***Supplementary Material***

1. **Supplementary Text**

**Text S1**. Backward Trajectories calculation and Potential Source Contribution Function analysis

In order to analyze the long-range transport and the origin of air mass, the 24-h backward trajectories were calculated at 0:00, 1:00, 2:00, 3:00, ……, 21:00, 22:00, 23:00 (UTC) at 500 m AGL. Meteorological data from the Global Data Assimilation System (GDAS) in 0.5° × 0.5° were used in backward trajectories calculation (ftp://arlftp.noaa.gov.pub/archives/gdas1/).

Potential source contribution function analysis (PSCF) was performed to explore the possible source region and transport distance of air mass in Peking University site. The PSCF value for the cell is defined as (Eq. S1):

|  |  |  |
| --- | --- | --- |
|  |  | (S1) |

An arbitrary weight function *Wij* was multiplied into the PSCF value to avoid the uncertainties (Polissar et al., 2001), the weight function used in this study is defined as follows (Eq. S2):

|  |  |  |
| --- | --- | --- |
|  |  | (S2) |

In Eq. (S2) a refers to the average number of endpoints expected per grid cell. In this study, PSCF analysis was calculated in a 0.5˚ × 0.5˚ grid, range from 32˚N to 58.7˚N and 87.6˚E to 126.4˚E. For weeks with more depleted δ15N-NH3 values, the total numbers of each trajectory were about 65296, a in Eq. (S2) was set to 16. For weeks with higher δ15N-NH3 values, the total numbers of each trajectory were about 130529, so a in Eq. (S2) was set to 32.

Both backward trajectories calculation and PSCF analysis were constructed using the MeteoInfo (v 3.0.1) (Wang, 2014).

**Text S2**. ISOERRO

The ISOERRO assumes that there is no between-population correlation of isotopic signatures. A first-order Taylor series approximation of the variance of ftraffic can be calculated using partial derivatives as follows:

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| --- | --- | --- |
|  |  | (S3) |

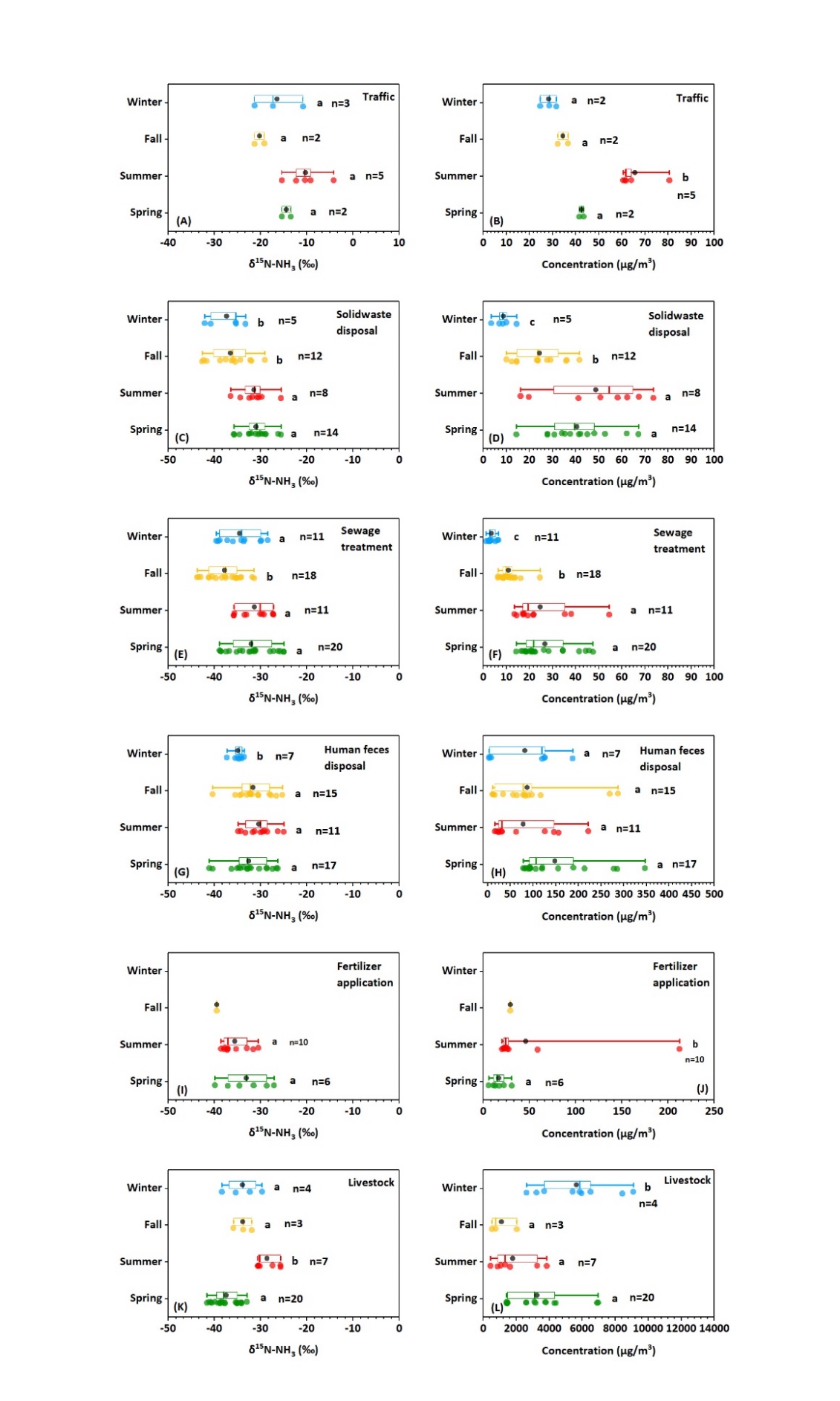
which reduces to:

