More profitable with PLOCHER®
Since 1992 successfull use in agriculture. A tried and tested system since 1980 with a worldwide application.

I ask you: WHY
... aren’t the profits as expected?
... is there a need to dispose of your own manure?
... do we exterminate the worm population?
... is the soil more compacted and eroded?
... is the groundwater contaminated with harmful substances?
... aren’t we using the knowledge and experiences from years gone by?

THEREFORE
... farmers secure their existence by using PLOCHER products... check out for yourself our economical/ecological sound products!

...healthy soil – healthy plants – healthy animals – healthy humans!

Yours sincerely

Roland Plocher

CONTENTS

PLOCHER Concept Overview ......................................................... 3

SLURRY • MANURE • SOIL

plocher slurry ................................................................. 4

PRACTICAL APPLICATION: how farmers protect soil, water and atmosphere 5
plocher pig slurry ............................................................... 6
plocher manure ............................................................... 6
plocher poultry manure ..................................................... 7
plocher activator-set 1-2-3 ................................................... 8

LIVESTOCK MANAGEMENT

plocher livestock ............................................................... 9
plocher vital-livestock ......................................................... 10
plocher pig special ......................................................... 11
plocher weaners care ......................................................... 11
plocher poultry special .................................................... 12
plocher fish supplement .................................................... 12

WATER • STABLE HYGIENE • HARMONIZERS

plocherkat large .............................................................. 13
plocher agro-kat .............................................................. 14
plocher all-purpose cleaner ............................................... 15
plocher stable harmonizer ............................................... 15
plocher e-smog angle ....................................................... 16
plocher paint- & cement additive ...................................... 16

CROPS • PASTURE • ORCHADS • FORESTRY

General advice for using PLOCHER-Products for crop ........................................... 23
plocher plants ................................................................ 24
plocher active-leaf ......................................................... 24
plocher leaf-special ....................................................... 25
plocher plant vital ......................................................... 25
plocher plant vital f 1 ....................................................... 25

Supporting the life cycle in nature with the PLOCHER concept .................. 26
Vitalplan for grain ................................................................ 27
Vitalplan for rapeseed ...................................................... 28
Vitalplan for sugar beet ................................................... 29
Vitalplan lucerne ............................................................ 30
Vitalplan for legumes ...................................................... 31
Vitalplan for soy beans ................................................... 31
Vitalplan for maize .......................................................... 32
Vitalplan for potatoes ...................................................... 33
Vitalplan for pastures/grassland ........................................ 34
Vitalplan for orchads ....................................................... 35

General advice for using PLOCHER-Products for forestry .......................... 36
Tips, experience figures and real-life reports start on page ......................... 38
What can PLOCHER-Products do for you?

THE PLOCHER-PRODUCTS SUPPORT THE NATURAL LIFE CYCLE OF PRODUCTION

- Treat the causes – not the symptoms
- Less expenditure – better quality – a recipe for success

1. Developing more humus and better hygiene in the soil:
   For soil activation, surface composting, aerobic composting of farm manure and slurry into valuable fertilizer use plocher soil activator-set 1-2-3 and also PLOCHER slurry and manure products.

   Result: aerated living soils, nutrients are fixed and available for plants, regulation of pH value, air and water content.
   More hygiene in the soil because of decomposition instead of rotting, pests and pathogens are considerably reduced.
   Improved decomposition = soil and plant protection = cleaner groundwater
   Improved decomposition = less air pollution = diminishes climate change

2. Crops:
PLOCHER plant products are long term, gentle on the soil cultivation of crops.

   Result: stronger root growth, increased nutrient uptake and resistance, biologically improved quality.

3. Livestock:
Improved resistance and productivity with PLOCHER supplements,
PLOCHER water vitalization and PLOCHER harmonizing

   Result: better assimilation of nutrients leads to higher productivity and biological quality of produce, less ammonia emission = increased well-being and vitality for the animals.

4. Stable hygiene:
Cleaning, building and renovating stables and barnes with plocher all-purpose cleaner and plocher paint & cement additive

5. Economy:
Since natures laws are the same for everyone it is important that any agricultural business benefits from evaluating the efficiency of its operations.

   Result: PLOCHER-Products are ecological and economical. This is a safe method that leads to business success and the same time benefits our environment!

Authorisations, Registrations:

Licensed in EG-Öko-BasisVO 834/2007

„FiBL“ Switzerland

QS - ID

Registered No. 9
Fodder-Hygiene-Regulations (EG) 183/2005

Soil and Plant products in accordance with Fertilizer Regulations (DüMV)

For all PLOCHER-Products we guarantee that there are no risks involved acc. to Product Liability Law (valid since Dec. 2000).
**plocher slurry**

**Description:**
Aerobic conversion of liquid manure into valuable fertilizer

**Effect:**
- The condition of the slurry is transformed from anaerobic to aerobic (from decay to decomposition), improved stable climate, less flies
- Sanitizing, reduction of bacteria
- Homogenizes the slurry, unobtrusive odor
- Gradual reduction of crusts and sediments
- Plants do not get burned
- Nutrients remain in the root zone available for the plants
- Build-up of humus in the soil
- No water pollution
- Effectiveness is confirmed by a 3 year „EU Project Pig Slurry“

**Suggested application:**
Initial application: 1,5 kg/1,5 l per 100 m³ of existing slurry. Mix with ample water and apply to liquid part of the slurry.
Regular application in the stable: weekly 5 g/4 ml per animal unit.

**plocher slurry – different carrier materials:**
- **Calcium carbonat:** Our standard product - used regularly!
- **Molasses:** Molasses is recommended for thick floating crusts. Farmers prefer molasses because of its ability to mix with water without forming any sediment.

**Further remarks:**
- **Drains without crust:** mix plocher slurry with ample water in a watering can and stir well. Distribute evenly in drain. For best results, add 2/3 of the treatment at the beginning of the drain.
- **Drains with crust:** make two holes per m² in the crust and pour the well stirred mixture of generous amounts of water and plocher slurry into the liquid part of the slurry.
- **In the tank/pit:** start the agitator and pour in the stirred mixture of water and plocher slurry. If no agitator is available, pierce the crust with the vacuum hose of the slurry spreader and pour the product mixed with water in this hose. Immediately after, pump the slurry into the slurry spreader and then back into the tank. For large tanks/pits repeat this at several places.
- **In collection channel:** mix plocher slurry in a watering can with ample water and pour – using a quantity of product corresponding to its volume when full – evenly over the empty drain. Repeat after each draining.

**Please Note!**
Observation is important! The effect of plocher slurry is easily recognized by an increase of bubble activity in the slurry. Contamination with chemicals or medicine (e.g. antibiotics) may postpone the effect.
Advantages of using PLOCHER-Products for slurry and manure
The PLOCHER-Products that process the slurry and manure can also be used in the stable and help to:

- Composting (aerobic) instead of rotting (anaerobic)
- Better stable climate for animals and humans
- Severe reduction of pathogenic bacteria and germs
- Slurry remains liquefied
- More homogenous slurry without stirring, better distribution of nutrients
- Easy on the plants, acts as fungicide
- Better fertilizer
- Supports humus development
- EU confirms effect through long term projects.

Element of life: our earth
The earth/soil is an ecological, living system! The preservation and support of this thin layer of humus is of paramount importance in our work. This will secure the productivity of the soil in the long term. If we are smart we enlist the help of the naturally occurring micro-organisms to improve fertility and keep the soil in good health. To do this we need to create the right environment for them and support them in their work.

Aeration of soil:
The microbiology in the soil needs adequate air to breathe. If, for instance, the soil has been compacted and aeration is compromised there is a lack of oxygen. As a result life in the soil and roots will die off. Some of the CO₂ that is released by the micro-organisms is needed by the plants for their photo-synthesis and some is dissolved in the groundwater to form carbonic acid. This acid in turn dissolves nutrients from the soil that are absorbed by plants.

The carbon cycle can be likened as the motor of soil fertility.
The Austrian scientist Prof. Dr. August Raggarm says:
If the soil had the chance to absorb CO₂ again on the basis of a high humus content, we could solve this problem.
Years ago the soil was able to store about 30 kg of CO₂ per m², nowadays it is reduced to 4 kg at the most! But if we increase the humus content of the soil we also would start the carbon cycle again.
To retain the balance and harmony in the soil we have to adjust our ways of cultivating the land.

PLOCHER treated slurry and manure (no stench), and compost (smells of forest soil) help to increase humus percentage in the soil and are a sort of biological filter that allows the soil to act as nutrient storage, to balance the water content and to filter out harmful substances.

Humus cannot be replaced by anything else. Mineral fertilizer cannot create this carbon cycle. The only mediums that fulfil this role are the organic substances from the farm, like slurry and manure, interspersed with green manure and crop rotation.

Soil is a living organism – it provides the basis of life!
The farmer who employs PLOCHER-Products contributes to improve the natural life cycle of the land and helps the environmental issues.

PLOCHER-Products support you in this.
**plocher pig slurry**

**Description:**
Aerobic conversion of pig slurry into valuable fertilizer

See article no. ag 1041 plocher slurry. As start-up and also for continuous use.

**Suggested application:** Dosage/application same as plocher slurry.

**ATTENTION:** Do not use plocher pig slurry on cattle slurry, because it can compost and bind!

If soil and slurry stink, something is „rotten“ and decomposition (anaerobic - without oxygen) means that soil biology and nutrients will die off - due to harmful emission environment!

The microbiology in soil and slurry needs adequate air to breathe, because decomposition (aerobic - with oxygen) = soil protection = less emission = better for the environment!

---

**plocher manure**

**Description:**
Aerobic treatment of manure

- Improved climate in the stable, less flies
- Fixation of ammonia in fungal and microbe proteins
- Improved decomposition decreases volume
- Nutrients are retained in soil and available for plants
- Better hygiene through decomposition (aerobic) increases natural antibiotics
- **Decomposition = soil protection = ground water protection**
- **Decomposition = less emission = better for the environment**

**Suggested application:**
Dissolved in water or dry application.

**In the stable/yard:** Initial application: 3 g/ m²
Maintenance 2 g/ m²/week (or 5 g/per LU/week)
**Freerange:** 10 -20 g per 100 m²/week
**Dungheap:** Dissolve 40 g per m³ in water drill several holes per m² and pour in and also spray all over.

**Important Note:**
- If using deep litter it is advisable to clean stable first with plocher all-purpose cleaner, then start using plocher slurry.
**Description:**
Aerobic composting of poultry manure into valuable fertilizer

**Suggested application:**

**Before Bedding:**
Dissolve 3 kg or 3 l/1000 m² in 100 l water and spray over floor

**After Bedding:**
Dissolve 2 kg or 2 l/1000 m² into 200 l water and spray over floor directly after bedding the stables.

**Excrement belt:** 2 g or 2 ml/m² per week or to use as the need arises.

**Freerange:**
Use 10 - 20 g bzw. 10 - 20 ml/100 m² on the area outdoors, apply on demand 1-4 times per month. Dissolve in water and spray as usual.

**Important Note:** If using deep litter it is advisable to clean first with plocher all-purpose cleaner, then begin using plocher poultry manure.

Important for sustainable farming practices is good tilth formed by a biological process of micro-organisms. Soil health is the basis of life! PLOCHER-Products support this life cycle on the farm as well as in the fields.

---

**SMART FARMERS KNOW THE SECRET - GOOD COMPOSTING!**

Decay is always non-productive, no matter if it is decay of compost, slurry or soil. Decay attracts flies and vermins, and is a breeding ground for germs, salmonella etc. The following comparison table of 2 composting areas from the laboratory test of the LWK Hannover (March 2010) shows the impact on how plocher soil and slurry can influence composting. The on-site odour test demonstrated obvious differences. Here an excerpt:

<table>
<thead>
<tr>
<th>Parameter - smelling test</th>
<th>with PLOCHER – healthy earthy smell</th>
<th>without PLOCHER – stinging odour</th>
</tr>
</thead>
<tbody>
<tr>
<td>C : N (The C : N relation is an important indicator for biological actions!):</td>
<td>16 : 1</td>
<td>21 : 1</td>
</tr>
<tr>
<td>Magnesium (Magnesium is involved in all enzyme reactions!)</td>
<td>1,40 kg/t</td>
<td>0,87 kg/t</td>
</tr>
<tr>
<td>Calcium:</td>
<td>3,75 kg/t</td>
<td>2,65 kg/t</td>
</tr>
<tr>
<td>Copper:</td>
<td>4,2 mg/kg</td>
<td>2,2 mg/kg</td>
</tr>
<tr>
<td>Zinc:</td>
<td>25,7 mg/kg</td>
<td>14,8 mg/kg</td>
</tr>
<tr>
<td>Mangan:</td>
<td>91,8 mg/kg</td>
<td>66,4 mg/kg</td>
</tr>
</tbody>
</table>

Trace elements have a powerful influence on soil fertility, i.e. decomposition leads to lack of zinc, the lack of zinc leads to less virus resistance and in the end pests take over. Please see page 44: „The two antagonists“
**COMBI-SET**

**SMALL** Art. ak 1740 – 1,5 kg/l each / **LARGE** Art. ak 1750 – 8,0 kg/l each

**Description:** activating soil life and area composting
By using all three products a better and faster result is achieved. The 3 carrier materials activate different root zones and the soil is able to regenerate in a shorter period of time. This leads to good composting of harvest trash. With time unwanted weeds may reduce.

- area composting (harvest trash/ subsequent mowing)
- activating soil life, hygiene through composting
- good tilth
- more active soils result in longer growing periods and a firm turf
- reduction of unwanted weeds
- mineral and trace elements are easily accessible for plants
- firm turf

**Suggested application:**
crops, pastures, orchards, horticulture, vineyard
Until a good soil quality is achieved
**Directly after harvesting and spring:** 300 g/ml/ha.
Reduce to 150-100 g/ml/ha when soil quality has improved.
**Soil regeneration:** Apply 500 g/ml per ha if needed with field spray. Can be mixed into slurry (aerobic - that has been treated with plocher slurry) and applied as usual. Do not mix with slurry in slurry pit.

**Recommendation:**
We recommend usage shortly before a rain shower/period.
- To improve composting of slurry/ manure plocher manure (bedding) and plocher slurry (slatted floors) should be used.
- Improved soil regeneration optimizes the use of „farm produced“ fertilizers, nutrients are better accessible for plants.
**plocher livestock supplement**

**Description:**
Improved resistance, increased well-being and productivity
- Starts a revitalization process of the organism
- Increases well-being and productivity
- Improves digestion and assimilation
- Helps create a biological optimum (meat and milk quality)

**Suggested application:**
Dairy cows (*slowly increase to recommended dose*), cattle for fattening, calves, sheep, goats: 1-2 g/LU/day
Can be mixed with the drinking water or added to the fodder or mineral supplements.

