4“: The lower the volume in the mixing zones of the extraction system, the better the hygiene situation and the lower the feed losses.

WEDA-EUROTIER NOVELTY No. 7

Management: “Mobile Quick Capturing of the WMobile3”

One Glance – One Click: New WEDA Tool for Smart Farming Awkward entering of data via keypad of the mobile phone was yesterday. By means of the Mobile Quick Capturing, WEDA provide users with a tool which displays relevant data at a glance and which highly simplifies the input. The capturing and entering of data of the feeding computer via mobile terminal devices is more and more becoming standard. One problem is the clear presentation of data and the easy capturing of data which is coordinated with the conditions inside the animal house. But also the overlapping of the display by the keypad of the mobile phone can conceal important information. WEDA’s innovation, “Mobile Quick Capturing of the WMobile3” is the first system on the market which enables keyboardless entry of all feed adaptations at the smartphone. Users can carry out adjustments and corrections intuitively by simple scrolling. All data are visible at one glance, and the cumbersome and complicated entry via keypad of the mobile phone is no longer required. The design is in keeping with the function and is adapted to the ‘look and feel’ of modern mobile phone applications. The quick caption offers the highest degree of comfort, and users can choose and adapt their data and settings individually via computer. The design is in keeping with the function and is adapted to the ‘look and feel’ of modern mobile phone applications.



“WMobile3”: Smart Farming: By simple scrolling, users can intuitively carry out settings and corrections.

WEDA-EUROTIER NOVELTY No. 8

Management: “Report Generator” WEDA-Report Generator

Same Knowledge for Everyone in the House

With the help of WEDA’s new “Report Generator“, simple and clear reports are created from all operationally relevant animal data and are made available for all members of the staff. The documentation and information of relevant feeding data and parameters from the herd population is becoming increasingly important for pig managements. By means of customary feeding computers and control systems, data can be saved and printed out. Quite frequently, the relevant data (due to the already available amount) are not recognizable at one glance and therefore have to be picked out from large tables. This requires a lot of time and moreover presents a source of errors which could cause considerable costs. With their new “Report Generator”, WEDA offer an instrument for the solution of the problem on the base of the excellent 4PX. With the aid of the computer, simple and fast reports, tailored to the needs of the enterprise, can be created

clearly laid out in the shape of forms. These reports can automatically be posted as e-mails, - a global novelty. With the help of this innovation, pig farmers and unit operators can now have access to relevant data at a glance and make these available to their staff anywhere and at any time. The freely selectable sending time, - also directly printable, if desired, - enables clear improvement of communication. In practice, the “early shift” will find a clearly arranged form at the beginning of their work which grants the staff members immediate information on the self-adjusted actual state of the individual animals. This way, already before the start of their work, the members of the staff will be able to recognize which animals had not taken up enough feed on the previous day.

WEDA-EUROTIER NOVELTY No. 9

Pig House Equipment: “Easy Up”

New WEDA Pen Opener: simply to be operated with only one hand.



“Easy Up“ – Child’s Play: The lever mechanism can be simply operated with just one hand.

Daily animal controls in pig managements are an essential factor for the success of the enterprise. This requires frequent opening of the pen doors. Besides the control, housing in, rehousing and other routine jobs belong to the daily routine in animal houses. Frequently, - despite permanent improvements - the pens cannot be properly without great effort. For smaller and less strong persons, this can lead to unnecessary strain, which can have a negative effect on health and motivation. The problem is solved with the new WEDA locking device, “Easy Up”: Now, it is only the gate locking mechanisms which has to be raised and not – as before, in customary standard design, the complete pen gate. The result is a clear relief of work inside the house. The lever mechanism, free from wear, is simply to be operated with only one hand. Moreover, the plastic-covered high-grade steel handle ensures greater comfort during opening and locking of the pen gates. Independent of the width of the gates, all WEDA systems (35 mm) can be converted.