

Product
Novelty.

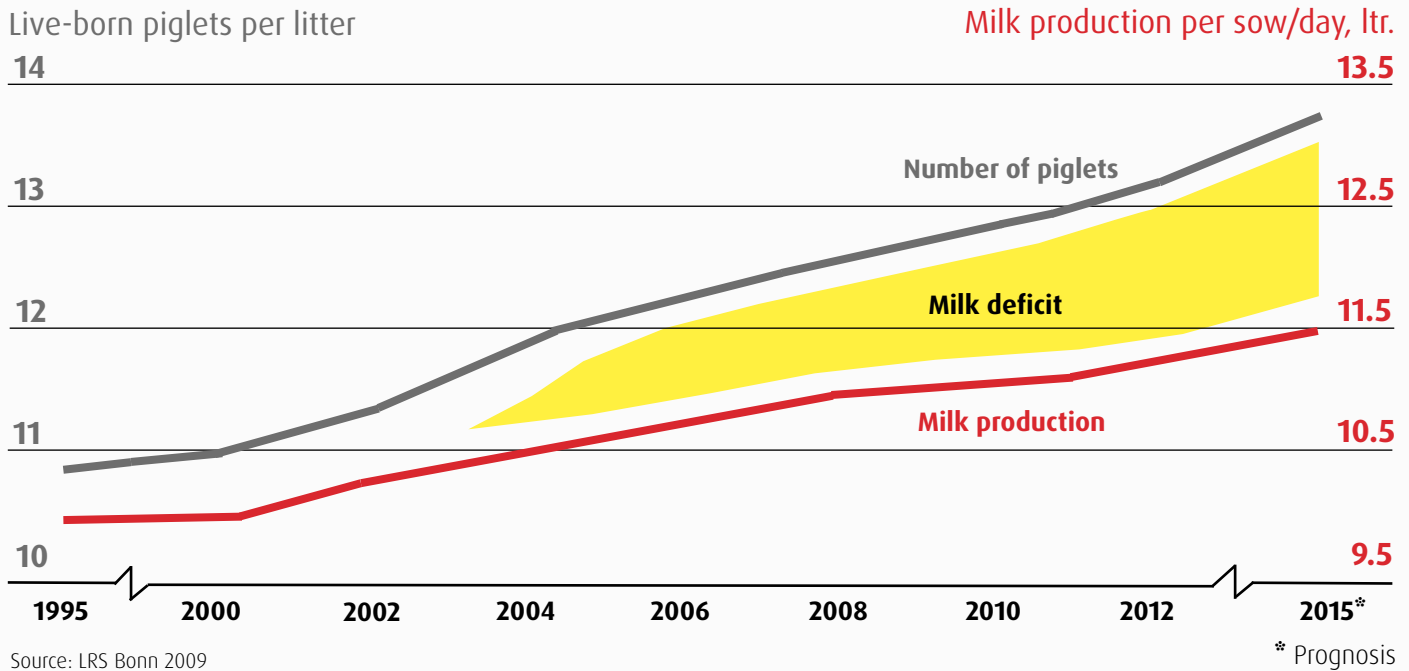


Suckling Piglet
Feeding - Nutrix+

WEDA[®]

We care about pigs

Why supplementary feeding?



Increasing numbers of litters, lower weaning weights

As indicated in the table above, the litter sizes of sows have clearly increased during the last few years, and this much faster than the milk performance of the sow. This leads to the following problems:

The sow tries to compensate the milk deficit physically, which means that the sow loses fat, meat and bone mass to a higher degree. However, due to the short time available, the meat mass cannot be replenished by feeding until the next insemination. This leads to lower fertility, miscarriages, a weak immune system, and more frequent complications in farrowing.

Furthermore, heterogeneous litters occur more frequently with an increased number of runts. This means a higher mortality rate, the necessity of human care due to manual feeding, and increased expenses.

Amongst professionals, the following rule of thumb applies: 1kg more in farrowing means at least 3kg more in piglet raising. Thus, if the suckling piglets reach lower weaning weights, this clearly affects piglet raising and fattening. There will be less profit for the farmer due to longer raising and fattening periods.

Remedy can be provided because one thing is certain: the vitality of the piglets and the health of the sow are of great significance for the company profit. Both can be positively influenced by means of supplementary feed. This provides relief for the sow, ensures litter balance and higher weaning weights.