|  |  |  |
| --- | --- | --- |
|  |  | (S4) |

where represent variances of the mean isotopic signatures for the ambient NH3, and traffic and non-traffic sources, respectively (i.e., the square of the SEs). An approximate variance for fnon-traffic=1−ftraffic can also be determined by switching the traffic and non-traffic subscripts in Eq. (S4).

1. **Supplementary Figures**

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| **Figure S1.** The ALPHA passive sampling system deployed at each site. |



**Figure S2.** Box-plots of δ15N values and concentration of NH3 sources in four seasons. The square and line within the box represent the mean and median values of δ15N-NH3 values and concentration, the left and right edges of the box represent the 25th and 75th percentiles of δ15N-NH3 values and concentration, the left and right bars represent the min and max values, different letters adjacent the bars indicate significant differences among seasons (*p < 0.05*)

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| **Figure S3.** Weighted PSCF values of NH3 concentrations at Peking University site. A refers to the weeks with δ15N-NH3 values lower than -33.7‰; b refers to the weeks with δ15N-NH3 values higher than -33.7‰. |

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| **Figure S4.** Comparison between online monitoring (IGAC) and offline monitoring (ALPHA). A shows the comparison between the results of weekly ALPHA samples and weekly average of NH3 concentration by IGAC; b shows the comparison of monthly average concentration of NH3 between IGAC and ALPHA; c shows the comparison of average concentration of NH3 in four seasons between IGAC and ALPHA. |
|  |
| **Figure S5.** Relationship of NH3 concentration between online (IGAC) and offline (ALPHA). |

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| **Figure S6.** Diurnal variation of NH3 concentration, temperature and relative humidity in four seasons in Peking University site. |

1. **Supplementary Tables**

**Table S1.** Source information, sampling time, concentration (μg/m3) and δ15N value (‰) of the NH3 source samples used in this study.