**Recommendations:**
- Stir plocher livestock with the appropriate amount of water in a watering can and pour over feed (silage).
- For best weight gain use plocher livestock before fattening begins.
- Vitalize water with the plocherkat for optimum result.

**Advice:**
PLOCHER supplements are not a substitute for veterinary treatments, but should accompany any other treatments. Antibiotics, medicines or other chemical substances can slow down the effect of PLOCHER-Products.

**Carrier material**
calcium carbonate:
at 9041 – 2 kg / at 9051 - 10 kg

For liquid feeding systems
(water soluble):
carrier material
natrium hydrogen carbonate:
at 9043 – 2 kg / at 9053 – 10 kg

**TAKE NOTICE:**
Because of better assimilation and absorption of fodder, feed rations might need to be changed. For example proteins can be reduced by 1%.
Description:
Promotes hygiene and vitality.
Carrier material is imprinted with information of substances similar to natural antibiotics.
- Balances and vitalizes the organism
- Better resistance against infections
- Improved digestion and assimilation
- Better growth
- Increased biological and energetic qualities
- Shortened regeneration phase
- No withholding period

Suggested application cattle/pigs/poultry:
Cattle: 5 g per LU/week or 1 g per LU/day; as cure: min. 5 g - 20 g for 6 days
Externally: mix 10 g into creme special and apply to udder.
Calves: 2 - 3 g/calf/week; as cure: min. 3 g per day for 3 - 10 days, if necessary even longer.
Fattening pigs: At the start 3 days long: 1 g per pig.
Brood sows: 5 g/2 - 3 days before farrowing, afterwards min. 1 g/2 - 3 days
Hoglets: per litter (approx. 10 piglets) 3 g/1 x per week until weaning, or daily if wanted.
Poultry, rabbits: mast begin: 500 g/ton of dry feed
or 250 g/m³ into consumed drinking water

Always use in combination with plocher livestock, plocher pig special and plocher poultry special

Recommendations:
If problems arise give plocher vital-livestock in a 1/2-1 liter bottle of water and also treat the udder externally (see left side: „Practical tip“)
Recommended dosage for internal use: give 10 g of plocher vital-livestock in the morning and evening and increase plocher livestock to 5 g per animal per day during the treatment phase. If problems subside use half the recommended dose for 2 days. Thereafter apply for 2 months, mixed in 2x10 g of plocher cream special, for 10 days each month.

Tips:
- Milk out the affected udder several times daily
- Important: treat bedding with plocher manure, more hygiene through aerobic composting.
- We recommend to clean stables with plocher all-purpose cleaner
- Treating water supply with the plocherkat enhances all of the above
- The use of antibiotics, medications and other products may reduce the effect of PLOCHER-Products.
**plocher pig special**

**Description:**
Better feed utilization, increased well-being
- Promotes vitality in the animals
- Increases well-being, decreases stress
- Better digestion and absorption
- Better meat quality

**Suggested application:** For breeding and fattening pigs, piglets.
50 g/t dry feed or 30 g/t wet-feeding systems. Can be mixed with the feed or at the factory or added to the drinking water.

**Recommendation:**
- For optimum results plocher pig special should be given at the start of the fattening period
- Additional benefit is gained if using plocher vital-livestock and plocher weaners care supplements.
- To improve conditions of stables and the reduction of ammonia use plocher manure (with bedding) and plocher slurry (with slatted floor).
- Important: clean stable with plocher all-purpose cleaner before occupancy.
- Vitalize water with the plocherkat.

**plocher pig fattening**

**Description:**
Strengthening the immune system, weight again
- Promotes vitality
- Stabilizing
- Increases resistance to infections

**Suggested application:**
0,5 g/weaner/day 1 week before and 1 week after weaning.

**Recommendation:**
- To optimize fattening add plocher pig special from the start of the fattening process.
- To improve housing conditions and to reduce ammonia emissions use plocher manure (with bedding) and plocher slurry (with slatted floor).
- Important: clean stable with plocher all-purpose cleaner before occupancy.
- Vitalize water with the plocherkat.

**plocher weaners care**

**Description:**
Strengthening the immune system, weight again
- Promotes vitality
- Stabilizing
- Increases resistance to infections

**Suggested application:**
0,5 g/weaner/day 1 week before and 1 week after weaning.

**Recommendation:**
- To optimize fattening add plocher pig special from the start of the fattening process.
- To improve housing conditions and to reduce ammonia emissions use plocher manure (with bedding) and plocher slurry (with slatted floor).
- Important: clean stable with plocher all-purpose cleaner before occupancy.
- Vitalize water with the plocherkat.

**Important:** To improve stable climate and reduce ammonia emissions it is recommended to use plocher manure for bedding, and plocher slurry for slatted floors.
plocher poultry special

Description:
More vitality, better meat and egg quality
- Increases vitality and well-being
- Eggshell consistency is improved
- Better laying performance and more weight gain
- Improved digestion and assimilation
- Less ammonia build up
- Healthy feathers

Suggested application:
60 g/ton into dry feed or add 30 g/m³ to water.

Recommendations:
To get best results feed plocher poultry special from the beginning of the fattening process. To improve housing conditions spray plocher all-purpose cleaner before occupancy. Ammonia reduction can be achieved by using plocher manure. Vitalize water with the plocherkat.

plocher fish supplement

Description:
Increased vitality, improved food utilization, better taste
- Promotes vital forces in the animal organism
- Increases well-being
- Meat is firm and has a good taste. No oily or fishy taste.
- Increased absorption and utilization of nutrients.

Suggested application:
Can be added at the factory. 200 g per ton fish food.

Note:
PLOCHER-Products for vitalization of water in aqua cultures and fish / mast breed cultures: we look forward to helping you with advice.

Recommendations:
To improve and stabilize water quality we recommend PLOCHER-Products for surface water, sediment reduction and stabilizing.
Description:
Vitalizing of drinking water

Water and its purpose in animals: Water is an important part of life. All organisms need water to function e.g.: the cow consists of 60-70% water, milk consists of 87% water. The water supply plays a big role in the care of the animals. If enough water of good quality is available, more fodder is consumed. An adequate water supply also encourages more saliva production. This in turn increases the pH value and the amount of acetic acid produced. Acetic acid provides more energy and is an important building block for milk fat. This acid also plays a part in the production of female hormones and fertility.

- The plocherkat helps you to increase the productivity of your business and at the same time takes care of the well-being of your animals
- Spring water quality out of your water pipes
- All functions in an organism benefit from water vitalization
- Reduces lime in water and increases the life of the pipes
- More efficient and hygienic cleaning, using less water
- Reduction of pollutants, e.g. iron, nitrates, manganese, ammonia, also chloride and its taste
- Easy installation

Recommendation:
The plocherkat is sufficient for approx. 20 - 25 LU with an average daily use of about approx. 1.5 m³.

Installation:
Clean pressure tank or collection tank thoroughly before installing plocherkat. Fasten on pipe past the water gauge/pressure valve. Flush pipe thoroughly after about 14 days.

Important:
For best results install at a minimal distance of 5 feet of any electrical equipment with a strong electrical field (e.g. motor, fuse box water heater). The effect of the plocher e-smog-angle has been proven to be reliable against influences from electro-smog (electrical wiring, etc.).
also see page 16

Note:
No maintenance costs! Continuously in use since 1986!
**plocher agro-kat**

**Description:**
Reduction of pestizides through vitalization of water

**Spring water quality for soil and plants through field sprayer:**

- Increases the efficiency of pestizides.
  - The plocher agro-kat works permanently

- **Water vitalization**
  By getting back the original spring water quality cluster structure changes. Water becomes an ideal transporter for the chemical molecules among others through enlarged water surface and changing of lime characteristics. By that the effiency of chemicals is increased significantly.

- **Water - hardness stabilization**
  Ein weiterer Pluspunkt des plocher agro-kat - die Härtestabilisierung!
  Many common pestizides i. e. Glyphosat respond to hardness in water with restricted efficiency by reaction with the Carbonat-Ions (building Ca/Mg-compounds). The molecule structure of hardness components are changed through plocher agro-kat vitalization. Consequently the efficiency of chemicals are no longer blocked. Therefore you become able to reduce plant protective agents significantly.

**Effect on business economics and work management:**

- **less phytosanitary chemicals – less stress for the plants**
- **high activity of soil biology – vital plants**
- **= ecological-economical workflow!**

Monetary calculation example, **maize**:

- Phyto-sanitary expenses - medium intensity - per ha € 70,--
- Savings up to 50 % (and more…) per ha € 35,--

**Expenses, helping your economy**: Using the plocher agro-kat works out from the beginning. All investment costs are covered after treating round about approx. 35 ha.

**Installation:**

The plocher agro-kat is fixed in the adjutation/ circulation system of the sprayer.

**The plocher agro-kat is maintenance-free!**

---

**Note:**
Supplied without mounting material.
**plocher all-purpose cleaner ms/cs**

**Description:** Natural, food grade cleaning agent for stable dairy, storage sheds, trucks etc. Concentrated cleaner, dissolves fats and dirt, sanitizing. Environment friendly, breaks down easily.

**Suggested application:**
Mix both carrier materials 1:1. Dose carefully.
All together 10 - 20 g/100 m² or 1 g/10 litres of water before occupancy.
Thorough cleaning: 1 g/litres of water

**Tip:** Vitalize your tap water with the plöcherkat.

**plocher harmonizer**

**Description:** Elimination of geopathic stress.

The earth has an energy field to which living organisms have adapted throughout the millennia and from which they draw part of their energy.
Staying or living in areas where this natural energy field is disrupted may cause geopathic (geo = earth + pathos = suffering) stress with adverse effects on metabolic processes, immune system, ability to sleep, etc.
The disturbance of the energy field may be caused by water veins or certain mineral concentrations, fault lines, moving underground plates, underground cavities, or at intersections of Hartmann and Curry lines.

The plocher harmonizer is based on 10 years of experience of Roland Plocher and is in use since 2002. Many testimonials and tests confirm the results of a more relaxed and harmonious energy level of humans and animals.
Specific information imprinted into the harmonizer disc changes the geopathic disturbance into a revitalising energy field.

**Recommendation:**
The plocher harmonizer should be placed centrally in the stable or building on the floor at a safe location. Effective in a radius of ca. 29 m.

**Note:**
The effect of the plocher harmonizer has been proven to be reliable. In some cases where initially no positive effects were noticed, additional influences from electro-smog (electrical wiring, etc.) were found and eliminated with the plocher e-smog-angle.

*Also see page 16*

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**Carrier material sea salt:**
hr 2441 – 2 kg

**Carrier material citric acid:**
hr 2442 - 2 kg

**Carrier material clay glazed:**
az 4011 – 21 cm Ø

---

**Note:**
There are no risks involved in using PLOCHER-Products acc. to Product Liability Law (valid since Dec. 2000).
plocher e-smog-angle

Description:
Protection against electro-smog for humans and animals.

The plocher e-smog-angle changes harmful energy fields into more compatible fields for the living organisms (the effect can be measured using kinesiology and other methods of natural medicine). The plocher e-smog-angle harmonizes all devices plugged into the electricity supply. Exceptions are microwave ovens and cordless phones once taken off the hook.

Installation: The plocher e-smog-angle is mounted on the insulated main-wire coming into the building - just before the meter box - or directly mounted onto the main meter box with duct tape. If combined with the plocherkat (see page 13) mount the plocher e-smog-angle directly onto the water pipe line.

The Evers family
is very satisfied with the application of plocher slurry.
The Evers family won the „Golden Olga“ award for best dairy producer of Lower Saxony in 2010.

Meeting distributors and Evers farm visit in Sept. 2011
back: PLOCHER-distributor I. Rinkleff, W. Domel,
right: M. Junius, R. Plocher

Quality & Economy:
ROLAND PLOCHER® integral-technik offers holistic, long term and future orientated solution for agriculture

- Soil regeneration
- Aerobic slurry and manure management (EU confirmed)
- Plant support
- Livestock prophylaxis
- Vitalization of drinking water
**Fam. Hinck, Wedemark-Abbensen**

**Ecological & Economical Farm Management**

---

**Cattle/Dairy - Integral Solutions**

---

**Feeding**

- Initiation of a revitalisation process in the organism
- Increased well-being and performance
- Better digestion and fodder conversion
- High quality produce resulting from ideal, biological conditions

---

**Water**

- Water revitalization
- Cleans and protects pipe system
- Prevents build-up of lime, reduces contaminants
- Natural elimination of pathogens, natural hygiene

---

**Bedding**

- Natural, aerobic decomposition process starting in the stable
- Better stable climate - significant reduction of ammonia, etc.
- Reduction of flies
- No harmful pathogens - beneficial milieu for positive organisms
- Reduction of bedding volume

---

**Slurry/Manure**

- Save energy through homogenisation of slurry
- Natural hygiene, reduction of odours and flies
- Aerobic milieu - significant reduction of pathogenic organisms
- Higher fertiliser value through binding of nitrogen
- Aerobic slurry/manure = protection of soil, plants, water, climate

---

**Stable**

- Natural cleaning without killing positive microorganisms
- Environmentally friendly
- Biodegradable

---

**Testimonials:**

Successful farming with PLOCHER-overall concept!

**Farmer’s trick => aerobic decomposition!**

Since 1993 - less work, better quality

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**Fam. Geisseler, CH-Triengen**
Feeding

**plocher livestock supplement cc/ na**
1-2 g/LU per day. **Gradual increase of dosage to recommended dosage**, e.g. mix in water sprinkled over silage. Also application through the water pipe system possible.

Immunisation with strengthening informations of natural antibiotics taken from herbs:

**plocher vital livestock do/ na**

**Dosage:**
- Cattle: 5 g per LU/ week
- Calves: 2 to 3 g/ calf/ week

**Externally:** Mix 10 g with e.g. 100 g udder ointment

Easy application in water and/ or fodder

Simple installation of plocherkat to the water pipe

Water

**plocherkat** water revitalisation (capacity depending on water quality): 1 - 1,5 m³ water per day (equivalent to 20 - 25 LU)

**plocher bioreactor** revitalizes higher volumes of water (recommended for more than 100 LU)

Natural hygiene through aerobic milieu - optimum stable climate

Bedding

Initial dosage: 3 g/m² applied directly onto the floor.
Subsequent applications: 2 g/m² per week or 5 g/GVE per week.
Mix 2 kg plocher manure with 200 litres of water and sprinkle on an area of 1000 m².