- Milk amount of mother sow is not sufficient; bad condition of sow
- Higher piglet losses
- Financial losses
- Relief by increasing the vitality of the piglets by means of a supplementary feeding system
- Nutrix+ fulfils all important demands on a supplementary feeding system



Supplementary feeding promotes animal performance

- **Protection of sow**
- **Optimal and sufficient provision of suckling piglets**
- **Considerable workload reduction and saving of costs for farmer**
- **Higher production performances per unit, because no nursing sows required**



Calculations Mr. Brede
www.weda.de/files/Brede_en.pdf

Automatic supplementary feeding offers a number of advantages for the animals and for the farmer:

Advantages of automatic supplementary feeding	
For the sow	- Relief for the sow. Strong weaning of the sow is prevented. Due to this, improved fertility, less miscarriages, better health and higher performance
For the suckling piglets	- Piglets can remain with the mother sow (no nursing sows) - Even growth - Optimal and sufficient provision for all animals
For the farmer	- Amortisation of the unit within a year - Financial advantage as opposed to manual feeding ranges at €1 and cup feeding at €0.60 per piglet - Considerable workload reduction and saving of time because structured work according to plan is possible. Due to this, saving of labour and costs - Healthier and strong animals at the time of weaning means a financial advantage for piglet raising and fattening - No nurse sows necessary and thus more farrowing places for the production. Higher production performances per unit.

By means of the automatic supplementary feeding, considerable costs can be saved. According to the independent adviser, Wilfried Brede, the entrepreneurial profit (per breeding sow and year, before tax) ranges the highest at €284 with the Nutrix system in comparison with a nurse / (€233), and with the cup system (€271). In his examination, Mr. Brede compared manual and automatic supplementary feeding systems.



System for 2,500 Sows in Russia (unit can be extended up to 4,000 sow places)

Healthy and fast growth

The Nutrix+ feeding system was especially developed for the demands of suckling piglets. The Nutrix+ possesses all advantages of an automatic supplementary feeding, and apart from that, still further features which are beneficial for the animals and for the farmer. These criteria are presented in the following tables.

Nutrix+ features	
Feeding	<ul style="list-style-type: none"> - Smallest amounts of only 30 to 40g per trough feeding - Approx. 3,500 suckling piglets per feed line possible - Piglet milk, yoghurt, prestarter and starter feed - Lower feed expenses because any kind of feed can be fed out - Adaptation of feeding to growth of piglets in order to allow animals getting slowly used to grains --> enzyme training; e.g., feeding of 20 recipes in 26 days
Troughs	<ul style="list-style-type: none"> - Plastic double troughs integrated into pen wall with island and grid. "Full Report" to system already takes place at a filling amount of 0.07 litres. They do not stand in the centre of the house as a trip hazard (as in the case of cup systems) - Grids ensure social contacts. A light-coloured trough is sooner accepted by the animals. - Oval trough shape: a lot of space for feeding; the animals cannot lie down in the trough or run through it. Reduction of feed losses. - No dirty corners - Easy cleaning by means of water hose or rinsing lance

- **Micro-dosification of 30-40g per trough feeding and more than 100 feedings per day possible**
- **Feeding of sows' milk substitutes of all kinds**
- **Feeding is optimally adapted to the growth of the animals**
- **Enzyme training**
- **Approx. 3,500 suckling piglets per feed line**



- Feed / water ratio up to 1:3.5
- From 350 sows onwards more cost-effective than cup system
- Sensor feeding
- Frequency regulation
- Feed weighing
- Optimal hygiene

Nutrix+ features	
Technology	<ul style="list-style-type: none"> - Frequency regulation in combination with compressed air: transport through the feed lines which is adapted to the medium; protection of piglet milk and piglet feed - Sensor feeding and weighing - Modular expandability, and thus use of different feed mixes and automatic subsequent mixing for larger feed amounts possible - Individual mixing temperatures: optimal mixing of temperature-sensitive components - Feed / water ratio up to 1:3.5 - Maximal hygiene: acid-lye rinsing and downpipe cleaning WACS applicable - Easy and fast assembly as pre-assembled at WEDA'S



Easy to operate

The use of the Nutrix+ in sow managements leads to considerable work relief in the management of large litters as it works fully automatically and can in addition be operated by remote control.