| **Source Type** | **Source Testing Site** | **Latitude(N)** | **Longitude(E)** | **Season** | **Sampling Time** | **N** | **δ15N** | **Conc.** | **Temp.** | **Notes** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **(‰)** | **(μg/m3)** | **(℃)** |
| Traffic | Badaling Tunnel | 40°21' | 116°01' | Spring | 2017/3/27 9:25-4/2 8:35 | 2 | -13.5 ± 1.0 | 41.6 ± 14.0 | 11.0 | a |
| Traffic | Badaling tunnel | 40°21' | 116°01' | Spring | 2017/4/2 8:35-4/9 7:05 | 3 | -15.4 ± 0.6 | 43.4 ± 0.5 | 15.0 | a |
| Traffic | Badaling tunnel | 40°21' | 116°01' | Summer | 2017/6/16 7:05-6/23 6:45 | 3 | -15.4 ± 3.3 | 61.3 ± 2.7 | 25.0 | a |
| Traffic | Badaling tunnel | 40°21' | 116°01' | Summer | 2017/6/23 6:45-6/16 6:30 | 3 | -9.2 ± 1.8 | 60.6 ± 1.2 | 28.0 | a |
| Traffic | Badaling tunnel | 40°21' | 116°01' | Summer | 2017/6/30 6:30-7/7 7:35 | 3 | -4.2 ± 2.4 | 80.6 ± 0.5 | 28.1 | a |
| Traffic | Badaling tunnel | 40°21' | 116°01' | Summer | 2017/7/24 7:35-7/31 7:20 | 3 | -10.4 ± 0.2 | 64.0 ± 6.6 | 25.4 | a |
| Traffic | Badaling tunnel | 40°21' | 116°01' | Summer | 2017/7/31 7:20-8/7 8:05 | 3 | -12.3 ± 1.0 | 61.7 ± 1.2 | 28.8 | a |
| Traffic | Badaling tunnel | 40°21' | 116°01' | Fall | 2017/10/17 8:35-10/24 9:25 | 3 | -19.2 ± 2.7 | 36.7 ± 2.3 | 12.6 | a |
| Traffic | Badaling tunnel | 40°21' | 116°01' | Fall | 2017/10/24 9:25-10/31 8:20 | 3 | -21.3 ± 0.4 | 32.2 ± 0.4 | 9.8 | a |
| Traffic | Badaling tunnel | 40°21' | 116°01' | Winter | 2018/1/5 7:30-1/12 8:45 | 3 | -18.4 ± 3.4 | 28.6 ± 1.0 | -3.7 | a |
| Traffic | Badaling tunnel | 40°21' | 116°01' | Winter | 2018/1/12 8:45-1/19 9:05 | 3 | -10.8 ± 0.9 | 31.6 ± 1.3 | -1.7 | a |
| Traffic | Badaling tunnel | 40°21' | 116°01' | Winter | 2018/1/19 9:05-1/26 9:15 | 3 | -17.3 ± 0.3 | 24.6 ± 0.8 | -6.4 | a |
| Solid waste disposal | Leachate treatment | 40°03' | 116°13' | Spring | 2017/4/19 15:00-4/27 15:15 | 3 | -26.2 ± 7.4 | 27.8 ± 2.2 | 15.0 | a |
| Solid waste disposal | Leachate treatment | 40°03' | 116°13' | Spring | 2017/4/27 15:15-5/4 14:50 | 3 | -31.1 ± 1.2 | 35.4 ± 3.4 | 19.8 | a |
| Solid waste disposal | Leachate treatment | 40°03' | 116°13' | Spring | 2017/5/4 14:50-5/11 13:45 | 3 | -35.8 ± 5.8 | 45.0 ± 0.5 | 20.4 | a |
| Solid waste disposal | Leachate treatment | 40°03' | 116°13' | Spring | 2017/5/17 9:00-5/24 9:25 | 3 | -28.9 ± 0.3 | 67.2 ± 0.8 | 24.1 | a |
| Solid waste disposal | Leachate treatment | 40°03' | 116°13' | Summer | 2017/7/24 8:20-7/31 8:05 | 2 | -34.4 ± 5.7 | 58.2 ± 34.4 | 25.4 | a |
| Solid waste disposal | Leachate treatment | 40°03' | 116°13' | Summer | 2017/7/31 8:05-8/7 8:55 | 3 | -25.6 ± 4.0 | 41.2 ± 1.6 | 28.8 | a |
| Solid waste disposal | Leachate treatment | 40°03' | 116°13' | Fall | 2017/10/17 9:50-10/24 10:00 | 3 | -36.3 ± 6.0 | 23.5 ± 0.3 | 12.6 | a |