Available either as powder or in liquid form

Slurry/ Manure

**plocher slurry** (storage tanks): 1,5 kg per 100 m³ slurry dissolved in 150 litres water; apply and mix with the liquid part of slurry.
At regular intervals => 5 g/LU/week in the stable (slatted floor & slurry sewer).

Natural cleaner - 100 % biodegradable

Stable Cleaner

**plocher all-purpose cleaner** after basic cleaning: 10 g/100 m² or 1 g per 10 litres. Apply to floor, walls and ceiling: Intensive cleaning: 1 g/litre water

**plocher slurry/ plocher manure**: guillem & jauche bzw. plocher kompost & mist: Apply to floor, walls and ceiling: first application 2 g/m². Equent applications: 1 g/m²

PLOCHER Integral Solutions - sustainable agriculture!

www.plocher.de
Piggeries - Integral Solutions

Feeding
• Increased well-being, increased stress resistance
• Improvement of fodder conversion and digestion
• Optimization of meat quality
• Reduction of animal smell

Water
• Revitalization of water
• Cleaning and protection of pipe system
• Stabilisation of lime, reduction of e.g. iron & manganese
• Natural elimination of pathogens, natural hygiene

Bedding
• Natural, aerobic decomposition in the stable
• Optimal climate in the stable
• Sanitization and reduction of flies
• More fertilisation value of manure through binding of nitrogen
• Reduction of volume - prolongation of mucking out the stable

Slurry/Manure
• Saving energy through natural homogenisation
• Sanitization, reduction of odour and flies
• No harmful pathogens and salmonella
• Manure of leaves und humus content
• Aerobic slurry/manure = soil-/plant-/water- and climate-protection

Stable
• Natural cleaning without killing positive microbes
• Environmental friendly
• Biodegradable

Testimonials:
The integral solution convinces me!
Cutting costs in stables and on soil land
Vital piggs and manure without nasty smell!
Improved meat quality
**Feeding**

Starting 1st day: *plocher pig special do/na* or *plocher pig fat do/na*: 50 g/t dry fodder, 30 g/m³ liquid fodder, additionally for weaning period: *plocher weaners care do/na*, 0.5 g/weaner/day, use 1 week before and after weaning.

Immunoisation with strengthening informations of natural antibiotics taken from herbs:  

- *plocher vital-livestock do/na*  
  - sow: 5 g/2-3 days before weaning, after weaning min. 1 g/ for 3 days - if necessary feed longer  
  - piglets: per litter (approx. 10 piglets) 3 g/1 x per week until weaning, if necessary every day  
  - feeding pigs: start of fattening for 3 days: 1 g/pig. Other dosage 30 g/ton of fodder for 2-3 weeks

**Water**

- *plocher kat* water revitalisation, according to the water quality: 1 - 1.5 m³ water per day (equivalent to 20-25 LU)  
- *plocher bioreactor* revitalises higher volumes of water (recommended for more than 100 LU)

**Treatment of bedding**

- Initial dosage: 3 g/m² directly to the floor  
- Following applications: 2 g/m² per week or 5 g/LU per week.  
- Application: 2 kg *plocher manure* with 200 litres sprinkled to 1000 m²

**Slurry/Manure**

- *plocher slurry*: 1.5 kg per 100 m³ slurry in 150 litres water; apply and mix to the liquid part of slurry. At regular intervals => 5 g/LU/week in the stable (slatted floor & slurry sewer).

**Stable Cleaner**

- *plocher all-purpose cleaner* after basic cleaning: 10 g/100 m² or 1 g per 10 litres sprinkling allover to the ground/wall/ceiling; intensive cleaning: 1 g/litre water  
- *plocher slurry/plocher manure*: ground/wall/ceiling after basic cleaning: first application 2 g/m². Further applications: 1 g/m²

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**PLOCHER Integral Solutions - sustainable agriculture!**  
**Contact us for more information!**

www.plocher.de

PLOCHER GmbH • integral-technik  
Torenstraße 26 • 88709 Meersburg • Tel.: 07532 - 4333- 0  
Fax: 07532 - 4333 - 10 E-Mail: info@plocher.de
Poultry - Integral Solutions

Feeding

- Initiation of a revitalisation process in the organism
- Improved digestion and assimilation
- Better laying performance/meat quality
- Stable eggshell quality
- Healthy plumage

Water

- Water revitalization
- Cleans and protects pipe system
- Prevents build-up of lime, reduces contaminants
- Natural elimination of pathogens, natural hygiene

Bedding

- Natural, aerobic decomposition process starting in the stable
- Better stable climate - significant reduction of ammonia, etc.
- Reduction of flies
- Less harmful pathogens - beneficial milieu for positive organisms
- Increased fertiliser value of manure through binding of nitrogen
- Reduction of volume

Stable

- Natural cleaning without killing positive microorganisms
- Environmentally friendly
- Biodegradable

PLOCHER-secret of success:
Treating causes instead of fighting symptoms!
plocherkat in poultry:

- Water is a very important part in the feeding. Water quality is just as important as the quality of feed.

A reduced water consumption of 20% in egg production has a significant adverse effect on feed conversion, laying performance and weight of eggs.

- Contrary to prevailing opinion water is very sensitive. Impure water in defective pipe systems lead to rapid increase of pathogens (E. coli, etc.) in the water, especially in warm weather periods. In case of problems in general and in particular in large livestock units it is recommended to pay close attention to the water quality..“

Source: Agricultural textbook on animal husbandry
Feeding

plocher poultry special do/na:
60 g/ton in dry fodder or 30 g/m³ consumed water.

plocher vital-livestock do/na
Start of fattening period: 500 g/ton in dry fodder or 250 g/m³ consumed water for 6 - 8 days. Prolong period as needed. Also in critical periods you can add plocher vital-livestock do/na for 3 - 10 days.

Water

plocherkat water revitalisation (capacity depending on the water quality): 1 - 1,5 m³ water per day (equivalent to 20 - 25 LU)
plocher bioreactor revitalises higher volumes of water (recommended for more than 100 LU)

Treatment of bedding

Before applying bedding:
plocher poultry manure do/me 3 kg (dolomite) or 3 litres (molasses) mixed with 100 litres of water for1000 m². Sprinkle directly on the floor.

After putting bedding material:
plocher poultry manure do/me 2 kg (Dolomite) or 2 litres (Molasses)/1000 m² Sprinkle with 200 litres of water onto the bedding promptly after putting bedding material.

Manure band conveyor:
plocher poultry manure do/me 2 g or 2 ml/m² per week - or as needed.

Free range breeding:
10 - 20 g or 10 - 20 ml/100 m² plocher poultry special do/me sprinkled onto the free-range area, 1 - 4 x applications per month - depending on quantity of accumulated manure and if anaerobic odours develop.

Stable cleaner

plocher all-purpose cleaner 20 g/100 m² - 20 g of cleaner mixed with100 l of water. Sprinkle onto floor, walls and ceiling; intensive cleaning: 1 g/litre water

Turkey fattening:
Report from Jo Guiavarch (Bretagne - France):

Protocol:
9400 turkeys, water treatment: 2 plocherkat
Treatment of bedding in the stable: 1200 m²:
2 litres plocher poultry special me mixed with 100 litres of water

Result:
Dry bedding, no ammonia, optimal well-being of turkey stock.
Profitability: gross profit/m² before implementing PLOCHER-Systems all the time less than € 12,--. Gross profit with PLOCHER-Systems => 15,58 €.

Contact us for information!
PLOCHER GmbH • integral-technik
Torenstraße 26 • 88709 Meersburg • Tel.: 07532 - 4333- 0
Fax: 07532 - 4333 - 10 E-Mail: info@plocher.de
There are a range of products available for crops which, used in combination, bring excellent results. On farms that run their own livestock it is recommended to add plocher slurry to drains and plocher manure to the manure heap. This “home-grown” organic fertilizer is valuable on the fields and will not burn or have any adverse effect on the soil, roots or leaves.

No regulations to observe
PLOCHER-Products are carrier or base materials that are imprinted with certain information. No registration is necessary because these materials are naturally occurring substances like dolomite, calcium carbonate, magnesium sulphate or molasses.

Advantages in using PLOCHER plant products
- Admissible for all plants and crops
- Application in all areas, for instance near protected water catchment areas, on hills, gullies or near waterways.
- Economical advantages
- Not poisonous for farmers or environment
- No risk for the consumer
- No problems with legislation or authorities

Important for Applications:
PLOCHER plant and soil products can be used in combination and applied together with conventional agents. It is advisable to reduce conventional products gradually.

The regular application of the PLOCHER concept leads to a successful, economically and ecologically sound agricultural business.

Examples and guidelines for the use and application of PLOCHER-Products are found on the next pages as example vital plans. These are recommendations for applications depending on weather, position etc. and could mean changes in dosages and the timing of spraying.

Recommendations for application:
- All PLOCHER plant and soil products can be mixed on the previous day.
- Water vitalization with the plocherkat will increase the effect.

A plocherkat can be fastened on the spray unit itself, please see page 14.
plocher plants do/me

Description:
supports and strengthens flower, leaf and root development

- Specific imprinted information supports growth
- Improved photo synthesis
- Increased biological and energetic qualities
- Plocher plants reduces stress caused by chemical agents
- Plants me: excellent wetting agent (do not use on fungal attacks)

Suggested application:
Treatment of seeds: 20 - 40 g/100 kg seed (depending on crop)
Dipping solution for seedlings: 10 g per 10 liters water, use surplus solution to water deesdlings. Dilute with double the amount of water.
Beginning of growth: 200 g/ml/ha
Vegetation: 100 g – 400 g/ha depending on crops 2 - 6 applications (can be combined – see vital plans)

Recommendation for application of PLOCHER plant products:
- Prepare all ap and ak products the night before and mix with the appropriate amount of water for application.
- The health of the soil is very important. Plocher soil activator-set 1-2-3 prepares the soil to release optimum nutrients for crops.
- Water vitalization with the plocherkat increases the effect.

plocher active-leaf mg

Description:
Activates regenerative forces in leaves

- Specific imprinted information promotes better growth
- Strengthens and protects the plants
- Supports photo synthesis
- More leaf shine
- Enhanced biological and energetic quality

Suggested application:
100 - 200 g/ha depending on crop.
Dissolve in warm water before filling spray tank and mix with the appropriate amount of water for application.
Up to 5 - 7 treatments possible (see vital plans)

Recommendation: see above plocher plants do/me
**plocher active-leaf me**

**Description:**
Supports the growth of leaves. Can be combined with plocher soil activator set 1-2-3.
- Specific imprinted information promotes better growth
- Strengthens and protects the plants
- Supports photo synthesis
- More leaf shine
- Enhanced biological and energetic quality

**Suggested application:**
100 ml/ha i.e. for salad, pastures
200 ml/ha depending on crop/vegetation growth of sugar beet, maize, potatoes, grains

**Recommendation:** see article plocher plants do/me

**plocher plant vital do/mg**

**Description:**
Strengthens, promotes and protects the plants
- Carrier material is imprinted with information similar to natural antibiotics
- Increased resistance
- Shortening of the regenerative phase
- Enhanced biological and energetic qualities

**Suggested application:**
crops, pastures, fruit and vegetable, forestry
depending on crops/vegetation growth: 100-250 g/ha
(see vital plans)

**Recommendation:** see article plocher plants do/me

**plocher plant vital f1**

**Description:**
Supports regenerative forces of plants.
- specifically helpful in certain weather conditions
- increased biological and energetic qualities

**Suggested application:**
Crops, pastures, fruit and vegetables, vineyards, forestry
100 g/ha - 500 g/ha depending on weather (damp-hot conditions)
(see vital plans)

**Recommendation:** see article plocher plants do/me

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**Note:** By using PLOCHER-Products fertilizers and chemical sprays can be reduced over time.
Each PLOCHER-Product can basically be applied on its own, for instance to improve slurry or manure, but the effect is considerably increased when used in combination. This can be likened to a system (farm) where all parts form an interdependent ecosystem (environment) which is greater than the sum of its parts.

**Note: Economically and ecologically sound farming**

The purpose of PLOCHER-Products are to improve vitality in water, soil, animals and plants, as well as better viability of the farms own resources and more independence for the farmer.

This in turn secures economical and ecological survival, more profit and if so desired could pave the way for a transition to organic farming.

**And - ideal for „rearranging“ farms:**

Easy and quick conversion to economic agriculture.
# vital plan for GRAINS

<table>
<thead>
<tr>
<th>BBCH</th>
<th>PLOCHER-Products</th>
<th>amount/ha</th>
<th>costs/ha € net</th>
<th>remarks</th>
</tr>
</thead>
</table>
| after harvest | first application/on demand: per 300 g/ml/ha | soil activator 1 do 100 g  
soil activator 2 me 100 ml  
soil activator 3 mg 100 g | soil regeneration for surface composting of harvest residue  
can also be mixed with PLOCHER treated slurry before spreading |
| 1750 | | | |
| seeds | plants do 20 g/100 kg | | | mix with seeds 1-3 days before sowing, if already treated  
mix with seeds in spreader |
| 3051 | | | |
| 21 tillering phase | plants do 100 g  
active-leaf mg 100 g | 3,36  
2,85 | can also be mixed with PLOCHER treated slurry and applied |
| +3151 | | | |
| 3252 flag leaf | plants do 100 g  
active-leaf mg 100 g | 3,36  
2,85 | can also be mixed with PLOCHER treated slurry and applied |
| +3051 | | | |
| +3151 | | | |
| sum / ha | 26,28 | | |
| 3252 first awns | plant vital f1 mg 100 g  
active-leaf mg 100 g | 3,11  
2,85 | supports vitality e.g. winter wheat |
| +3051 | | | |
| +3151 | | | |
| total costs / ha | 35,60 | bulk container | |

## Recommendation:
Application can be individually adjusted depending on growth. Dissolve PLOCHER-Products in warm water (200-400 l per ha) before adding to spray tank. PLOCHER-Products are registered according in “Organic Agriculture” EG Register 2092/91 EWG and listed in FiBL Germany/Switzerland.

Inform yourself of the advantages of incorporating the ROLAND PLOCHER®integral-technik in your agricultural business.

