

Carbon credit system for soils & the challenging biochar market

The ecoregion Kaindorf



- ★ **founded in 2007 (IPCC report)**
- ★ **6 small communities - one vision**
- ★ **to get CO2-neutral by 2020**
- ★ **7 different working groups - 100 volunteers**
- ★ **more than 300 projects have been implemented**
- ★ **the most important one is our humus project**

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**the first humus symposia in Kaindorf (Austria) in 2007
starts with 20 participants**

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- ★ **high amounts of compost (100 m³/ha)**
- ★ **reduced tillage**
- ★ **permanent green (also in winter)**
- ★ **reduce agrochemicals as much as possible**
- ★ **change crop rotation with 1/3 legumes**

we created a „method“

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green manure with:

- rye
- winter vetch
- sweet clover

we start in 2007 with 3 farmers on three hectares

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100m³ compost /ha

we start in 2007 with 3 farmers on three hectares

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produce maize



we start in 2007 with 3 farmers on three hectares

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produce maize and wheat



we start in 2007 with 3 farmers on three hectares

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- ★ **increasing humus content from 3% to 7%**
- ★ **no more soil runoff**
- ★ **simplified tillage**
- ★ **no more pesticides are necessary**
- ★ **no more chemical fertilizers are necessary**
- ★ **all soil parameters are optimal**

what happens after 5 years

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- ★ we try to find a solution for every farmer
- ★ calculate the costs for carbon increasing (30€/to)
- ★ develop a new carbon credit system

we created a carbon credit system

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- 1. make contracts with farmers**
- 2. taking soil samples very exactly**
- 3. the farmer starts with carbon increasing**
- 4. measure the carbon content again after 2-5 years**
- 5. calculate the additionally fixed carbon**
- 6. we pay 30€/to fixed CO₂ and create a certificate**
- 7. sell this certificate to companies which want to become CO₂-neutral for 45€/to**