| Solid waste disposal | Leachate treatment | 40°03' | 116°13' | Fall | 2017/10/24 10:00-10/31 10:15 | 3 | -38.8 ± 7.2 | 23.7 ± 0.3 | 9.8 | a |
| Solid waste disposal | Leachate treatment | 40°03' | 116°13' | Fall | 2017/10/31 10:15-11/7 9:00 | 3 | -34.4 ± 0.2 | 27.7 ± 1.1 | 8.1 | a |
| Solid waste disposal | Leachate treatment | 40°03' | 116°13' | Fall | 2017/11/7 9:00-11/14 9:30 | 3 | -42.3 ± 0.9 | 23.1 ± 1.1 | 5.5 | a |
| Solid waste disposal | Leachate treatment | 40°03' | 116°13' | Winter | 2018/1/5 8:05-1/12 9:30 | 3 | -40.8 ± 1.4 | 8.5 ± 0.5 | -3.7 | a |
| Solid waste disposal | Landfill area | 40°03' | 116°13' | Spring | 2017/4/19 9:35-4/27 8:50 | 3 | -34.6 ± 3.7 | 14.3 ± 1.0 | 15.0 | a |
| Solid waste disposal | Landfill area | 40°03' | 116°13' | Spring | 2017/4/27 8:50-5/4 9:10 | 3 | -29.1 ± 3.0 | 37.7 ± 3.6 | 19.8 | a |
| Solid waste disposal | Landfill area | 40°03' | 116°13' | Spring | 2017/5/4 9:10-5/11 9:25 | 3 | -35.7 ± 0.9 | 27.8 ± 0.4 | 20.4 | a |
| Solid waste disposal | Landfill area | 40°03' | 116°13' | Spring | 2017/5/17 9:05-5/24 9:30 | 3 | -30.5 ± 1.0 | 41.4 ± 0.6 | 24.1 | a |
| Solid waste disposal | Landfill area | 40°03' | 116°13' | Spring | 2017/5/24 9:30-5/31 9:00 | 3 | -25.6 ± 2.2 | 30.8 ± 0.7 | 23.5 | a |
| Solid waste disposal | Landfill area | 40°03' | 116°13' | Summer | 2017/7/24 8:30-7/31 8:10 | 3 | -36.5 ± 0.5 | 16.2 ± 0.1 | 25.4 | a |
| Solid waste disposal | Landfill area | 40°03' | 116°13' | Summer | 2017/7/31 8:10-8/7 9:00 | 3 | -31.8 ± 5.2 | 19.7 ± 0.3 | 28.8 | a |
| Solid waste disposal | Landfill area | 40°03' | 116°13' | Fall | 2017/10/17 9:55-10/24 10:05 | 3 | -35.5 ± 13.1 | 14.4 ± 0.2 | 12.6 | a |
| Solid waste disposal | Landfill area | 40°03' | 116°13' | Fall | 2017/10/24 10:05-10/31 10:20 | 3 | -41.7 ± 5.4 | 14.4 ± 0.2 | 9.8 | a |
| Solid waste disposal | Landfill area | 40°03' | 116°13' | Fall | 2017/10/31 10:20-11/7 9:05 | 3 | -37.6 ± 0.5 | 10.0 ± 0.2 | 8.1 | a |
| Solid waste disposal | Landfill area | 40°03' | 116°13' | Fall | 2017/11/7 9:05-11/14 9:35 | 3 | -42.7 ± 3.1 | 12.3 ± 0.4 | 5.5 | a |
| Solid waste disposal | Landfill area | 40°03' | 116°13' | Winter | 2018/1/5 8:10-1/12 9:40 | 3 | -33.3 ± 4.9 | 14.4 ± 0.2 | -3.7 | a |
| Solid waste disposal | Landfill area | 40°03' | 116°13' | Winter | 2018/1/12 9:40-1/19 9:55 | 3 | -35.4 ± 7.4 | 10.0 ± 0.2 | -1.7 | a |
| Solid waste disposal | Landfill area | 40°03' | 116°13' | Winter | 2018/1/19 9:55-1/26 10:10 | 3 | -35.3 ± 2.4 | 7.0 ± 0.4 | -6.4 | a |
| Solid waste disposal | Landfill area | 40°03' | 116°13' | Winter | 2018/1/26 10:10-2/2 9:45 | 3 | -42.1 ± 3.1 | 3.4 ± 0.2 | -4.9 | a |
| Solid waste disposal | Solid waste transfer station | 44°03' | 116°28' | Spring | 2018/4/29 15:30-5/7 10:45 | 3 | -30.1 ± 1.1 | 34.0 ± 0.7 | 18.9 | b |