Without any problems, the computer provides for 24 hours a day up to 750 farrowing places with fresh and tasty feed, over 100 times a day. The "around the clock" provision is in keeping with the appetite of the piglets, because at night, resp. after working hours of the staff, the piglets consume almost the same amounts as during the day.

The system can be easily controlled and operated via touch panel. Via unit visualization, unit components can be directly controlled and input data can be altered.

The Nutrix+ operates on daily schedules, valve-related evaluations, and it determines the overall consumption of the unit. Moreover, the system cleans itself fully automatically according to the programmed cleaning cycles. In order to prevent that the piglets' milk remains in the troughs for hours in cases of litters with only low feed demand, individual feed valves can be locked by the operator.

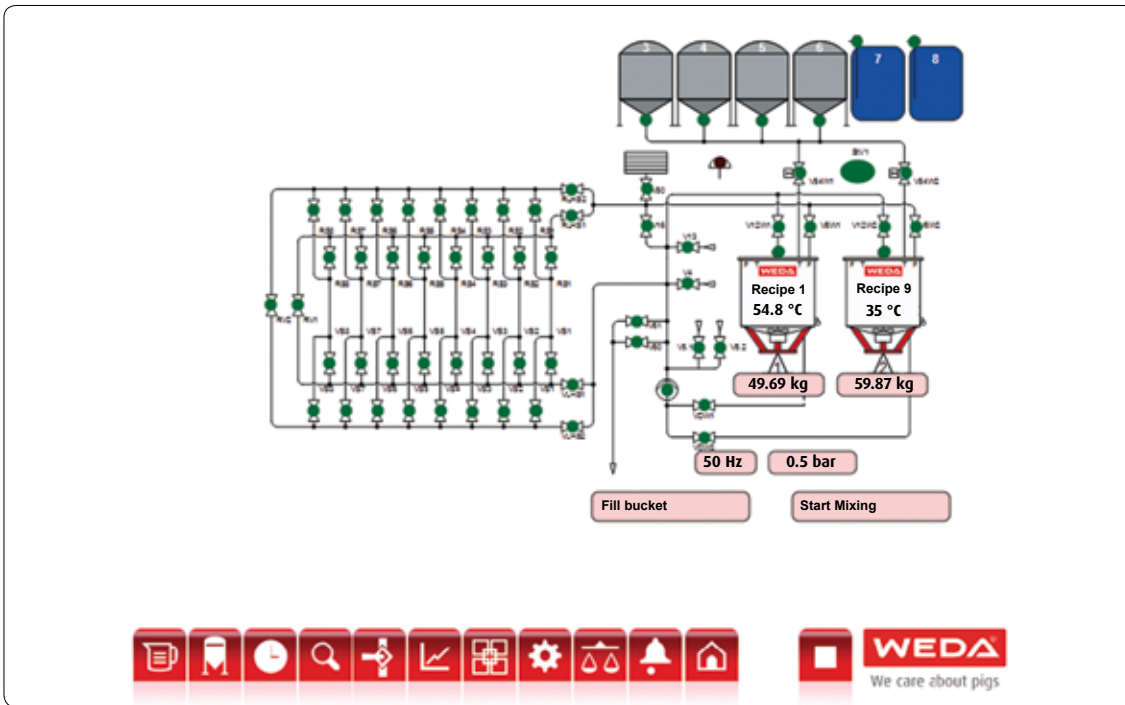
- **Reduced workload because fully automatic, remote controlled and 24h feeding**
- **Control per touch panel**
- **128 valves per pump, and 3 pumps controllable by computer**
- **Unit visualization**
- **Evaluation per valve**



- **Total consumption**
- **Daily schedules**
- **Alarm function**
- **Fully automatic cleaning**
- **Locking of individual valves possible**
- **Remote maintenance**

By means of the alarm function, the operator immediately receives information on irregularities in the unit and about possible measures for remedying them. On demand, the WEDA Service can dial in from outside into the unit and can be of help in troubleshooting.

By means of data cable, the Nutrix+ can be connected with an already existing WEDA unit or PC without any problems. This way, the operator of the unit is able at any time and from any place to change and to look into the data of the Nutrix+.



The "Process Visualization" allows you an overview of all important components of your unit at one glance. The components can be directly controlled by means of Touch Panel and the settings can be altered.