we created a carbon credit system

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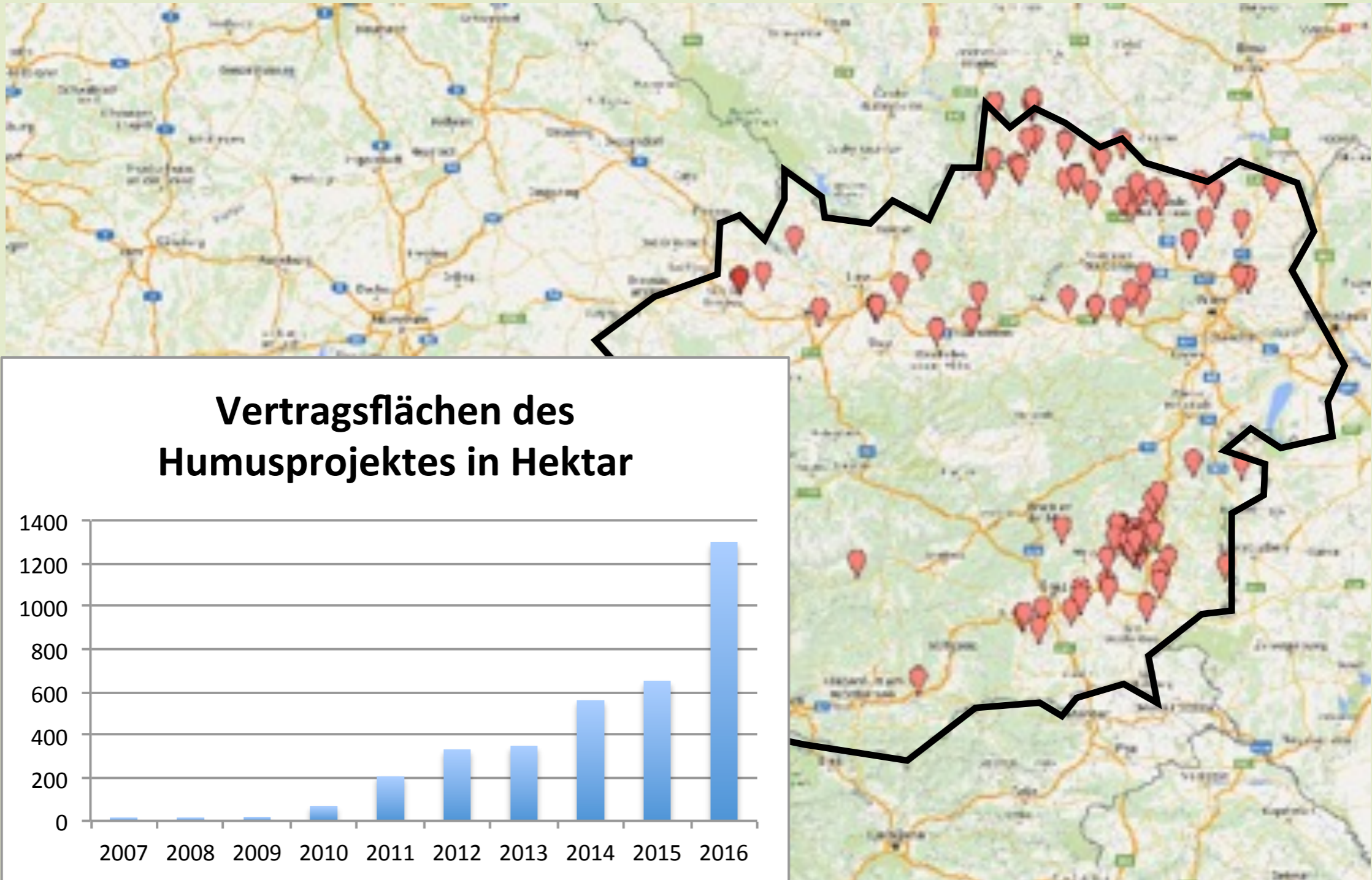
- 8. the farmer has to guaranty the stability of carbon for the next 5 years**
- 9. after this 5 years we take the third sample**
- 10. if the carbon content is decreased, the farmer has to pay back for the decreased part**
- 11. the whole system in online and traceable**

we created a carbon credit system

Modification of soil structure by increasing carbon



Trading with humus certificates based on CO2



Trading with humus certificates based on CO2



ÖkoregionKaindorf
Dienersdorf-Ebersdorf-Harti-Hofkirchen-Kaindorf-Tiefenbach

Stammdaten | Betriebsheft | Positivlisten | Kommunikation | Humuszertifikat | Verwaltung | Logout

▼ Käufer

🔍 Herbstho

» Suche

▼ Herbsthofer Johannes
8224 Kaindorf

▼ 2012

1 Stachel 1

2,52 ha
Stachel Josef
8224 Kaindorf

Humusaufbau: 1,0 %
Humusaufbau seit: 2010
CO2 Bindung: 110,81 t

Gekauftes CO2: 110,81 t

▼ 2010

2 König

1,00 ha
König Johann
8224 Kaindorf

Humusaufbau: 1,6 %
Humusaufbau seit: 2007
CO2 Bindung: 66,84 t

Gekauftes CO2: 66,84 t

► Landkarte

Map controls: Straße, Luftbild, Vogelpersp., Beschriftg.

Map label: 1 Stachel 1

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we created a carbon credit system