## Carrier materials:
do = dolomite  
me = molasses  
cc = calcium carbonate  
mg = magnesium sulphate

PLOCHER-plant support products can be combined with other products (see vital plans).

Note: Products can also be combined and applied with conventional agents. Other agents should be reduced over time.
Dissolve PLOCHER-Products in warm water (200-300 l/ha) before adding to spray tank. Repeat the last treatment in each phase depending on conditions and growth.

The micro biology of the humus level in farmland is a very interesting and complex study. There are thousands of millions of micro-organisms in one single gram of fertile humus which are most important for a healthy plant growth. Biologically healthy plants can only thrive in a soil that is active with microorganisms. Fertility of the soil is paramount for all life. The PLOCHER-Products for slurry, manure and soil regeneration support revitalisation of soil life and ensure continuous health in soils that result in stronger and more resistant plants.

- Loosened, living soils
- Improved water/air
- Regulation of pH value
- Improved nutrient availability
- Hygiene through decomposing not rotting: reduces damage from soil born pests.
- Surface composting

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**vital plan for RAPESEED**

<table>
<thead>
<tr>
<th>BBCH</th>
<th>PLOCHER-Products</th>
<th>amount/ha</th>
<th>costs/ha € net</th>
<th>remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>after</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>harvest</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1750</td>
<td>first application/</td>
<td>100 g</td>
<td>10,08</td>
<td>soil regeneration for surface composting</td>
</tr>
<tr>
<td></td>
<td>on demand:</td>
<td>100 ml</td>
<td></td>
<td>of harvest trash.</td>
</tr>
<tr>
<td></td>
<td>per 300 g/ml/ha</td>
<td>100 g</td>
<td></td>
<td>Can also be mixed</td>
</tr>
<tr>
<td></td>
<td>soil activator 1</td>
<td>soil activator 2</td>
<td></td>
<td>with PLOCHER slurry products before</td>
</tr>
<tr>
<td></td>
<td>do</td>
<td>me</td>
<td></td>
<td>applying.</td>
</tr>
<tr>
<td></td>
<td>soil activator 2</td>
<td>mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>me</td>
<td>mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>soil activator 3</td>
<td>mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>mg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3051</td>
<td>plant do</td>
<td>20 g/10 kg seeds</td>
<td>0,67</td>
<td>treat seed 1-3 days before</td>
</tr>
<tr>
<td>3071</td>
<td>plant me</td>
<td>50 ml</td>
<td>1,89</td>
<td></td>
</tr>
<tr>
<td>+3051</td>
<td>plant do</td>
<td>100 g</td>
<td>3,36</td>
<td></td>
</tr>
<tr>
<td>+3151</td>
<td>active-leaf mg</td>
<td>100 g</td>
<td>2,85</td>
<td></td>
</tr>
<tr>
<td>3252</td>
<td>plant vital f1</td>
<td>100 g</td>
<td>3,11</td>
<td></td>
</tr>
<tr>
<td>+3352</td>
<td>plant vital mg</td>
<td>100 g</td>
<td>3,11</td>
<td></td>
</tr>
<tr>
<td>+3051</td>
<td>plant do</td>
<td>100 g</td>
<td>3,36</td>
<td></td>
</tr>
<tr>
<td>+3151</td>
<td>active leaf mg</td>
<td>100 g</td>
<td>2,85</td>
<td></td>
</tr>
<tr>
<td>3252</td>
<td>plant vital</td>
<td>100 g</td>
<td>3,11</td>
<td></td>
</tr>
<tr>
<td>3352</td>
<td>plant vital</td>
<td>100 g</td>
<td>3,11</td>
<td></td>
</tr>
<tr>
<td>3051</td>
<td>plant do</td>
<td>100 g</td>
<td>3,36</td>
<td></td>
</tr>
<tr>
<td>3151</td>
<td>active leaf mg</td>
<td>100 g</td>
<td>2,85</td>
<td></td>
</tr>
<tr>
<td>total costs / ha</td>
<td>31,28</td>
<td>bulk container</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A population of 300 earthworms per m² ingest and turn over a layer of about 1.5 cm of soil per year which corresponds to a nitrogen content of 140 kg/ha.

*We already have agricultural soils which are totally devoid of worms.* (E.Hennig)
Dissolve PLOCHER-Products in warm water (200-300 l) before filling spray tank.

**Remark:**
We recommend plocher soil activator-set 1-2-3 to help compost harvest trash, straw and green manure, to increase hygiene in the soil and encourage uniform growth of sugar beet.

**Organic fertilizer:**
Sugar beet, because of their long maturation, make good use of nutrients provided by PLOCHER treated manure and slurry. Here again, the proper decomposition is of importance for the quality of the sugar beet.

Apply PLOCHER treated slurry/manure according to vegetation (fungicidal effect). Nitrogen is taken up in small amounts, the soil regenerated and biological quality of crops considerably increased.

Important: Too much slurry/manure interferes with the soils organisms and the sugar beets quality suffers from too much nitrogen.

As direct drilling mustard or a combination of phacelia and mustard is ideal
First crop: maize, lucerne and rye which fight the sugar beet nematodes.
(Potatoes, grains and lupins are neutral).

Rapeseed, mustard, bird rape and cabbage varieties are not suitable as first or inter crop.

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### vital plan for SUGAR BEET

<table>
<thead>
<tr>
<th>BBCH</th>
<th>PLOCHER-Products</th>
<th>amount/ha</th>
<th>costs/ha € net</th>
<th>remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>after harvest and in spring</td>
<td>first application on demand: per 300 g/ml/ha soil activator 1 do soil activator 2 me soil activator 3 mg</td>
<td>100 g 100 ml 100 g</td>
<td>10,08 10,08 10,08</td>
<td>soil regenerator 1-2-3 for surface composting of harvest trash and/or intercrop</td>
</tr>
<tr>
<td>seeds</td>
<td>3051 plant do</td>
<td>20 g/ unit</td>
<td>0,67</td>
<td>treatment of seeds 1-3 days before</td>
</tr>
<tr>
<td>20 rosette growth</td>
<td>3071 plant me +3051 plant do +3151 active-leaf mg</td>
<td>50 ml 100 g 100 g</td>
<td>1,89 3,36 2,85</td>
<td>repeat application depending on development</td>
</tr>
<tr>
<td>40 up to harvest</td>
<td>3252 plant vital f1 mg +3352 plant vital mg +3051 plant do +3151 active leaf mg</td>
<td>100 g 100 g 100 g 100 g</td>
<td>3,11 3,11 3,36 2,85</td>
<td>repeat application depending on development</td>
</tr>
</tbody>
</table>

**total costs / ha** 42,08 bulk container
The financial value of slurry and manure is often underrated.

**Change your attitude ... improve slurry/manure instead of disposing**

It has been established that treated slurry contains 0,5 kg/m³ more nitrogen: 0,5 x € 0,90* = € 0,45 pro m³

costs for plocher soil and slurry = € 0,30 pro m³

* price incl. tax per kg nitrogen, status may 2010

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<table>
<thead>
<tr>
<th>vital plan for LUCERNE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBCH</td>
</tr>
<tr>
<td>after harvest and in spring</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>seeds</td>
</tr>
<tr>
<td>beginning of leaf growth 10 cm</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>soil should be dry</td>
</tr>
<tr>
<td>after each cut</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>before ploughing</td>
</tr>
<tr>
<td>total costs / ha with 3-4 cuts</td>
</tr>
</tbody>
</table>

Treatments with PLOCHER-Products encourage and support soil life (micro organisms) and prevent infections like powdery mildew.

**Please note:**

Lucerne supplies several years nutrient rich fodder of high quality. For good reasons lucerne is called the “queen” of fodder crops.

In the main year of growth lucerne can be cut 3-4 times.

Once a year it should be allowed to flower. Even so lucerne is grown for several years the crop is nowadays harvested one or two years after sowing, similar to red clover.

Allow 7 - 8 weeks between the first and last cut to let the rootstock regain its strength. PLOCHER-Products support root growth.

Rotation crop value is approx#. 150 - 200 Euro/ha.
### vital plan for SOY BEANS

<table>
<thead>
<tr>
<th>BBCH</th>
<th>PLOCHER-Products</th>
<th>amount/ha</th>
<th>costs/ha € net</th>
<th>remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>after harvest</td>
<td>1750</td>
<td>soil activator 1 do</td>
<td>300 g</td>
<td>30,24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>soil activator 2 me</td>
<td>300 ml</td>
<td>30,24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>soil activator 3 mg</td>
<td>300 g</td>
<td>30,24</td>
</tr>
<tr>
<td>seeds</td>
<td>3051</td>
<td>plants do</td>
<td>20 g/100 kg</td>
<td>0,67</td>
</tr>
<tr>
<td>inter crop</td>
<td>1750</td>
<td>soil activator 1-2-3</td>
<td>as above</td>
<td>30,24</td>
</tr>
<tr>
<td>spring</td>
<td>1750</td>
<td>soil activator 1-2-3</td>
<td>as above</td>
<td>30,24</td>
</tr>
<tr>
<td>at 10-15 cm height</td>
<td>3071</td>
<td>plants me</td>
<td>100 g</td>
<td>3,78</td>
</tr>
<tr>
<td></td>
<td>+3352</td>
<td>plant vital mg</td>
<td>100 g</td>
<td>3,11</td>
</tr>
<tr>
<td></td>
<td>+3151</td>
<td>active-leaf mg</td>
<td>100 g</td>
<td>2,85</td>
</tr>
<tr>
<td>before flower development</td>
<td>3252</td>
<td>plant vital f1 mg</td>
<td>100 g</td>
<td>3,11</td>
</tr>
<tr>
<td></td>
<td>+3051</td>
<td>plants do</td>
<td>100 g</td>
<td>3,36</td>
</tr>
<tr>
<td></td>
<td>+3151</td>
<td>active-leaf mg</td>
<td>200 g</td>
<td>5,70</td>
</tr>
<tr>
<td>total costs / ha</td>
<td></td>
<td>83,06</td>
<td></td>
<td>bulk container</td>
</tr>
</tbody>
</table>

### vital plan for PEAS, FIELD BEANS, LUPINS

<table>
<thead>
<tr>
<th>BBCH</th>
<th>PLOCHER-Products</th>
<th>amount/ha</th>
<th>costs/ha € net</th>
<th>remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>after harvest</td>
<td>1750</td>
<td>first application/on demand: per 300 g/ml/ha</td>
<td>soil activator 1 do 100 g 100 ml 100 g</td>
<td>10,08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>soil activator 2 me</td>
<td>100 ml</td>
<td>10,08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>soil activator 3 mg</td>
<td>100 g</td>
<td>10,08</td>
</tr>
<tr>
<td>seeds</td>
<td>3051</td>
<td>plants do</td>
<td>20 g/100 kg</td>
<td>0,67</td>
</tr>
<tr>
<td>approx. 5-10 days after sowing</td>
<td>1750</td>
<td>soil activator 1 do</td>
<td>100 g</td>
<td>10,08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>soil activator 2 me</td>
<td>100 ml</td>
<td>10,08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>soil activator 3 mg</td>
<td>100 g</td>
<td>10,08</td>
</tr>
<tr>
<td>at 10-20 cm height</td>
<td>3071</td>
<td>plants me</td>
<td>50 ml</td>
<td>1,89</td>
</tr>
<tr>
<td></td>
<td>+3051</td>
<td>plants do</td>
<td>100 g</td>
<td>3,36</td>
</tr>
<tr>
<td></td>
<td>+3352</td>
<td>plant vital f1 mg</td>
<td>100 g</td>
<td>3,11</td>
</tr>
<tr>
<td></td>
<td>+3151</td>
<td>active-leaf mg</td>
<td>100 g</td>
<td>2,85</td>
</tr>
<tr>
<td>total costs / ha</td>
<td></td>
<td>32,04</td>
<td></td>
<td>bulk container</td>
</tr>
</tbody>
</table>

**Remark:**
Individual application is possible depending on conditions and growth.
### vital plan MAIZE

<table>
<thead>
<tr>
<th>BBCH</th>
<th>PLOCHER-Products</th>
<th>amount/ha</th>
<th>costs/ha € net</th>
<th>remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>after harvest and in spring</td>
<td>first application/on demand: per 300 g/ml/ha</td>
<td></td>
<td></td>
<td>can also be mixed with PLOCHER treated slurry before spreading</td>
</tr>
<tr>
<td></td>
<td>soil activator 1 do</td>
<td>100 g</td>
<td>10,08</td>
<td></td>
</tr>
<tr>
<td></td>
<td>soil activator 2 me</td>
<td>100 ml</td>
<td>10,08</td>
<td></td>
</tr>
<tr>
<td></td>
<td>soil activator 3 mg</td>
<td>100 g</td>
<td>10,08</td>
<td></td>
</tr>
<tr>
<td>seeds</td>
<td>3051 plants do</td>
<td>20 g/unit</td>
<td>0,67</td>
<td>treat seeds 1-3 days before. If already treated mix with seeds in spreader.</td>
</tr>
<tr>
<td></td>
<td>3051 +3151 active-leaf mg</td>
<td>100 g</td>
<td>3,36</td>
<td>Check development and repeat if necessary.</td>
</tr>
<tr>
<td></td>
<td>3052 +3252 plant vital f1 mg</td>
<td>200 g</td>
<td>5,70</td>
<td></td>
</tr>
<tr>
<td></td>
<td>+3471 blatt-spezial me</td>
<td>200 ml</td>
<td>6,22</td>
<td></td>
</tr>
<tr>
<td>total cost / ha</td>
<td>43,67</td>
<td>bulk container</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Individual application possible depending on conditions and growth. Dissolve PLOCHER-Products in warm water (200 - 300 l/ha) before adding to spray tank.

---

**The root zone flora**

In this zone the fine root hairs of plants develop as an important organ for the absorption of nutrients, comparable with the villi (small projections) in human intestines. This might make it more understandable why slurry/manure, which is anaerobic/rotting, does not belong in this zone. Only composted (aerobic) slurry/manure, with its available nutrients, is beneficial to the roots. *Humus Trilogy E. Hennig*
Fertilizing means feeding the soil life!

It is a common idea to fertilize plants, but this is not correct. The truth is that the microorganisms in the soil first have to transform the inorganic materials into organic ones to be available for the plants as nutrients. Aristotle was right when he said “the soil is the digestive system of the plants”. It can be likened to the human intestinal flora. He already knew that digestive processes are happening in the soil.