| Solid waste disposal | Solid waste transfer station | 44°03' | 116°28' | Spring | 2018/5/7 10:45-5/14 7:45 | 3 | -29.7 ± 1.9 | 52.7 ± 0.9 | 20.6 | b |
| Solid waste disposal | Solid waste transfer station | 44°03' | 116°28' | Spring | 2018/5/14 7:45-5/21 8:00 | 3 | -32.4 ± 0.5 | 62.1 ± 1.1 | 22.3 | b |
| Solid waste disposal | Solid waste transfer station | 44°03' | 116°28' | Spring | 2018/5/21 8:00-5/28 8:00 | 3 | -32.6 ± 0.2 | 42.1 ± 1.3 | 22.1 | b |
| Solid waste disposal | Solid waste transfer station | 44°03' | 116°28' | Spring | 2018/5/28 8:00-6/4 9:00 | 3 | -32.0 ± 0.1 | 48.1 ± 0.5 | 24.5 | b |
| Solid waste disposal | Solid waste transfer station | 44°03' | 116°28' | Summer | 2018/7/23 11:20-7/30 7:55 | 3 | -32.4 ± 0.6 | 73.6 ± 2.8 | 29.4 | b |
| Solid waste disposal | Solid waste transfer station | 44°03' | 116°28' | Summer | 2018/7/30 7:55-8/6 8:30 | 3 | -30.4 ± 0.3 | 50.7 ± 1.3 | 30.9 | b |
| Solid waste disposal | Solid waste transfer station | 44°03' | 116°28' | Summer | 2018/8/6 8:30-8/13 8:05 | 3 | -29.8 ± 0.4 | 67.4 ± 1.0 | 27.1 | b |
| Solid waste disposal | Solid waste transfer station | 44°03' | 116°28' | Summer | 2018/8/13 8:05-8/20 8:25 | 3 | -30.8 ± 0.6 | 62.3 ± 3.1 | 26.8 | b |
| Solid waste disposal | Solid waste transfer station | 44°03' | 116°28' | Fall | 2018/9/24 10:55-10/1 9:40 | 3 | -32.0 ±0.1 | 35.9 ± 1.9 | 16.4 | b |
| Solid waste disposal | Solid waste transfer station | 44°03' | 116°28' | Fall | 2018/10/1 9:40-10/8 10:50 | 3 | -32.2 ± 0.7 | 36.2 ± 1.1 | 16.3 | b |
| Solid waste disposal | Solid waste transfer station | 44°03' | 116°28' | Fall | 2018/10/8 10:50-10/15 9:55 | 3 | -29.1 ± 0.2 | 29.1 ± 1.0 | 11.6 | b |
| Solid waste disposal | Solid waste transfer station | 44°03' | 116°28' | Fall | 2018/10/15 9:55-10/22 10:55 | 3 | -35.9 ± 0.9 | 41.6 ± 27.3 | 11.1 | b |
| Sewage treatment | Secondary sedimentation tank | 40°5' | 116°15' | Spring | 2017/5/12 9:20-5/17 9:35 | 3 | -26.2 ± 3.2 | 16.5 ± 0.5 | 21.2 | a |
| Sewage treatment | Secondary sedimentation tank | 40°5' | 116°15' | Spring | 2017/5/24 10:00-5/31 9:30 | 2 | -33.9 ± 2.0 | 44.3 ± 24.8 | 23.5 | a |
| Sewage treatment | Secondary sedimentation tank | 40°5' | 116°15' | Spring | 2017/5/31 9:30-6/7 10:30 | 3 | -25.8 ± 0.7 | 21.27 ± 0.7 | 21.5 | a |
| Sewage treatment | Secondary sedimentation tank | 40°5' | 116°15' | Spring | 2018/4/23 10:30-5/2 11:10 | 3 | -38.6 ± 0.9 | 18.4 ± 1.4 | 17.9 | b |
| Sewage treatment | Secondary sedimentation tank | 40°5' | 116°15' | Spring | 2018/5/2 11:10-5/7 9:35 | 3 | -32.2 ± 4.1 | 14.2 ± 0.8 | 18.7 | b |
| Sewage treatment | Secondary sedimentation tank | 40°5' | 116°15' | Spring | 2018/5/7 9:35-5/14 9:10 | 3 | -36.8 ± 2.7 | 20.0 ± 0.3 | 20.6 | b |
| Sewage treatment | Secondary sedimentation tank | 40°5' | 116°15' | Spring | 2018/5/14 9:10-5/21 9:45 | 3 | -32.5 ± 3.8 | 22.4 ± 0.6 | 22.3 | b |