Recipes Automatic mixing

Recipe 1

Hot water	27.42 kg	Min. MR	3.00 : 1	<input checked="" type="checkbox"/> Autom. determination of mixing amount	
		Act. MR	3.83 : 1		
Cold water	27.42 kg	Proportion	MR g/ltr		
Milk	7.41 kg	100.00 %	from comp.	Final mixing time [s]	0
Prestarter	0.00 kg	0.00 %	from comp.	Soaking break [s]	600
Piglet 1	0.00 kg	0.00 %	from comp.	Agitator soaking break on [s]	10
Ferment	6.92 kg	10.00 %	DS only	Agitator soaking break off [s]	100
Sum	69.17 kg	110.00 %	standard	Required temperature	30.0 °C
Hint: mixing ratio deviates from standard				Water extra	0.00 kg
				Correction amount water	0.00 kg

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The Nutrix+ has a "Recipe Function", which enables the automatic mixing and feeding of pre-programmed recipes.

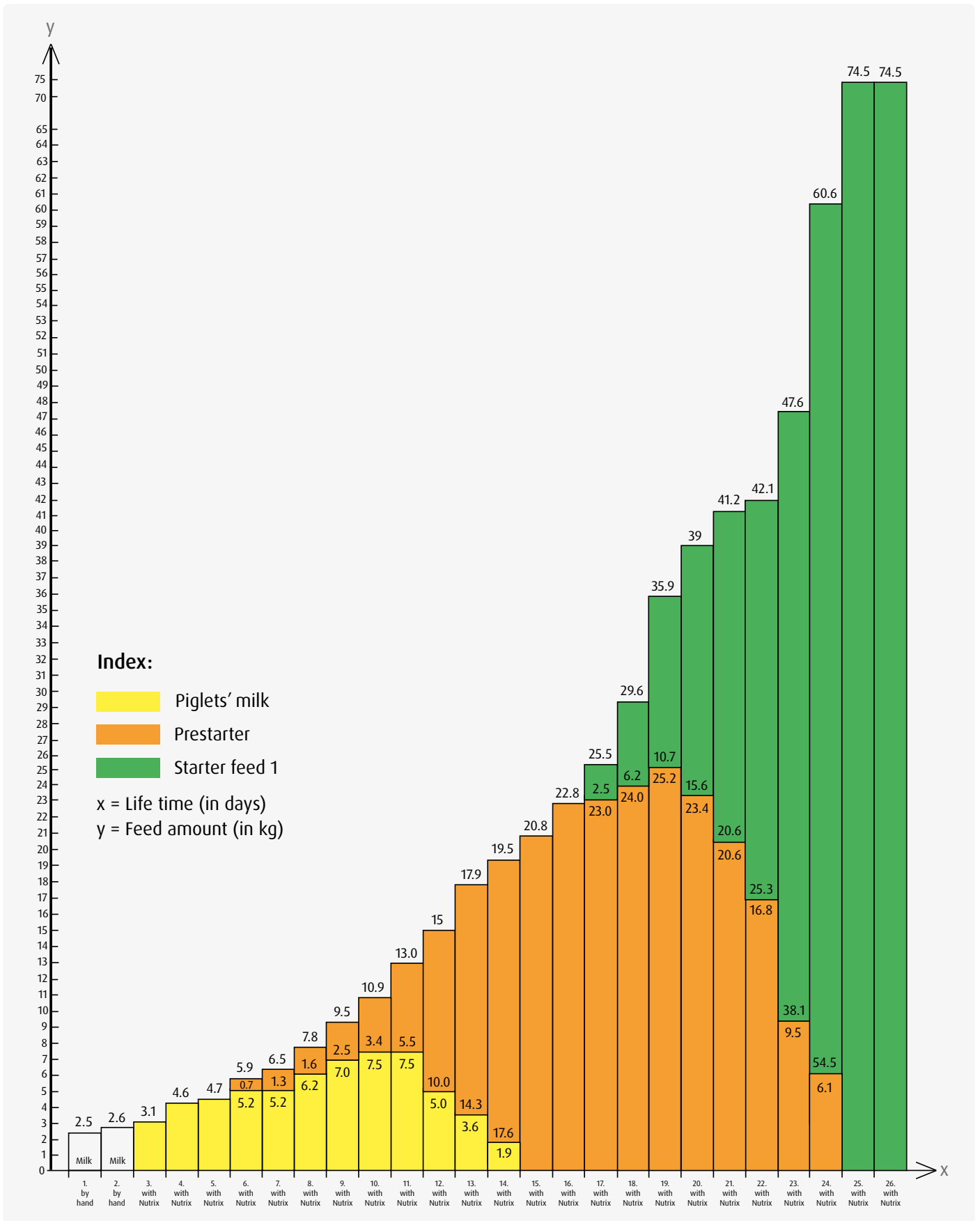
Over a certain period of time, the Nutrix+ displays the frequency of feed uptake per day at the different valves. This way, deviations can be quickly recognized and counter measures can be taken.