---

Wireworm & other pests

Products of rot from foul, anaerobic organic matter are attractive for pests and serve as breeding ground. Foul gases are typical attractants for pests in nature. The butyric acid that is being formed in anaerobic processes acts as an attractant for the lined click beetle whose larvae is known as wireworm. Please see page 44: Anaerobic rot an aerobic decomposition

Recommendation:
We recommend an intercrop of 10 kg of buckwheat, 2 kg of mustard, 3 kg of oil radish, 3 kg of phacelia and 2 kg of clover to keep an infestation of wireworms to a minimum.

---

<table>
<thead>
<tr>
<th>vital plan POTATOES</th>
</tr>
</thead>
<tbody>
<tr>
<td>BBCH</td>
</tr>
<tr>
<td>after harvest and in spring</td>
</tr>
<tr>
<td>seeds</td>
</tr>
<tr>
<td>21-25 leaf and stem development</td>
</tr>
<tr>
<td>31-39 main stem elongation</td>
</tr>
<tr>
<td>41-49 tuber formation</td>
</tr>
<tr>
<td>51-59 inflorescence</td>
</tr>
<tr>
<td>61-69</td>
</tr>
<tr>
<td>total cost / ha</td>
</tr>
</tbody>
</table>

Dissolve PLOCHER-Products in warm water (300-400 l/ha) before filling to spray tank.
Living soils encourage natural decomposition without the danger of loosing nutrients. The harmonious interplay between the organisms in the soil ensures minerals and trace elements are available for the plants as a constant source of nutrients.

**Result:** Strengthening of root stock, improved photo synthesis, biologically high-quality fodder and a firm turf.

---

### vital plan for PASTURES AND GRASSLAND

<table>
<thead>
<tr>
<th>BBCH</th>
<th>PLOCHER-Products</th>
<th>amount/ha</th>
<th>costs/ha € net</th>
<th>remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>autumn, again in early spring</td>
<td>first application/on demand: per 300 g/ml/ha soil activator 1 do soil activator 2 me soil activator 3 mg</td>
<td>200 g 200 ml 200 g</td>
<td>20,16 20,16</td>
<td></td>
</tr>
<tr>
<td>beginning of growth</td>
<td>plants do</td>
<td>200 g</td>
<td>6,72</td>
<td></td>
</tr>
<tr>
<td>rotational grazing/after cutting</td>
<td>on grassland after 1st or 2nd cut per 100 g/ml/ha soil activator 1 do soil activator 2 me soil activator 3 mg</td>
<td>100 g 100 ml 100 g</td>
<td>10,08</td>
<td>for regeneration of soil, surface composting and sanitizing of rank patches and mowing pastures</td>
</tr>
<tr>
<td>after ca. 14 days</td>
<td>plants do active-leaf mg leaf-special me</td>
<td>150 g 150 g 100 ml</td>
<td>5,04 4,28 3,78</td>
<td>depending on growth, treat pastures/grassland</td>
</tr>
<tr>
<td>complementary sowing</td>
<td>plant do</td>
<td>20 g</td>
<td>0,67</td>
<td>treatment of seeds</td>
</tr>
<tr>
<td>fertilizing</td>
<td>manure slurry</td>
<td>5,06/GVE/year</td>
<td>treat slurry/manure</td>
<td></td>
</tr>
</tbody>
</table>

**Application:**
Dissolve in warm water and mix with appropriate amount of water in spray thank. Can also be mixed with PLOCHER treated slurry/manure and applied.

**Note:**
Once the soil has regenerated and activated, plocher soil activator-set 1-2-3 can be reduced by 50% in the following year!

PLOCHER treated slurry/manure also contributes to a warmer soil in early spring. It is important for the survival of microorganisms not to apply slurry/manure on to frozen soils. Harrow in.

Buttercup & Co. not (!) wanted:
Goodbye weeds - effectively and and cost-saving avoided with the PLOCHER concept.

Take advantage of the economically and ecologically proven PLOCHER-Products for a successful agricultural business!
## vital plan for ORCHARDS

<table>
<thead>
<tr>
<th>BBCH</th>
<th>PLOCHER-Products</th>
<th>amount/ha</th>
<th>costs/ha € net</th>
<th>remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>early spring, before first shoots</td>
<td>first application/on demand: per 400 g/ml/ha soil activator 1 do soil activator 2 me soil activator 3 mg</td>
<td>1750</td>
<td>200 g 200 ml 200 g</td>
<td>20,16</td>
</tr>
<tr>
<td>shoots/bud</td>
<td>plants do plant vital mg</td>
<td>3051 +3352</td>
<td>200 g 200 g</td>
<td>6,72 6,22</td>
</tr>
<tr>
<td>flower</td>
<td>plants do plant vital mg</td>
<td>3051 +3352</td>
<td>200 g 200 g</td>
<td>6,72 6,22</td>
</tr>
<tr>
<td>soil treatment during season</td>
<td>soil activator 1 do soil activator 2 me soil activator 3 mg</td>
<td>1750</td>
<td>200 g 200 ml 200 g</td>
<td>20,16</td>
</tr>
<tr>
<td>application in summer</td>
<td>plants do active-leaf mg pflant vital f1 mg</td>
<td>3051 +3151 +3252</td>
<td>200 g 200 ml 200 g</td>
<td>6,72 5,70 6,22</td>
</tr>
<tr>
<td>after harvest and leaf fall</td>
<td>plants do</td>
<td>3051</td>
<td>200 g</td>
<td>6,72</td>
</tr>
<tr>
<td>Vegetationsende (nach der Ernte und Blattfall)</td>
<td>soil activator 1 do soil activator 2 me soil activator 3 mg</td>
<td>1750</td>
<td>200 g 200 ml 200 g</td>
<td>20,16</td>
</tr>
</tbody>
</table>

**total cost / ha (bulk container)** 111,72 - 206,45 depending on number of treatments

This treatment plan is a recommendation only. Weather, local conditions etc. will dictate dosage, spray intervals and order of products.

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Further information on [www.plocher.de](http://www.plocher.de) or [PLOCHER-customer advice, Tel: ++49 (0) 7532-4333-0](tel:+49%20(0)%207532-4333-0)
“Back to reality”: Every year the news about dying forests mirror to us the situation in our environment. Nearly every third tree is affected; this information is released by the government. According to this approx. 31% of trees in German forests are definitely damaged, only 32% are healthy on the outside.

Forest politics: “The most important issue is to support productiveness of the forests for nature itself and for society – healthy soil – healthy forest. (BMELV)

The forest soil cannot fulfil its role as a buffer, mineral and water reservoir anymore. We need to stop the acidity and compactness of the soil for the roots to “breathe” again.

PLOCHER-Products can help to rectify those problems: plocher forest-soil activator-set improves the root zone and this in turn supports the soil as a whole.

Active soil life (micro organisms) encourages decomposition and harmful substances are eliminated naturally. The harmonious interplay between the organisms in the soil ensures that minerals and trace elements are available for the trees as a constant source of nutrients. Air and water content are regulated.

Gases that inhibit and damage roots cannot develop in an environment that decomposes aerobically.

Important information!
Optimizing the decomposition reduces fungal and viral infection and contamination in the soil.

plocher forest-soil activator-set strengthens and supports trees via the root stock – bark beetles and company have no chance!
plocher forest-soil activator-set

plocher forest-soil activator-set 1:  
ak 1840 1,5 kg/l each – ak 1850 8,0 kg/l each  
carrier material: dolomite, molasses und magnesium sulphate

plocher forest-soil activator-set 2:  
ak 1940 1,5 kg/l each – ak 1950 8,0 kg/l each  
carrier material: molasses und magnesium sulphate

Description:  
strengthening of root growth, soil activation, surface composting

Suggested application:  
Depending on the condition of the forest soil
■ For first treatment use plocher forest-soil activator-set 1 300 - 500 g/ml/ha each
■ Subsequent treatments, depending on the development, use plocher forest-soil activator-set 2 with 300 g/ml/ha each, repeat 1-3 times yearly.
plocher forest-soil activator is dissolved in equivalent amount of water and sprayed on.

Afforestation/Nurseries/Christmas tree plantations:  
It is important to start with good conditions for the seedlings. Use plocher forest-soil activator-set 1 300-500 g/ml/ha each before planting.

Dipping solution for seedlings:  
Dissolve 10 g of plocher plant do per 10 l of water. Dilute left-over solution with water and use to water seedlings.

Further care:  
■ Spray seedling with plocher plant do 300 g/ha and plocher active-leaf mg 300 g/ha within the same year of planting.
■ BTreat soil 1-3 times yearly with plocher forest-soil activator-set 2 at 300 g/ml/ha, repeat 1 - 3 times a year, depending on condition.

PLOCHER-Products are ecologically and economically sound. It is a sure and safe way to an economically successful and environmentally correct agriculture and forestry.
AGRICULTURE SPECIAL Soil/Slurry

Successful and Profitable Farming using Farm produced Resources

The soil – a basis of our livelihood

Active soil ensures the natural process of surface composting and a reduced loss of nutrients. The harmonious interplay of microorganisms fixes nutrients and trace elements into the soil which are slowly released later as a constant source of nutrients for plants. Activating the soil also contributes to regulate the pH value.

Important: The potential infestation of fungal and viral attacks via the soil is significantly reduced by optimizing the composting process.

The application of plocher soil activator 1-2-3 is of essential importance for pest management. Improved composting equals field hygiene!

Application: Mix product in lukewarm water first and spray crops with the required amount of water. Alternatively mix with PLOCHER treated slurry before spreading.

Recommended dosage:
For surface composting:
- soil activator 1 (dolomite) 100 g
- soil activator 2 (molasses) 100 ml
- soil activator 3 (magnesium sulphate) 100 g

First application:
Use 200-500 g/ml/ha of each of plocher soil activator 1-2-3

PLOCHER treated slurry is an ideal foliar nutrient

It is true – the soil smells fresh and aromatic
We do not only talk about it we have been taking the initiative - for over 25 years.

**PLOCHER-Products support a Sustainable Agriculture**

A secure livelihood of sustainable and economic farming starts with upgrading of farm produced slurry and manure, because fertilizing really means to activate the soil!

It is an old but erroneous idea to fertilize plants. Reality is that micro-organisms in the soil have to convert the inorganic nutrients first before the plants are able to assimilate them.

Hence our main focus is on the soil. It is the farmer’s asset and the key to economical success and high quality produce.

**Improved composting**
- less emission = environmental protection

**Active soil life** (micro-organisms)
- soil and plant protection
- ground water protection

We clearly see the difference between the fields where PLOCHER treated slurry (aerobic slurry) has been used since 1994, as well as plocher soil activator and other PLOCHER plant products for the last 5 years.

**Tried and tested over 25 years, PLOCHER-technology helps agricultural enterprises to:**
- Save costs
- Secure returns
- Reduce labour
- Produce ecologically
- Protect the environment

We help you to be profitable again and enjoy life as the man on the land!

Yours sincerely

Roland Plocher

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The soil development in tests with PLOCHER products and without, (shown in photo page 1 and below) and in comparable piggeries and crop rotation of potatoes, speak for themselves.
Activating the Soil

Improved Composting ensures Field Hygiene

Field hygiene is closely connected with aerobic composting. Soils that have a poor structure are waterlogged, compacted and show anaerobic conditions (rotting environment), cannot be hygienic.

An active and healthy soil life can develop only in an aerobic environment and the humble worm plays an important role in this. It was shown in tests concerning worms and plant health, that worms, and especially their faeces, increases the number of micro-organisms and these in turn activate antibiotic substances in the soil that help plants recover from pests attacks.

An active soil life can only develop if conditions are right.

Therefore it is not necessary to quickly remove any harvest trash, rather establish a natural cycle of surface composting, addition of manure and catch crops in between. To optimize the conditions for this to happen, ROLAND PLOCHER® integral-technik supplies tried and tested products to activate the soil and promote composting.

All life is dependant on fertile soil, it is essential for our health and well-being. PLOCHER-Products support the natural cycles to establish a sustainable agriculture.
Soil Compactness and Slurry

**What can I achieve with Euro 4,30* per LU/year?**

Slurry should be spread and subsequently worked into the soil in rainy, overcast weather. Spreading slurry in sunny weather causes more emissions and the slurry can scorch and affect plants. It can also be a problem for worms which live in the upper region of the soil.

Slurry that is not properly composted (not aerobic) will destroy the worm population.

The worm population determines the soil structure:

- Worm holes are used by plants for their growth and they provide a living space for many organisms which stabilize the soil structure.
- These holes lead to better air and water distribution.
- Increase of aerobic bacteria promotes good composting, prevents acidity and is effective against rotting.

“We already have agricultural soils which are totally devoid of worms” (E. Hennig)

Soils with lots of worms are able to resist soil compacting and help to reduce the erosion problem.

**Unhealthy and dead soils lead to erosion:**

Lack of structure in the soil washes earth particles into the small cavities first, then into the larger ones and eventually the soil is silted up = **inner erosion**. As a result the rainwater cannot be stored in the soil and runs off = **outer erosion**.

With the help of plocher slurry the farmer is able to use his „farm produced“ compost as a valuable “home grown” fertilizer. Composted slurry is a basic requirement for active soil life and healthy plants. The PLOCHER treated slurry shows a higher content of available nitrogen, up to 0,5 kg/m³. PLOCHER treated slurry can be spread at the optimal time for plants and at the required amount, regardless of weather.

*Net costs: Small container 2 kg, per LU/year approx. € 4,92
Bulk container 10 kg, per LU/year approx. € 4,30*
The effect of plocher slurry on pig slurry

Excerpt for the EU Report:

„Profitability and Environmental Protection“

This 3 year 5b EU-project has been concluded in Nov. 1999. It was carried out, controlled and managed by the Soil and Horticultural Commission Meetjesland, Belgium.

The total bacterial count drops dramatically. This is a sensational effect on pathogenic, unhealthy bacteria in the slurry.

Reduction of pathogenic bacteria after the slurry was treated with plocher slurry:

- 100 % reduction of Salmonella
- 99,4 % reduction of E-Coli
- 86,3 % reduction of Enterococcus
- 72,0 % reduction of Clostridium Perfringens

This reduction of pathogenic bacteria has a positive effect on the life of the animals directly in the stable, and indirectly via the quality of the fodder they consume.

Unhealthy bacteria have no chance to contaminate the fodder.