| Sewage treatment | Secondary sedimentation tank | 40°5' | 116°15' | Spring | 2018/5/21 9:45-5/28 9:30 | 3 | -31.3 ± 2.2 | 18.3 ± 1.0 | 22.1 | b |
| Sewage treatment | Secondary sedimentation tank | 40°5' | 116°15' | Summer | 2018/7/23 9:05-7/30 9:00 | 3 | -27.3 ± 7.0 | 17.7 ± 0.3 | 29.4 | b |
| Sewage treatment | Secondary sedimentation tank | 40°5' | 116°15' | Summer | 2018/7/30 9:00-8/6 11:35 | 3 | -29.3 ± 3.2 | 21.8 ± 0.4 | 30.9 | b |
| Sewage treatment | Secondary sedimentation tank | 40°5' | 116°15' | Summer | 2018/8/6 11:35-8/13 9:35 | 3 | -33.1 ± 2.4 | 17.3 ± 0.6 | 27.1 | b |
| Sewage treatment | Secondary sedimentation tank | 40°5' | 116°15' | Summer | 2018/8/13 9:35-8/20 9:50 | 3 | -29.7 ± 1.4 | 13.4 ± 0.7 | 26.8 | b |
| Sewage treatment | Secondary sedimentation tank | 40°5' | 116°15' | Fall | 2017/10/17 10:25-10/24 10:30 | 3 | -34.2 ± 0.5 | 8.2 ± 0.6 | 12.6 | a |
| Sewage treatment | Secondary sedimentation tank | 40°5' | 116°15' | Fall | 2017/10/31 10:55-11/7 9:40 | 3 | -31.8 ± 3.9 | 10.4 ± 0.5 | 8.1 | a |
| Sewage treatment | Secondary sedimentation tank | 40°5' | 116°15' | Fall | 2017/11/7 9:40-11/14 10:00 | 3 | -36.2 ± 6.8 | 7.4 ± 0.6 | 5.5 | a |
| Sewage treatment | Secondary sedimentation tank | 40°5' | 116°15' | Fall | 2018/9/24 11:30-10/1 10:25 | 3 | -37.6 ± 1.3 | 8.5 ± 0.5 | 16.4 | b |
| Sewage treatment | Secondary sedimentation tank | 40°5' | 116°15' | Fall | 2018/10/1 10:25-10/8 11:20 | 3 | -35.2 ±1.7 | 6.4 ± 1.1 | 16.3 | b |
| Sewage treatment | Secondary sedimentation tank | 40°5' | 116°15' | Fall | 2018/10/8 11:20-10/15 10:40 | 3 | -37.7 ± 0.9 | 6.4 ± 0.6 | 11.6 | b |
| Sewage treatment | Secondary sedimentation tank | 40°5' | 116°15' | Fall | 2018/10/15 10:40-10/22 11:40 | 3 | -41.2 ± 0.7 | 8.9 ± 0.2 | 11.1 | b |
| Sewage treatment | Secondary sedimentation tank | 40°5' | 116°15' | Winter | 2018/1/12 10:05-1/19 10:05 | 3 | -33.7 ± 0.1 | 5.3 ± 0.2 | -1.7 | a |
| Sewage treatment | Secondary sedimentation tank | 40°5' | 116°15' | Winter | 2018/1/19 10:05-1/26 10:25 | 3 | -39.2 ± 0.8 | 2.8 ± 0.4 | -6.4 | a |
| Sewage treatment | Secondary sedimentation tank | 40°5' | 116°15' | Winter | 2018/1/26 10:25-2/2 10:00 | 3 | -30.0 ± 3.8 | 1.2 ± 0.0 | -4.9 | a |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Spring | 2017/5/12 9:25-5/17 9:35 | 3 | -25.0 ± 6.6 | 18.6 ± 0.6 | 21.2 | a |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Spring | 2017/5/17 9:35-5/24 10:00 | 3 | -31.1 ± 0.3 | 34.4 ± 0.5 | 24.1 | a |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Spring | 2017/5/24 10:00-5/31 9:30 | 2 | -27.2 ± 1.3 | 28.3 ± 0.1 | 23.5 | a |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Spring | 2018/4/23 10:30-5/2 11:10 | 3 | -34.5 ± 1.9 | 45.9 ± 4.1 | 17.9 | b |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Spring | 2018/5/2 11:10-5/7 9:35 | 3 | -38.7 ± 3.5 | 17.2 ± 0.8 | 18.7 | b |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Spring | 2018/5/7 9:35-5/14 9:10 | 3 | -38.9 ± 1.5 | 20.8 ± 1.0 | 20.6 | b |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Spring | 2018/5/14 9:10-5/21 9:50 | 3 | -37.5 ± 0.1 | 22.1 ± 0.6 | 22.3 | b |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Spring | 2018/5/21 9:50-5/28 9:30 | 3 | -35.2 ± 2.0 | 20.9 ± 1.0 | 22.1 | b |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Summer | 2017/7/24 8:55-7/31 8:35 | 3 | -27.3 ± 1.4 | 35.4 ± 0.4 | 25.4 | a |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Summer | 2017/7/31 8:35-8/7 9:25 | 3 | -30.1 ± 0.7 | 38.1 ± 0.3 | 28.8 | a |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Summer | 2018/7/23 9:05-7/30 9:00 | 3 | -35.8 ± 0.7 | 19.3 ± 0.9 | 29.4 | b |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Summer | 2018/7/30 9:00-8/6 11:40 | 3 | -33.5 ± 2.5 | 21.6 ± 0.8 | 30.9 | b |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Summer | 2018/8/6 11:40-8/13 9:40 | 3 | -35.7 ± 3.2 | 17.2 ± 0.1 | 27.1 | b |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Summer | 2018/8/13 9:40-8/20 9:55 | 3 | -35.8 ± 0.2 | 14.4 ± 0.5 | 26.8 | b |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Fall | 2017/10/17 10:30-10/24 10:35 | 3 | -43.5 ± 5.9 | 11.0 ± 0.3 | 12.6 | a |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Fall | 2017/10/24 10:35-10/31 11:00 | 3 | -43.8 ± 0.3 | 10.7 ± 0.4 | 9.8 | a |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Fall | 2017/10/31 11:00-11/7 9:45 | 3 | -39.7 ± 1.9 | 13.6 ± 0.5 | 8.1 | a |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Fall | 2018/9/24 11:30-10/1 10:30 | 3 | -34.4 ± 8.5 | 11.7 ± 0.7 | 16.4 | b |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Fall | 2018/10/1 10:30-10/8 11:20 | 3 | -35.2 ± 0.4 | 8.6 ± 0.3 | 16.3 | b |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Fall | 2018/10/8 11:20-10/15 10:40 | 3 | -40.5 ± 0.9 | 9.4 ± 0.1 | 11.6 | b |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Fall | 2018/10/15 10:40-10/22 11:40 | 3 | -41.2 ± 0.7 | 13.6 ± 0.1 | 11.1 | b |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Winter | 2018/1/5 8:35-1/12 10:05 | 3 | -29.9 ± 12.8 | 2.6 ± 0.2 | -3.7 | b |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Winter | 2018/1/12 10:05-1/19 10:05 | 3 | -38.9 ± 3.2 | 6.2 ± 0.1 | -1.7 | b |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Winter | 2018/1/19 10:05-1/26 10:25 | 3 | -28.5 ± 0.4 | 2.9 ± 0.1 | -6.4 | b |
| Sewage treatment | Oxidation ditch | 40°5' | 116°15' | Winter | 2018/1/26 10:25-2/2 10:00 | 3 | -39.6 ± 1.1 | 2.1 ± 0.2 | -4.9 | b |
| Sewage treatment | Fine grid room | 40°5' | 116°15' | Spring | 2017/5/12 9:30-5/17 9:35 | 3 | -31.3 ± 0.9 | 26.3 ± 0.3 | 21.2 | a |