Feeding Control										
	Name	Today	1 day ago	2 days ago	3 days ago	4 days ago	5 days ago	Active	Allocation	
1	602	104	35	101	50	86	36	Yes	1	
2	604	199	101	140	162	132	124	Yes	2	
3	606	408	272	308	413	236	373	Yes	3	
4	608	98	63	104	96	119	76	Yes	4	
5	610	226	166	205	316	175	198	Yes	5	
6	612	157	140	178	132	134	116	Yes	6	
7	614	263	234	225	233	185	241	Yes	7	
8	616	231	177	211	244	181	205	Yes	8	
9	618	175	140	180	137	117	87	Yes	9	
10	620	38	29	63	77	115	57	Yes	10	
11	622	174	148	229	221	181	170	Yes	11	
12	624	212	173	218	149	203	222	Yes	12	
13	626	135	116	184	193	133	215	Yes	13	

With the help of the "Cleaning Plan", the manual as well as the automatic cleaning of the unit can be planned throughout the week. The labour-intensive cleaning processes can be carried out on such days, which have only few or no workload peaks.

General parameters		Weekly schedule clean up								
	Day of week	Emptying	Rinsing Man.1	Acid	Lye	Report	WACS+	Rinsing Man.2	WACS	Emptying Water
0	Sunday	Yes	No	No	No	No	No	Yes	Yes	Yes
1	Monday	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes
2	Tuesday	Yes	No	No	No	No	No	Yes	Yes	Yes
3	Wednesday	Yes	No	No	No	No	No	Yes	Yes	Yes
4	Thursday	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes
5	Friday	Yes	No	No	No	No	No	Yes	Yes	Yes
6	Saturday	Yes	No	No	No	No	No	Yes	Yes	Yes

Feed concept



Feed Concept Suckling Piglet Feeding System Nutrix+ (for 650 piglets)



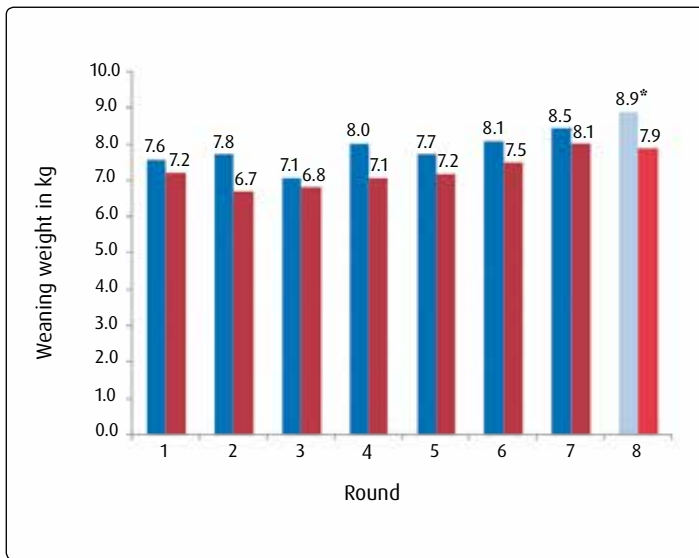
Within the framework of a bachelor thesis, the effects of two different feeding systems on suckling piglets (manual and automatic supplementary feeding with Nutrix+) were examined in practice. The result: with almost identical feed consumption in the case of the Nutrix+, significantly higher gains could be determined (up to 40 g per piglet and day). The excess proceeds per piglet, reached - due to the higher weaning weights - on average €2.04.