Quotation from the EU-Report:

„Here Profitability and Environmental Protection go Hand in Hand!“
Application of plocher manure

The application of plocher manure increases the biological value of manure in comparison to manure that has been left rot.

For the most part the value of farm produced manure is an unknown figure. It really should be taken into account when calculating the expenses for livestock. Only then do we realize the value and usefulness of farm produced manure and recognize it as an asset, as the “gold of the farmer”, not as a by-product that needs to be disposed of.

Application of plocher manure provides a better efficiency of nutrients. The average NH3 losses of manure are 50 % in most cases. The cost of plocher manure is well covered by the increased utilisation of nutrients from manure.

The costs for plocher manure of € 0,67/m³ are automatically well covered by the increased utilisation of nutrients from manure.

Further savings are possible

- Increase in hygiene – better housing climate and less vet expenses.
- Promotion of beneficial soil organism – increase in plant vitality, humus, water storage and less water used.
- Better utilisation of nutrients – less fertilizer cost.

For a better environment:

Less emissions – less ground water pollution and CO₂ reduction

For a better relationship with your neighbours:

Much less odour

Organic Farm „Gut Steinhuder Meer“ manure is treated with plocher manure. Aerobic compost is the ideal fertilizer for organic high-quality powerful basic fodder.
Decay and Composting
The two antagonists (after E. Hennig)
Life cycles in slurry, compost and soil

Decay (anaerobic)

Without oxygen
Against life
Plungent, stinging odours
Caused by:
Anaerobic bacteria
pests, insects
Leads to:
Formation of gases such as methane, hydrogen sulphide and loss of nitrogen through ammonia out gassing
Results in:
Raw humus,
insect humus
Formation of:
Toxins, viruses, pests which provide a breeding ground for sickness and affect plants and animals
Ground water/Emission:
Pollutants are still in solution and pose a greater risk for ground water

Compost (aerobic)

With oxygen
Pro life
Very little or no odour
Caused by:
Aerobic bacteria
yeast, fungi, worms
Leads to:
Nitrogen is bound in bacteria and fungal proteins and provide a permanent source of nutrients
Results in:
Real humus that lasts,
worm humus
Formation of:
Trace-elements (e.g. zinc, copper), magnesium, enzymes and natural antibiotics. Viruses are destroyed and pests have no living space
Ground water/Emission:
No risk for ground water as nutrients are bonded

PLOCHER: Our responsibility for Nature
Literature: „The Secrets of Fertile Soils“ (E. Hennig)
Nutrients in the slurry are subject to strong variations. Apart from the age and weight of the animals, feeding and additional water inflow play a big role in the amount and composition of slurry. Hence the figures in the diagrams should be seen only as approximate values. An analysis of the slurry is therefore obligatory for each farm, so a technical and functional planning of spreading slurry can take place.

Nitrogen losses are in form of ammonia out gassing and can be up to 15% in stables, 15% in storage and up to 35% in spreading the untreated slurry. The proportion of ammonium to ammonia is dependant on temperature and pH value. More losses of ammonia occur in higher temperatures or higher pH. Application of plocher slurry lowers the pH from alkaline to neutral. This is a prerequisite for binding nitrogen in an organic form.

The treatment of slurry with the plocher slurry, converts ammonia (NH3) into ammonium (NH4) which is then readily available for plants.

Tests (Dr. Helmar Prestele, Department of Agriculture) have shown that there is 0.5 kg/m³ more nitrogen available in treated slurry. Losses (resulting from heavy downpours and also from emissions) can be further minimized if the plocher treated slurry is spread at the optimal time and the appropriate dosage, which then acts as a fungicide and the nutrients can remain in the root zone. (See field trials page 46)!

**Nitrogen:**
The proportion of plant available nitrogen of the total nitrogen in pig slurry is about 70%, in cattle slurry it is about 50%. Spreading the slurry at the right time guarantees the full utilisation of nitrogen. The effect of nitrogen in slurry equals the nitrogen content of mineral fertilizer. The time of fertilizing (never on frozen soils!) and the amount of slurry spread should equal the nutrient requirements of plants.

This is crucial for the successful interplay between soil – plant roots – humus development.

**Phosphor, potassium, magnesium, calcium, and trace elements:**
Their effect and usefulness can be put on the same level as mineral fertilizers. PLOCHER treated slurry protects soil and plants and helps to drastically reduce pathogenic bacteria.

**Conclusion:** PLOCHER treated slurry is a valuable product that increases the profitability and sustainability of farms. Improving instead of disposing!

**plocher slurry is offered in different carrier materials for easy application:**
- Calcium carbonate: our standard product.
- Molasses: this is mostly used on crusts; farmers prefer this product because it easily mixes with water.
Field Trials of the Agencia de Extencion Agraria, Spain

Distribution of Nutrients in Slurry Treated Soils

The analysis from 26 May 1999 in conjunction with the Agencia de Extencion Agraria in Spain illustrates the distribution of nutrients in those soils where anaerobic, rotting and foul smelling slurry had been used for several years.

Subsequently PLOCHER treated slurry (aerobic and odourless) was spread on those soils. This was done within a similar time frame and the same quantity of slurry was used as earlier on.

The ground was tested again at the exact same spot on 24 May 2000 (one year later).

The results clearly show the success of the trial, for the crop production and as well as for the water management. The profitability of farming enterprises also depends on a good water management and keeping the ground water, drinking water and lakes and rivers clean.
Why the Slurry binds the Ammonia and why it is Homogenous

The release of ammonia is one of the biggest environmental problems of agriculture.
Cattle cause half of all ammonia emissions. This is the reason that Germany committed to reducing ammonia emissions to less than 55,000 tons per year by 2010.

PLOCHER-Technology offers a solution to farmers: plocher slurry brings “life in slurry”!

Mixing plocher slurry into the slurry tank changes the environment from anaerobic into aerobic. Putrefaction bacteria cannot live in an oxygenated environment. Within a short time the oxygen information in PLOCHER treated slurry encourages the growth and reproduction of aerobic bacteria strains which aerate the biomass and activate proper composting.

This process releases carbon dioxide which binds with hydrogen to form carbonic acid. Carbonic acid lowers the pH from alkaline down to pH 7.

It is only at around pH 7 that the ammoniacal nitrogen is formed which is important for fertilizing.
The occurring micro algae change the colour of the slurry to dark green and the activity of bacteria alter the consistency of the slurry into a homogenous mass.
Existing crusts dissolve with time and odours are considerably reduced. Another positive aspect is the sanitation (see page 5 and 7).

Application rate:
First application: 1,5 kg/100 m³ slurry
Subsequent application: 5 g plocher slurry per 500 kg LU/week (equals ca. 8 Cent, net)

Bring value to your slurry ... instead of disposal!

<table>
<thead>
<tr>
<th>Content of nutrients in cattle manure in kg/m³:</th>
</tr>
</thead>
<tbody>
<tr>
<td>% TM</td>
</tr>
<tr>
<td>7,5</td>
</tr>
<tr>
<td>€-price/kg incl. VAT</td>
</tr>
</tbody>
</table>

Monetary Value of the three nutrients:

| 4,9 x € 0,90 = € 4,41 |
| 2,0 x € 1,01 = € 2,02 |
| 6,0 x € 0,69 = € 4,14 |

€ 10,57 per m³ cattle manure (without MgO/CaO(trace elements etc.)

Studies have shown results, that treated manure contains 0,5 kg/m³ more nitrogen:

0,5 x € 0,90 = € 0,45 per m³

Costs for plocher slurry =* € 0,30 pro m³

The costs of plocher slurry are covered already because of the higher nitrogen gain. (* = Bulk container incl. VAT)

Profit from the economical and ecological advantages of PLOCHER-products for a successful farm management!
Questions and Answers:

Slurry, Manure and Soil Treatments

plocher slurry - an interesting observation…
It is quite common that piglets in their friskiness not only play but also fight. If they are sprayed with a solution of a few grams of plocher slurry in about 10 litres of water, they immediately quieten down and coexist quite happily.

Why we recommend using 3 products for soil treatment…
plocher soil activator 1-2-3 has 3 different carrier materials (dolomite, molasses and magnesium sulphate). Each of those carrier materials reach root zones in different depths and therefore achieve an optimal result in combination.

Froth forms…
Occasionally the slurry starts to froth without an apparent reason; this can be annoying, especially when the slurry tank is nearly full. The foam occurs if the readily soluble carbohydrates ferment. This happens mainly if there are undigested corn particles in the maize silage.
plocher slurry supports the composting process and not the fermentation. This shows the advantage of plocher slurry in housing, for soil and plants; the product supports the microbiology which leads to correct decomposition.
It is important not to introduce any germ killing agents which could disturb the aerobic environment and hinder the composting process.
Furthermore PLOCHER-products like the plocherkat for water vitalisation and livestock supplements positively support this process and also nutrient assimilation and feed utilization in animals. This benefits the economical management of the farm.
5th of December:

**International Day of the Soil**

We should celebrate this day and refresh ones memory how important the soil is for us. Soil is the basis of our lives – it supports humans, animals and plants. A natural and sustainable cultivation is most important if we want soils that are able to fulfil their many roles as buffer, water and nutrient storage.

*Picture above: Symposium “Healthy Soil – Healthy Plants” in conjunction with the Academy of Horticulture; Roland Plocher explains his technology*

*Picture below: Mr. Bantle introduces the new edition of Raoul Francé’s “The last Chance for a Future without Poverty”. A book about the conscious and natural ways to look after our soils. Further information: Matthias Recht (2nd from right), Tel: +49 (0)7532 4333-15 email: m.recht@plocher.de*
**Goodbye dock & Co.**

Proper Slurry Management is crucial for Quality Stockfeed

Yellow as far as one can see! What looks like rape seed is actually a field full of buttercup. Buttercup has taken over on many pastures.

Those pastures are useless as stockfeed or silage.
- The poisonous buttercup (identified on the leaves) is a toxin in silage or as green fodder.

**Causes:**
- Compacted soils, too much fertilizer, over-exploitation, injured turf

**Consequences** for stock if eaten in larger quantities:
- diarrhoea and blood in urine
- milk is tinged yellow/red, bitter taste

This explains why a proper slurry management is necessary for a biologically high quality stockfeed. It also means to “feed the soil” appropriately.

The application of PLOCHER slurry and manure products in housing will already start the composting process there. Sustainable and profitable management of farms and environmental and ground water protection requires the improvement of farm produced slurry into a valuable fertilizer.

PLOCHER treated slurry is biocompatible with plants and soils for good pastures, rich in biodiversity and produces a firm turf. It has been noticed that animals favour pastures fertilized with PLOCHER treated slurry.

**Sorrel**

The most stubborn weed is sorrel. Over fertilizing, soil compactness and turf damage are the main reasons. Even two sorrel plants per m² can add up to 40 % of the plant mass.

Application of PLOCHER treated slurry retains the nutrients in the upper levels of the soil. As a result the sorrel does not get enough nutrients from the lower levels and weakens. The altered sap in the sorrel attracts pests and eventually recedes. Grasses and clover can grow unhindered and a strong, natural turf emerges – without further expense and extra labour.
The Kutschera Test
Altered root growth of plants fertilized with slurry.

Prof. Dr. Kutschera and her colleagues have developed a very informative test method. Essentially the altered growth of roots fertilized with slurry and the resulting damage to roots are investigated. And as seen from a holistic point of view root growth in plants is of main importance. Unfortunately today’s trend still seems to favour high yields and the importance of strong root growth is ignored. The test conducted by the Institute for Bioenergetics in Kinsau, according to rigorous guidelines of the so called Kutschera Testing Method, showed, that PLOCHER products dramatically stimulated the root growth of oats.

Picture below: Far left H₂O / control plant; left H₂O + plocher slurry. Right another slurry product; far right the same slurry product + plocher slurry

Picture right: A distinct difference can be seen on the roots: left H₂O / control plant; right H₂O + plocher slurry
Environmental Safety of Plocher™ products

Referring to observations and results obtained during the study we have conducted on the efficacy of some Plocher™ products and on a review of many years of various application of Plocher™ products technology in several countries, it has not been possible to detect any ecotoxicity associated with the use of Plocher™ products in the environment. Neither their basic chemical composition (notably CaCO₃, SiO₂ or stainless steel) nor their catalytic action mechanism on natural processes permits to fear a toxic risk for the environment.

Plocher™ products present themselves as a natural powder, liquid or solid form. Their contact with a given environment (water, slurry, manure, compost, soil, etc.) translates by a catalytic type activity that modifies chemical balances of the environment. For example, in the presence of organic matter, natural aerobic transformation processes are favoured, which leads to a faster mineralization and to a more homogenous aspect of the matter, which becomes in addition less odorous, if need be.

Trials conducted at the Sherbrooke University’s Environment and Sustainable Development Institute with Plocher™ products in different environments (slurry, manure, compost, bodies of water…) have shown positive results, notably on a qualitative point of view (increase of the mineralization kinetics, odour diminution, homogeneity, oxygen uptake…)

Olivier Thomas, director
Winter wheat: £ 44/ha saved

Warwickshire, Lee Sutton: “Where we used PLOCHER, the revenue was 1.5 t/ha higher - with less expenses: 30% less slurry/pesticides

Sommer wheat - more revenue and improved soil

In April 2008 farmer Al Brooks choose sommer wheat (var. Gladiator) as most promising opportunity to test PLOCHER-products. The wheat grew in anaerobe, heavy clay soil and showed stress symptoms.

Mid-May of 2008 plocher active-leaf und plocher plant vital was applied to half of the testing area (approx. 5 ha). A second application was fulfilled with the same products on June 6th 2008. After harvesting Al Brooks said: „Where we used PLOCHER, the revenue was 1.5 t/ha higher, which really was visible during threshing. In addition there was an improved root growth and an improved soil structure. PLOCHER works and it was definitely worth testing it. In 2009 I will test it with a high yield type of grain.“ Charlotte Swift took samples on July 9th 2008. The samples of the soil from the PLOCHER-area were significantly better – crumbier and contained more earth worms as the untreated soil samples. The untreated soil was almost unremovable from the roots of the wheat. The consistency of the soil equaled plasticine. The grain of the PLOCHER-version samples were more uniform and bigger in size.
Since 1980:

Successful Contribution to Animal Husbandry
A secure livelihood is based on sustainable, ecological improvement of farm produced slurry/manure. Properly processed slurry and manure is a valuable asset as fertilizer. To fertilize soil really means to revitalize and activate the soil; this provides a good basis for successful livestock farming. Productive and vital animals are the key to economical profit and high quality products!

