Subject: Re: Extraction of data from your 1994 paper
From: "Sasha D. Hafner" <saha@kbm.sdu.dk>
Date: 07/30/2015 01:14 PM
To: Wim Bussink <Wim.Bussink@nmi-agro.nl>

Hi Wim,

OK, good, that explains my confusion. If you have an electronic copy of your thesis can you send me a copy?

Best regards,
Sasha

On 07/30/2015 11:25 AM, Wim Bussink wrote:

> Hi,
>
> Hmm,
> That was a mistake in the paper. In my PhD thesis I corrected this error (as becomes clear now)
>
> Met vriendelijke groet,
> Wim Bussink
>
> Nutriënten Management Instituut NMI BV
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> 6709 PD Wageningen
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> mobiel (06) 2903 7096
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> http://www.nmi-agro.nl
> e-mail: wim.bussink@nmi-agro.nl
>
> Op overeenkomsten met NMI zijn onze algemene voorwaarden van toepassing
>
> _____
> Van: Sasha D. Hafner <saha@kbm.sdu.dk>
> Verzonden: donderdag 30 juli 2015 11:21
> Aan: Wim Bussink
> Onderwerp: Re: Extraction of data from your 1994 paper
>
> Hi Wim,
>
> Thank you for the quick response and for your help with the weather data.
>
> Maybe I have a different copy of your paper. See the attached
> version--in this version Tables 2 and 3 have only TAN application rate
> (column 6) and slurry application rate (column 7). Do I have a different
> version than you?
>
> I wish I had been able to get dates from Jan. I'll check with him and
> Bert again. Also I'll ask about additional surface application data and

> copy you.
>
> Best regards,
> Sasha
>
> On 07/30/2015 11:09 AM, Wim Bussink wrote:
> > Hi Sasha,
> > See below
> >
> > Kind regards
> >
> > Wim
> > -----Oorspronkelijk bericht-----
> > Van: Sasha D. Hafner [mailto:saha@kbm.sdu.dk]
> > Verzonden: donderdag 30 juli 2015 10:47
> > Aan: Wim Bussink
> > Onderwerp: Re: Extraction of data from your 1994 paper
> >
> > Hi Wim,
> >
> > Many thanks for your helpful answer.
> >
> > On the TAN concentration, I think either I am making a mistake or perhaps there is a mistake in the paper. A value of 1.4 kg/m3 (~1.4
> > g/kg) seems reasonable but I see much lower values in your data. For the first row in Table 2, for example, I get 0.27 kg/m3 (~0.27 g/kg) (2.7 kg/ha divided by 10 m3/ha).
> >
> > > content is 2.7 applied amount is 10m3. Total applied amount of TAN is than 27 kg
> >
> > Jan's older data (ALFAM1) show a range of
> > 1.45 to 6.4 g/kg.
> >
> > > 6.4 is very high voor TAN content of slurry (per haps pig slurry). By the way table 2 is all cattle slurry
> >
> > Am I making a mistake? Or should the column label "NH4-N kg ha-1" in Tables 2 and 3 actually read "NH4-N kg/m3"?
> >
> > > ?? In my paper there is no column NH4-N kg ha-1 only NH4-N kg/m3, like the 7th column
> >
> > That is good news about the weather data! Hourly temperature, rain, and wind speed data would be best. Let me know if this is too difficult to obtain. If it is better that I download it myself, that is OK, but I will ask you for some help in finding the closest locations.
> >
> > > I have the rough files and will rearrange it a bit. You will get it soon.
> >
> > I tried matching up your data for un-acidified trials with the data Jan has submitted, but cannot find any matches.
> >
> > > that is strange. We have to ask Jan if he has more data about surface spreading, because experiment 7 and higher were executed by him. The first line of an emission experiment is the reference (surface spreading of normal cattle slurry)
> >
> > Jan's data do not include dates
> >
> > > date would be nice, because a factor like daylenght etc may affect the emission result. Also it is nice to see if experiments are a bit balanced and more less equally distributed over the years.

, so I tried matching by dry matter and pH (with some room for rounding), but none of the observations match data in your Tables 2 or 3.

The table linking experiments to location is very helpful, thank you (I was going to ask you about that).

Best regards,
Sasha

On 07/28/2015 11:26 AM, Wim Bussink wrote:

Hello Sasha,

see below

Met vriendelijke groet,
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Van: Sasha D. Hafner<saha@kbm.sdu.dk>
Verzonden: donderdag 2 juli 2015 14:58
Aan: Wim Bussink
Onderwerp: Extraction of data from your 1994 paper

Dear Wim,

We have very little data on the effect of acidification in our AlFAM database, so we are trying to extract data as we can from your 1994 paper. I am sure I'll have some questions for you in the coming weeks as we work on this task. For now, I just have a few. First, are the TAN application rates in Tables 2 and 3 correct?

> Yes, They have all been analyzed by an official laboaratory. Off course there can be a value not correct, but what I know about Dutch slurries, these are normal values in those days.

Values of 1.4 are sometimes possible. The relative low values in experiment 8, 9, 10, 11 you have to ask Jan Huijsmans. What could have happened is that the slurry was mixed thoroughly before acidification (a batch) driving out some ammonia.

They seem low, and imply
low concentrations of TAN in slurry (for example for the first entry in Table 2 the TAN concentration would be 270 mg N/L. Second, do you

have weather data?

> Yes, I looked in the digital database of KNMI. I have rainfall data of nearby weatherstations and data like temp, radiation, wind etc..

The temperature data are available on an hourly and on a daily basis. What do you prefer?
I cannot find back the time we started the experiment exactly (mostly it is in the morning)

You have already a lot of data of Jan Huijsmans, also of surface spreading of normal cattle slurry. In the acidification experiments normal cattle slurry was always the reference. So perhaps you have already the weather data of the acidification trials? Simply bij looking which of the dates matches with the dates of Jan's weather datafile for surface spreading. Please let me know

I know the emission data are now missing, but wonder if maybe the weather data were stored elsewhere.

> we had our own weather station data, but in the tables presented we used official weather data from nearby stations. They are available on a daily and a hourly basis.

Last, are the temperature reported in Tables 2 and 3 the averages for the entire first and second day (I assume so but want to be sure).

> yes it is the 24 hr average, from a nearby weather station

For example for exp 1 and 3 I used data of the Bilt, a station somewhat further south. Now data from lelystad and marknesse (more closeby to Swifterbant are available. in principle sowhat more accurate)

experiment (linking to table 1)
1 S
2L
3S
4 Z
5 Z
6 W
7 W
8 Z
9 Z
10 Z
11 D
12 D
13 D

S= Swifterbant, L=Luttenberg, Z= Zegveld, D = Duiven en W is Wageningen

http://www.knmi.nl/klimatologie/daggegevens/download.html and than "kaart ligging stations" you get a map were the weather stations are located.
from these main 30 stations al kind off data are availbe. Regarding

> rainfall. Data from 350 stations are available
>
> So I can provide you with more detailed weather data?
>
> The a selection of the rainfall data I have attached.
>
> Best regards,
> Sasha
>
> --
>
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