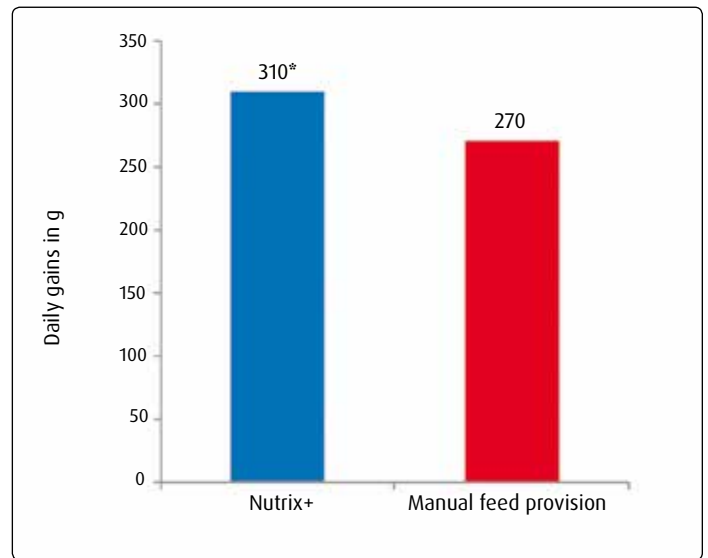
Results Ziron & Hellbusch
www.weda.de/files/Ziron_en.pdf

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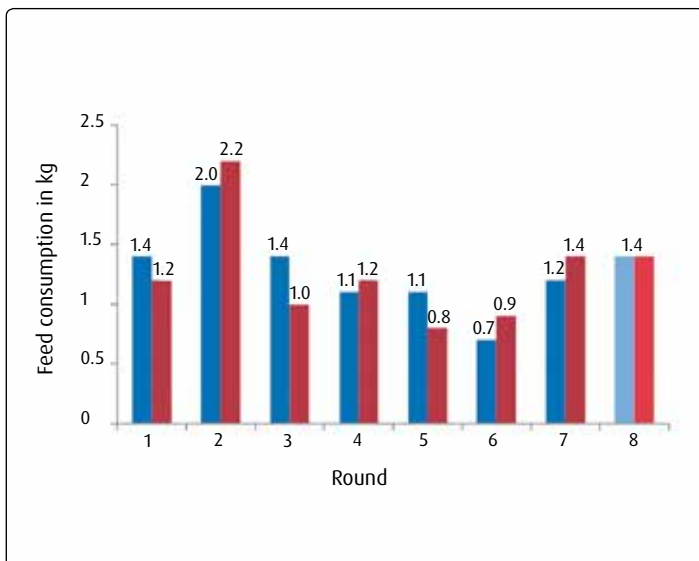
■ Nutrix+ ■ Manual feed provision * = Significant



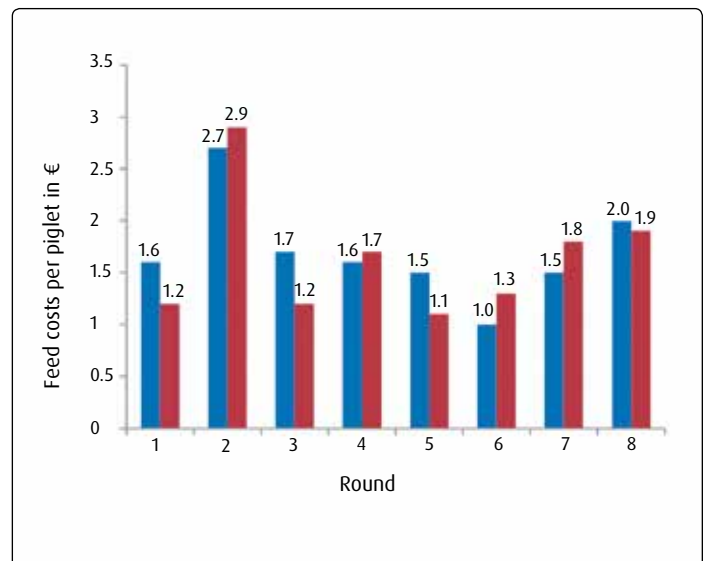
Weaning weights in kg depending on the feed provision



Daily gains depending on the feed provision



Feed consumption in kg depending on the feed provision



Feed costs per piglet depending on the feed provision



Good results and satisfied farmers

The experiences with the Nutrix+ up to now are entirely positive. Our customers notice clear homogenization of the litters, improved health of the suckling piglets, and relief for the sow. The latter can first and foremost be seen in the increase of the number of live-born piglets and in the clear decrease of the number of repeat breeders. In addition, an increase in weaning numbers and weaning weights can be recognized. In the adjacent table, we present the results of a sow management (with and without Nutrix+). The farmer additionally reports a clear saving of pure milk powder amounting to €0.50 per piglet.