PLOCHER-Products provide support and increase productiveness in: dairying, pig and poultry farming and many other sectors. Farmers are enthusiastic about the PLOCHER-Products.

PLOCHER-technology has been proven for over 25 years and helps farmers to:

- save costs, increase profits
- secure good income and offer quality products
- reduce labour
- ecological production
- protect the environment

We help you to be profitable again and enjoy life as a farmer.

Yours sincerely

We are your Partner
Observing nature’s cycles we see clearly that it is important to think and act holistically. We also have to recognize that mankind is not separate from nature and start acting accordingly.

Above diagram shows how important the position of farmers and associated industries is. Only co-operation of farmers and processing industries that is based on trust can guarantee success in sustainable and economical farming. The attitude of customers is changing. They consciously make choices and are interested in the origins of produce. Especially meat and meat derived products are under scrutiny and the differences in quality are easily recognizable. Customers will come back if the quality and taste is “right”.

Economically and ecologically:

KEEPING LIVESTOCK
Dairy, cattle fattening
Importance of Water quality
Pig fattening/ breeding
Poultry fattening/ breeding
Aquaculture
Potential financial benefits of slurry treatment with PLOCHER
by Michael Bernardin www.symbionature.com

Typical example:
Dairy farm of 60 cows and 60 heifers

- 3000 m³ of slurry is the average of what is produced in a year ./. $1800
- Increase of 10 to 20 % of the fertilizing value because of the fixation of the volatile elements by the aerobic activation (calculated with 10 %) $4000
- 15 % more energy net for lactation in PLOCHER treated hay

As non-treated slurry gives hay less nutritive value, the producer has to compensate:
- 1 kg of corn and protein supplements more by cow by day
  That equals 600 kg of feed for a year
- $300/t of feed per year = $180/cow/year => 60 cows x $180 $10,000
- add 60 heifers $4000

Supplementary benefits:
- Mixing time for reduced by 20 to 60 % $300
  Which equals 2 to 6 hrs. à $80 ($160 - $480)
- Less flies in buildings
  Fly treatment cost between approx. $600 - $800 per year $700
- Better hygiene and control of environmental pathogens in building
  PLOCHER is applied, i.e. faster healing of hooves $???
- Less mykotoxins in the crops because of the oxygen in the slurry
  An average treatment for antitoxins is:
  $0,25/cow/day => $91,25/year/cow x 60 heads $5475

Possible benefits: _____________________________ CAD $22675
___________________________ = €17481

The PLOCHER-concept is effective for you, too!
Optimizing an organic agricultural farm in Switzerland
Report 2007

The agricultural farm from Monika und Bernhard Hunziker has been managed according to the swiss BIO-norm for the last 30 years. 1993 was the first year the farm manager put the ROLAND PLOCHER® integral-technik into action for manure treatment. During the following 14 years all agricultural supplements from PLOCHER where applied, whereas the farm served also as a test farm to develop of new products. The 17 ha farm is home to 12-14 milkers, who supply fertilizer for fodder and vegetable production.

Since 2002 fertilizer is not bought in addition any longer - on the contrary - farm fertilizer is given to other farmers.

Fodder production und farm fertilizer consumption 1997-2007. The fodder production per area and year could be almost doubled from approx. 8'000 kg to approx. 15'000 kg dry substances per year. Thus the applied farm fertilizer amount decreased from 1.3 DGE to 0.7 DGE per ha.

The production of milk was rated the most efficient way from a benchmarking of the swiss university for agriculture* in this class of farm sites.

Increase of milk production 1997-2006. The amount of milk produced per cow increased over 10 years from well 6'000 kg per year to approx. 7'500 kg. The basic fodder performance carries a share of 94 %.


PLOCHER-importer
agricultural products:
Sales and Consultation:
Monika & Bernhard Hunziker
CH-5054 Kirchleerau
Tel + 41 62 726 26 08
www.huplo.de
A Holistic Concept:
Managing successfully and economically using PLOCHER-Products

Ofranic Dairy in Pluherlin/Frankreich
Philippe Blain in Pluherlin, France, milks 42 dairy cows from which he averages about 6,500 l of milk per year. His farm also incorporates 70 ha of agricultural land. He first introduced the PLOCHER-System in 2001 and since 2003 the farm has been converted to organic. He installed 3 plocherkat and uses plocher surface water and plocher groundwater to vitalize the water. He also uses the full PLOCHER-Programme in housing and fields: plocher livestock supplements, plocher slurry, plocher manure, plocher soil activator 1-2-3 and plocher plant products. Mr. Blain is now a happy man. His vet costs are reduced from Euro 73.00 per LU and year down to Euro 49.70, which includes the cost for the plocher supplements.

16 Years of Success – with the use of PLOCHER Agricultural Concepts
A meaningful conversation: Thomas Flessner (left), a farmer from Lübeck with M. Recht, Roland Plocher and Prof. Dr. Edgar Klose at the DLG Agricultural Show in 2004 in Rostock. His statement: “We save 20,000 Euro per year on our 220 ha farm including 120 dairy cows and followers.”

Farmers speak from Experience

E. Kraemer (left), 77716 Hofstetten, Germany: “15 years ago I introduced the complete PLOCHER-System on my farm. We have no more problems with slurry and save about 2000 Euro per year on fertilizer and pesticides because of the increased availability of nutrients and the fungicidal effect of the slurry. Using the plocherkat and plocher livestock supplement helped to stabilize the health of the animals and this kept vet expenses down. Also, spreading slurry mixed with plocher soil activator and PLOCHER-plant products on the pastures improved the turf, kept the sorrel to a minimum and increased plant diversity including herbs and red clover”.

G. Schneider (right), 79348 Freiamt, Germany: He introduced the complete PLOCHER-Programme 15 years ago. That also includes the harmonizer and the e-smog angle in the housings to remove any negative energy fields which could affect the wellbeing of the animals!

Spring water for your animals
…naturally since 1986 with the plocherkat
Farm of Detlef Hinck, Wedemark-Abbensen: Application of PLOCHER-Products – a Field Report

In summer of 2005 we took charge of a farm of 140 ha usable land, 40 ha of pastures and 100 ha of fields.

We run 230 to 250 head of cattle of which 100 are dairy cows and 100 are breeders (incl. calves) and 30 to 40 cattle for fattening. The farm is run by 2,7 workers per 100 ha. For the last 20 years the livestock has been housed all year round by the previous owners.

Therefore it was not a surprise that illness in the housing escalated shortly after we took over.

We have close to 30 years of experience, but did not know the existing circumstances. By housing the calves in igloos outside we were able to manage any problems like lung infections and scours of the calves quite quickly.

We avoided any major problems with the cattle by improving the airflow throughout the housing and allowing them to spend more time on pastures in spring 2006.

The dairy cows were not so lucky and suffered increasingly from mastitis, claw problems (Mortellaro, Panaritien) and reduced fertility.

We experienced great difficulties in keeping the cell count of the milk below 400000, and in summer of 2006 we could not sell any milk for about 10 days. Until then we tried to solve our problems by asking advice from various experts, with the result that our successes were only short lived.

On the 18.12.06 we had the water of our well (water supply for livestock and farm) analysed and the result was a nitrate contamination.

What now? Our water consumption is up to 15 m³ per day and buying water would have been costly. On previous occasions we had heard about the so called plocherkat, so we contacted a PLOCHER agent and asked for help. We also thought the other products and their application sounded good and decided we should try them.

At the beginning of 2007 we started to use following products on the farm:

- plocher livestock
- plocher vital-livestock
- plocher manure
- plocher slurry

After only a few days we observed improved fodder uptake and less ammonia emissions – better and cleaner air, more milk and the cell count dropped to 250 - 300000. The animals experienced less stress after calving and were ready for mating again within a few weeks.

Since then we have been able to pump the slurry again, with the help of the smallest tractor (from the collection into the holding tank) and we have also been able to spread it very evenly.

Mrs. Hinck: ...we have got the problems under control – thanks to PLOCHER-Products!
The manure now starts composting in the barn, thus reducing its volume. Even with a small supply of straw the animals stay clean. This means that the manure can now stay in the housing for up to 3 weeks and it is visually the same amount of manure we previously removed every 2 weeks, only the weight has increased by 30%. The removal is done by paid workers with a large manure spreader of 25 m³ volume, here again the manure was spread out very evenly.

After the cereal and maize harvest the volunteer cereal was noticeable after 3-4 days. Essentially the soil was a lot more active and has kept the moisture, in the dry period before summer, really well. Better than the year before.

At the end of May 2007 we also installed a plocherkat for our water supply according to the instructions of the PLOCHER company. Once a week we clean the pipes by reversing the flow of water and let them drain. The analysis of the water on 27th of July 07 showed no nitrates were found, and everything was within its parameters (results are enclosed).

It took a little while of implementing new methods and habits of application, we now spend about 1,5 hours a week extra.

The application needs to be consequent to lead to continuous success.

We are happy to answer any questions. It is also possible to reduce the amount of products after a certain time of use.

Last July and August we were not very regular with our application of PLOCHER-Products due to renovations, harvest and change of apprentices. This diminished the effect of the products, the ammonia emissions and the fly population increased again in the housing.

Detlef Hinck, Tel. 05072/770821
Example: Keeping Dairy Cows

**Proper Composting helps Sanitation Management in Housing and strengthens Immune Function in Animals**

*Germs can cause trouble...*

In nature calves are born in a fairly clean environment in comparison to stables where they are exposed to all kinds of bacteria. Most of the losses are due to scours and happen in the first 4 months.

**1. Housing Hygiene**

Application of plocher slurry or plocher manure produces a high oxygen level that encourages a healthy, aerobic environment in which harmful bacteria cannot thrive. Effective hygiene management depends on proper composting of slurry and manure. Plocher all-purpose cleaner, a food grade cleaner, is a versatile agent for cleaning housing before restocking, dairies, sheds etc. and for flushing pipes.

**Important factor:** There are no chemical agents in plocher treated slurry and manure. Chemical contamination of slurry may hinder the composting process.

**2. Feeding**

The circumstances during pregnancy and birth contribute to the development of a healthy calf. PLOCHER feed supplements strengthen resistance and thus establish a better basis for growth and productivity.

**3. Water**

Pregnancy and birth also require a good water supply to provide adequate milk which is essential for the calf. Therefore it is of vital importance to offer lukewarm water to the cow after birth and have water available for the calves after the second day.

The plocherkat supplies water of spring water quality and supports the well-being of the animals.

*Turn the tables on bacteria... give them a hard time!*

Get a grip on the rodent and insect problem! Farmers have observed that without a crust on the slurry the rodent’s living space is limited and the problem really solves itself.

It has also been noted that the fly population has been reduced dramatically, based on the fact that adding plocher slurry changes the environment in the slurry from anaerobic to aerobic. Flies are only encouraged by rotting odours, (anaerobic), to lay their eggs.

**Dairy Farming**

**Do your own calculation:**

- plocher livestock, 2 g/day/500 kg/LU ............
- plocher vital-livestock, 5 g/week/500 kg/LU ............
- plocher slurry, 5 g/week/500 kg/LU ............
- plocher manure, 5 g/week/500 kg/LU ............
- plocherkat (1,5m³/day) ............

**Cost approx.:** ............

Insert your own application rates
Quinta de Santa Clara, Portugal:

**Trial Report:**

**Fattening Steers**

The following PLOCHER-Products were used: plocher livestock (at 9041) and plocher vital-livestock supplement (at 9141) during a 5 months period between Dec. 2003 and May 2004.

The plocher livestock was added to the water on a daily basis (2 g per 500 kg/LU) and plocher vital-livestock was added to the water once per week at the same rate.

Feeder cattle, a cross between Mertolengo and Limousine

*The Graph shows the average daily increase in weight.*

Better daily average weight increase, less fodder intake and reduced fattening time. Each animal fetches Euro 63 more! (Compared to the average price in Portugal)

The animals reached the desired weight in less than a year, fetched a better price at the markets and we increased our productivity and profit. Those results would not possible or very difficult at least, without the help of the PLOCHER-System, especially for the breeds mentioned earlier.

After such positive results the farm Quinta de Santa Clara will extend the PLOCHER-System to the remainder of the agricultural production. Due to the fact that those products are permitted for organic growers by EU standards, makes it feasible to develop new market openings. *Patricia Guerreiro, Ing.Agr. Manager, www.quintasantaclara.com*

"Farmers profit from well composted manure"

- Plocher slurry and plocher manure encourage an effective composting process: the result is a high quality fertilizer, which does not harm the soil and the damage by snails is far less.
- Our calves we rear for breeding and fattening are kept outside all year round. We are convinced PLOCHER clients: fodder utilisation, health and meat quality are just right!

*H.R. und A. Felber-Kurth, CH-4539 Farnern*

We exhibit and look forward to your visit.
Gschweichhof - an Organic Farm for more than 14 Years

Details of the Farm:
Elevation: 800 above sea level
Usable agricultural land until 1996: 17.5 ha / until 2000: 27.5 ha / today: 40.82 ha
Milk quota: 240 000 kg
Livestock: 34 milkers, 26 young cattle
Crops: 9.6 ha, (winter wheat and spelt)
Employees: Manager and trainee (4 months)

Slurry Treatment:
- Crust of about 1 m blocks agitator in 1993
- Application of PLOCHER-slurry agent – as seen on TV – success after 3 weeks
- 1200 m³ storage for slurry
- Addition of 5 g per 500 kg/LU/week – 11.7 kg/year

Advantages of Slurry Treatment:
- Crust is only a few centimetres thick
- No need to invest in a new agitator
- Reduction of odour
- Aerobic composting of slurry, not rotting (anaerobic)
- Safe for plants
- No need for chemical fertilizers

Transition to Organic Farming:
- Since 1993 application of PLOCHER-Products for slurry, manure, livestock and crops
- Converted to organic farming in 1996, no more need for chemical fertilizer
- Gradual improvement of slurry
- Improved soil fertility
- Increasing quality of fodder
- Health of livestock improved
- Better slurry

Feeding:
- Winter: 95 % silage
- Summer: pasture
- 4 cuts instead of 5
- Good quality fodder (high in crude fibre and crude protein)
- Better health of animals
- Long term improvement

Crop and Fodder Cultivation:
- Basic principle: good soil as a result of PLOCHER soil products (encourages worms)
- PLOCHER plant products for better crops
- Permanently high yield of grains (spelt: 43–45 kg/hl, winter wheat: 82 kg/hl)
- Good germination of seeds
- Firm turf

Summary:
Positive outlook after 15 years application of PLOCHER-Products • Small investment but big effect • Working with nature instead against it The future looks rosy!