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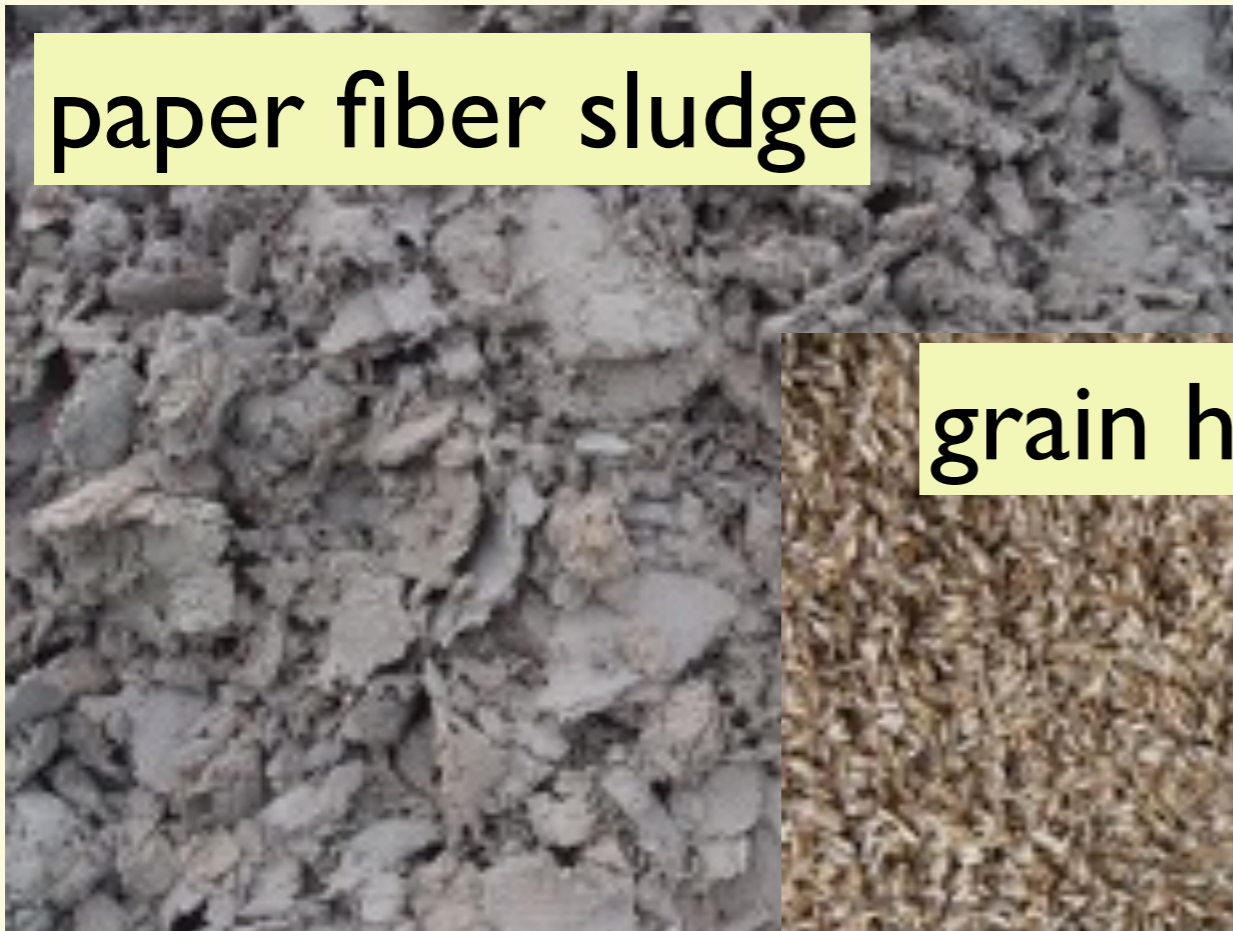


we created a carbon credit system

Our Company

- 10.000 tons of different composts
- 30.000 tons of different soils for garden designing, greening roofs and potting plants
- since 2008 a lot of experiments to develop a Terra Preta like soil
- since 2012 operating one of the first biochar plants in Europe

Feedstock



The new biochar-plant produce 1-1,5 tons biochar per day



In the dryingbox we use the excess energy of the pyrolysis-
process



The loading is large enough for the daily requirement of fuel



The charring is a pyreg reactor
In the background is the exhaust heat exchanger



BIOKOHLE

Produktionsanlage