A current evaluation of the Nutrix results, carried out by ForFarmers, with 50,296 weaned piglets and a suckling period of 21 days, shows the following results. On average, the weight per weaned piglet amounted to 6.48 kg, with feed costs of €1.4 per piglet. Per sow, on average 14.8 piglets were weaned.

Our customers regularly report about clear improvements since their use of the Nutrix+. One of our customers has particularly outstanding results at 26 days of suckling period and additional 5 motherless days in the farrowing pen. These are shown in the following table.

Results	Without Nutrix+ (6 months)	With Nutrix+ (6 months)
Number of Inseminations	522	511
Repeat breeders (%)	5.2	3.1
No. of live-born piglets	16.3	16.6
Weaned piglets / sow	13.6	14.1
Suckling piglet losses (%)	15.3	14.4
Loss of sows (TVV; %)	18.9	16.3
Wean. weight piglets (kg)	5.5	5.8

	Results
Weaned piglets / sow	14.8
Weight / weaned piglets (kg)	6.48
Uptake / piglet (kg)	1.1
Feed costs / piglet (€)	1.14

	Results
Weaning weight / litter (kg)	130.32
Weaning weight / piglet (kg)	9.12



- Continuous supply
- Conveyance via chain or feed screw
- Complete emptying
- Robust
- Reliable

Fast and reliable dosification

Feed dosificators ensure smooth and continuous supply of the dry feed for the suckling piglet feeding system, Nutrix+. We have gathered the essential properties of our robust and reliable FDs and FETs in the following table for you:

Technical Details	FD 100	FD 200	FD 600	FET 600
Content (litres)	100	200	600	600
Drive (kW)	0.75	0.75	0.75	via chain
Feed screw (m)	6	6	6	---
Dosification by means of chain conveyor	---	---	---	x
Pipe diameter (mm)	75	75	75	60
Inlet hopper with extension	x	x	x	x



Nutrix+ film
www.weda.de/en/videos



Lower costs with simultaneously increasing health

Fermented feed offers the following advantages for suckling piglets and farmer:

Advantages of Fermentation for Suckling Piglets and Farmers	
Suckling piglets	<ul style="list-style-type: none">- Better feed uptake with increasing feed conversion- Reduction of cough and diarrhoea problems- High gains, better growth- More homogeneous groups at weaning- Positive intestinal health- More vitality- Reduction of tail biting
Farmer	<ul style="list-style-type: none">- Lower mortality rate- Healthier and more vital animals- Saving of costs

- **Cost saving**
- **Healthier animals**
- **Improved growth**
- **Better feed uptake**
- **Increase in turnover due to better production results**

With the Mini Fermenter, WEDA have developed a system for the fermentation of smallest feed amounts, by which optimal feed provision for suckling piglets from the first day of life onwards is now achieved. First experiences gained in practice confirm a much better development of the suckling piglets with positive effects all the way to fattening.



Small-scale fermentation

- 125l container, insulated, with heating and agitator
- Temperature of 38°C over a period of 24 hours
- Ferment proportion of the feed from the first day of life onwards ranges at 9%.
- From day 14 onwards, the ferment proportion of the feed is raised to 12% to 20%.



Article small-scale fermentation

www.weda.de/files/Profi_article_small_scale_fermentation.pdf

The ferment is produced in a 125l mini fermenter. The insulated container is equipped with an agitator and an integrated heating. Very important: the container has to keep a temperature of 38°C for 24 hours to allow for the lactic acid bacteria to develop properly. And this is how it is done: after thorough cleaning of the fermenter, 80l of water at 40°C are filled into the fermenter. Parallely, the fermenter heating is in operation. Then 20kg of grain mixture are stirred in and finally lactic acid bacteria are added. Then, the agitator is switched into interval operation in order to keep the entry of air into the feed as low as possible. Via time switch, the unit then stirs the container only four times a day for five minutes each. The heating remains in operation for 24 hours. Then the fermentation process is finished and feeding out can take place now.

The proportion of ferment in the feed ranges at 9% of the total ration from the first day of life onwards. From day 14 onwards, the proportion of ferment is raised to 12 to 20%. The feed dosed out by the Nutrix is supposed to have a pH-value of 4.6.

A unit with 500 sows requires 100 litres of ferment for approximately one week.

We care about pigs

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All information with reservations. Changes are possible at any time.