“The Ford-daughter Fortune VG89 with more than 50'000 litres in 5 lactations, truly emphasizes the goal of breeding for family Geisseler!”
Develop actual farm power

Water Quality is of crucial Importance

Practical use of the plocherkat
The plocherkat increases the biological value of water from which your livestock profits. The water is softer, tastes fresher and supports all functions in the body. This contributes to the increase of well-being and productivity of the animals. Farmers notice that after the installation of a plocherkat the animals consume more water. Drinking more water encourages better saliva production; this in turn increases the pH value and the amount of acetic acid produced. Acetic acid provides more energy and is an important building block for milk fat. This acid also plays a part in the production of female hormones and fertility. The plocherkat and the supplement plocher livestock, which encourages the formation of digestive juices, are extremely helpful to structure feed rations. Increased bile juices emulsify the fats better and the animal is able to assimilate more nutrients. Bile also activates intestinal motility and protects the intestinal content from putrefying.

In addition, the plocherkat stabilizes the hardness of water, which means it inhibits lime deposits in troughs and pipes and saves money in the long run.

It certainly is worthwhile to install a plocherkat as this example shows:
„Once off cost for a plocherkat: Euro 483,19, this works out as little as EUR 24,16 per cow. (Sufficient for about 20 cows, depending on productivity and water quality.)
Compare this to the loss of Euro 273 per cow and per year from udder infection caused by the inferior water quality in Lower Saxony. One can appreciate the once off cost of the plocherkat.“
(Agriculture and Forestry 44/2001, “Good Health is an Asset”)

Installation:
Simply fasten on water pipes past the water meter and pressure valve. No maintenance necessary and it works permanently!

For larger herds we recommend a plocher bio-catalyst which is made to predetermined parameters and your specifications. (please see page 6).

Water and its purpose in the animal
All organisms need water to function: a cow consists of 60-70 % water. Milk consists of 87 % water. Water is also an essential part of feed because the amount of fodder is, amongst other factors, dependant on the intake of water. A good uptake of water is therefore an important factor in the productivity of livestock.
The efficiency of
PLOCHER-Supplements in Piggeries
The Institute Labo Tech Rostock in Germany compared the effect of PLOCHER-Supplements and conventional agents on pigs and presented the following results:

Salmonella Control
The Chamber of Agriculture of Weser-Ems, who is responsible for Salmonella control, reports that in 1998 only 1 in 16 animals were infected. In 2004 the examiners assessed an infection in every sixth pig. The reason for the increase in infections has not been cleared. One possibility is that the pathogens are spread on the fields together with the slurry and thus return to the animals amongst the fodder. Rats, birds and cats are also possible carriers of the bacteria.
(Source: Newspaper Celle, 9th Feb. 2005)

Profitability of plocher pig special in Weaner Production
On the average about 1.2 ton are used per sow and year. 50 g of plocher pig special are mixed into a ton of fodder; 60 g are needed for 1.2 ton. Recalculate with your own parameters...

The effects of plocher slurry on pathogenic bacteria are confirmed by a 3 year EU Study:
No Salmonella bacteria have been detected in PLOCHER treated slurry!

Better Composting – Better Hygiene
... naturally with PLOCHER®
Large Scale Trial in Switzerland

Application of PLOCHER-Supplements in Fattening Pigs

The trial consisted of two groups of 15 animals each. A control group and a group which was fed with PLOCHER-Supplement. Both groups were fed identical rations.

To minimize any external influences, the two groups of animals were transferred into different housing. Correct dosage was ensured by adding the supplement via the hopper.

BENEFITS OF PLOCHER-Supplements:

Due to the improved feed assimilation and absorption, feed rations need to be re-calculated. **proteins can be reduced up to 1 %!**

---

**Percentage of premium meat**

- **without PLOCHER -> control**
- **with PLOCHER-Supplement**

---

**Feed assimilation**

- **without PLOCHER -> control**
- **with PLOCHER-Supplement**

---

**Quality increase**

- **without PLOCHER -> control**
- **with PLOCHER-Supplement**

---

Die ROLAND PLOCHER® integral-technik is active in current Agricultural Projects

More detailed information on [www.plocher.de](http://www.plocher.de)
Practical Tip:
The required amount of PLOCHER-Supplement is premixed with rapeseed oil and then added to the feed. This guarantees a good dispersion!

Helmut Bardess, 95349 Thurnau,
a PLOCHER client for 12 years.

Press Report:
No more Stench in Dinstorf!
Healthy pigs and slurry that does not smell? The farm Lindwedel in Dinstorf has both. Farmer Holger Lindwedel told his colleagues and his agents for agricultural products, that his pigs are lively and have a high rate of productivity.

Werner Domel, an agent of the PLOCHER company in southern Germany that markets slurry and fodder supplements, invited farmers to share their experiences. “Slurry turns into a valuable farm produced fertilizer – and there is a rather pleasant side-effect: fewer flies” Domel said.

And the secret? The application of the products activate and support natural processes in animal faeces. Slurry decomposes instead of rotting. This leaves the slurry more homogeneous and does not damage plants. VW

Do your own calculation:
Pig Fattening
plocher pig special, 40 g/year
or plocher pig fattening ................
plocher vital-livestock, 0,5 g/year ........
plocher slurry, 40 g/year ................
- or -
plocher manure, 40 g/year ..............
plocherkat (1,5m³/day) ..............

Running Costs approx. per year: ........

Test-Farm Relliehausen from the university Göttingen
In 2008 we started a trial run on the test-farm of the university Göttingen for live stock breading and keeping in Relliehausen to test the PLOCHER-supplements for manure treatment and hygiene (plocher pig slurry, plocher all-purpose cleaner) in two stock cycles.
Clearly it could be proven, that the flow ability and homogeneity of pig slurry improved very much. There was less swimming and sinking layers paired with a decrease of flies.
Because of the positive experiences in pig slurry treatment and of application of the plocher all-purpose cleaner we want to use these products in the future in large live stock farms.

Arne Oppermann, conductor of the test-farm

Further information:
Ingrid Rinkleff, Krebeck, PLOCHER-distributor
Tel: 05507 606, E-Mail: Rinkleff@t-online.de

Information and consulting on the Euro Tier
Roland Plocher and Ingrid Rinkleff during conversation
PLOCHER-Products for Butchers

Meat Quality: A Prerequisite for Success!

Our holistic agricultural concept is tried and tested for over 25 years and provides the farmer with first class meat quality.

Left a "conventional" pig – right a "PLOCHER" pig

Controversial Issue

Glutamate:
We have the Alternative!

There are two versions of Glutamate:

- a natural form that occurs in all plants
- a synthetic form (made from genetically altered micro-organisms)

Chemically tested it seems that both forms are the same, but the crucial difference is that the chemically manufactured Glutamate is stored in the cells.

There are tests and reports that point to the health risks.

The ROLAND PLOCHER® integral-technik makes it possible to transfer the energetic information of the natural product onto a medium. Our specific PLOCHER-Products offer a 100 % substitute for artificial flavour enhancers, Glutamate and other synthetic additives.

- plocher sea salt aroma 1-2-3-4
  25 kg
- plocher quality curing salt 1-2-3-4
  25 kg

Recommendation for use:
Sausage and meat processing:

Sausages: 22 g* per kg meat and fat
Dried meat (ham): 40 g* per kg meat

* Mixture:
40 % plocher sea salt aroma no. 4 or mix 1-2-3-4 to equal parts
60 % plocher quality curing salt no. 4 or mix 1-2-3-4 to equal parts

Further farm shops from PLOCHER-users for sausage and meat, cheese, noodles, eggs, vegetables, asparagus, strawberries, schnaps and wine can be found online here: www.plocher.de/german/hoflaeden.php

Further farm shops from PLOCHER-users for sausage and meat, cheese, noodles, eggs, vegetables, asparagus, strawberries, schnaps and wine can be found online here: www.plocher.de/german/hoflaeden.php
Comparison of Tests (Summary of the original English report from Jan. 2000)

PLOCHER-Supplements in fattening Poultry

Starting Point
More intensive poultry farming led to an improvement in meat and egg production. But because of the intense farming the implementation of antibiotics became necessary. Subsequently the use of antibiotics has been questioned by the EU and various consumer organisations and the tests presented here by the Belgian Ministry of Agriculture analyses the suitability of PLOCHER-Supplements as an alternative to the antibiotic Flavomycin.

Results
There was no significant difference in weight increase in poultry fed with PLOCHER-Supplements and poultry given the antibiotics. At the end of the fattening period the poultry fed with PLOCHER-Supplements were marginally better.

The feed conversion in the two groups shows that the PLOCHER fed poultry performed better compared to the control group. (See diagram next page)

Looking at the overall fattening period the feed utilisation in the PLOCHER-group improved from 1,743 to 1,736. Mortality rose slightly to 3,03 % of the PLOCHER-group compared to 1,82 % of the control group. But this is not statistically significant.

The level of production, which is calculated from the data of feed utilisation, weight gain and mortality rate, rises from 314,5 to 318,5 in the group fed with PLOCHER-Supplements. In the PLOCHER group the weight of the liver was 2,29 % in relation to body mass. The control group presented with 2,16 %. The livers in the control group also showed a tendency to paler and spotty livers, which could point to higher liver stress.

Conclusion
The PLOCHER group performed better in nearly all tests compared to the control group supplemented with Flavomycin. The weight at slaughter showed an increase of 2,1 %.

The supplementation with PLOCHER-Products in intensive poultry fattening shows at least the same, if not better productivity in comparison to supplementation with Flavomycin; although the dosage of the PLOCHER-Supplement is 100 times less than the antibiotic.

Thanks to BVBA HERBAVITA (www.herbavita.org) for their financial support that made this test possible.
Comparison of Tests (Summary of the original English report from Jan. 2000)

Tests of Frozen Chicken Meat

It was shown clearly that chicken fed with the applicable PLOCHER-Products had statistically less aerobic bacteria, less Enterobacteria and less Pseudomonas compared to chicken kept under conventional means - according to studies conducted by LAVETAN.

- 30,000 chicken were given PLOCHER-Supplement (60/ton feed)
- Bedding was treated with plocher poultry manure (40 g/m³ manure)
- Water was vitalised with the plocherkat

The following graph illustrates the comparison of aerobic bacteria, Enterobacteria and Pseudomonas in the frozen meat of 30,000 chicken kept conventionally and 30,000 chicken supplemented with 3 PLOCHER-Products.

Furthermore PLOCHER offers specifically formulated products which ensure the quality of the chicken meat during transport, slaughter and processing.

All PLOCHER-Products are manufactured in Germany to EG standards: “Organic Agriculture 2092/91 EWG” and are registered for organic agriculture.
Fokida/Greece: Yearly Production of 300,000 kg

Farming of Bream in Nets/Cages

This aquaculture enterprise grows 1,8 million Bream and Bass in nets and cages in the open sea, with a yearly production of 300,000 kg of fish. The total area required for this number of fish amounts to 5000 m².

plocher fish supplement saltwater was mixed with the feed at the supplier “Provimi”. 360,000 fish were fed for one year with the plocher supplement, from Aug. 2004 until Aug. 2005, the rest of the fish were fed as usual.

After that year the convertibility factor (FCR Factor) of the 360,000 fish was established and compared with the convertibility of the remaining fish as well as the average convertibility of fish in the last 14 years. The FCR Factor equals the ratio of feed to live weight. The smaller the FCR Factor the better the assimilation and growth rate. The results are shown in the following table:

<table>
<thead>
<tr>
<th>Ø FCR in the last 14 yrs.</th>
<th>FCR of fish with PLOCHER</th>
<th>FCR of fish without PL.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.20</td>
<td>2.02</td>
<td>2.22</td>
</tr>
</tbody>
</table>

Result: Fish fed with PLOCHER- Supplements clearly improved in taste, had less fat and looked better. Based on this successful experiment it was decided to supplement all the fish with PLOCHER- Supplements for saltwater fish.

www.ecofuture.gr

More Profit. Less Expenses

Cost-Effective Poultry Breeding in France

Poultry breeder Jo Guiavarch/ France introduced the PLOCHER-System in 2004/05:

4480 turkey hens (23.09.04 - 8.12.04)
4744 gobblers (23.09.04 - 10.01.05)

Result:

- Bedding stays dry and releases much less ammonia
- Economics:
  - Due to the PLOCHER-System the following profit was achieved:
  - € 18,696,-- minus € 14,400,-- = € 4,296,--.

Bedding stays dry and releases much less ammonia

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Quality improvement with plocherfish supplement in Farm Raised Carp (Tests conducted in the Czech Rep.)

The Test Facility
In the year 2000 tests were carried out in the Czech Republic to improve the quality of carp. Here the plocher fish supplement for fresh water fish was used.

Two groups of carp were fed pellets 10 weeks before processing. One group was fed pellets with plocher fish supplement added (70 g per ton).

Result:
Presented are chemical analyses as well as expert opinions from the laboratory and practical experiences. The graph below shows the report according to the laboratory analyses: the chemical analyses mainly determined the proteins as well as dry matter and ash. Field reports regarded the trials very positively.

Conclusion:
Based on those results the application of plocher fish supplement for fresh water fish is to be recommended for breeding carp.

Table: Laboratory assessment of boiled carp

<table>
<thead>
<tr>
<th></th>
<th>control</th>
<th>with plocher fish supplement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broth (extract) after boiling the carp</td>
<td>slightly cloudy, odour rather typical when warm, strong fish smell when cold</td>
<td>slight fish smell when warm reminds of chicken when cold</td>
</tr>
<tr>
<td>Muscle meat after boiling</td>
<td>breaking apart easily</td>
<td>consistency fragile, breaks apart under slight pressure</td>
</tr>
<tr>
<td>Taste</td>
<td>typical fishy taste, slightly oily</td>
<td>good tasting and no oily taste</td>
</tr>
</tbody>
</table>
PLOCHER-Products for the Benefit of soil, water, plants, animals – ecologically and economically sound farm management

PLOCHER-Products are made specially to support the specific characteristics and needs of humans, animals, and plants. The carrier materials also have been selected carefully according to their purpose. PLOCHER-Products are harmonizing and supporting – they act as catalysts. PLOCHER-Products are registered acc. to EG-Öko-BasisVO 834/2007 and are listed in FiBL CH.

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