| Sewage treatment | Fine grid room | 40°5' | 116°15' | Spring | 2017/5/17 9:35-5/24 10:00 | 3 | -31.7 ± 4.7 | 34.4 ± 0.5 | 24.1 | a |
| Sewage treatment | Fine grid room | 40°5' | 116°15' | Spring | 2017/5/24 10:00-5/31 9:30 | 2 | -25.0 ± 0.8 | 47.5 ± 0.9 | 23.5 | a |
| Sewage treatment | Fine grid room | 40°5' | 116°15' | Spring | 2017/5/31 9:30-6/7 10:30 | 3 | -28.0 ± 1.0 | 41.5 ± 0.8 | 17.9 | a |
| Sewage treatment | Fine grid room | 40°5' | 116°15' | Summer | 2017/7/31 8:40-8/7 9:30 | 3 | -27.2 ± 0.5 | 54.5 ± 2.2 | 28.8 | a |
| Sewage treatment | Fine grid room | 40°5' | 116°15' | Fall | 2017/10/17 10:30-10/24 10:35 | 3 | -38.4 ± 1.3 | 24.5 ± 0.6 | 12.6 | a |
| Sewage treatment | Fine grid room | 40°5' | 116°15' | Fall | 2017/10/24 10:35-10/31 11:00 | 3 | -35.6 ± 1.7 | 12.4 ± 0.4 | 9.8 | a |
| Sewage treatment | Fine grid room | 40°5' | 116°15' | Fall | 2017/10/31 11:00-11/7 9:45 | 3 | -31.4 ± 10.5 | 16.2 ± 0.1 | 8.1 | a |
| Sewage treatment | Fine grid room | 40°5' | 116°15' | Fall | 2017/11/7 9:45-11/14 10:05 | 3 | -43.0 ± 1.8 | 9.3 ± 0.4 | 5.5 | a |
| Sewage treatment | Fine grid room | 40°5' | 116°15' | Winter | 2018/1/5 8:35-1/12 10:05 | 3 | -33.5 ± 1.9 | 6.6 ± 0.6 | -3.7 | a |
| Sewage treatment | Fine grid room | 40°5' | 116°15' | Winter | 2018/1/12 10:05-1/19 10:05 | 3 | -37.2 ± 3.9 | 2.5 ± 0.4 | -1.7 | a |
| Sewage treatment | Fine grid room | 40°5' | 116°15' | Winter | 2018/1/19 10:05-1/26 10:25 | 3 | -34.2 ± 6.2 | 3.6 ± 0.4 | -6.4 | a |
| Sewage treatment | Fine grid room | 40°5' | 116°15' | Winter | 2018/1/26 10:25-2/2 10:00 | 3 | -36.0 ± 10.3 | 2.6 ± 0.1 | -4.9 | a |
| Human feces disposal | Fecal waste water treatment | 44°3' | 116°10' | Spring | 2017/5/10 10:15-5/17 9:20 | 3 | -26.6 ± 0.1 | 83.6 ± 1.9 | 21.3 | a |
| Human feces disposal | Fecal waste water treatment | 44°3' | 116°10' | Spring | 2017/5/17 9:20-5/24 9:45 | 3 | -32.1 ± 5.0 | 94.6 ± 0.2 | 24.1 | a |
| Human feces disposal | Fecal waste water treatment | 44°3' | 116°10' | Spring | 2017/5/24 9:45-5/31 9:15 | 2 | -26.3 ± 17.0 | 81.9 ± 5.1 | 21.2 | a |
| Human feces disposal | Fecal waste water treatment | 44°3' | 116°10' | Spring | 2017/5/31 9:15-6/7 10:15 | 3 | -32.9 ± 2.4 | 155.5 ± 6.3 | 24.1 | a |
| Human feces disposal | Fecal waste water treatment | 44°3' | 116°10' | Spring | 2018/4/23 9:30-4/30 9:50 | 3 | -40.4 ± 0.9 | 278.3 ± 15.0 | 18.0 | b |
| Human feces disposal | Fecal waste water treatment | 44°3' | 116°10' | Spring | 2018/4/30 9:50-5/7 8:40 | 3 | -41.1 ± 0.2 | 347.1 ± 1.9 | 18.6 | b |
| Human feces disposal | Fecal waste water treatment | 44°3' | 116°10' | Spring | 2018/5/7 8:40-5/14 8:30 | 3 | -36.3 ± 0.7 | 285.6 ± 2.5 | 20.6 | b |
| Human feces disposal | Fecal waste water treatment | 44°3' | 116°10' | Spring | 2018/5/14 8:30-5/21 9:00 | 3 | -28.7 ± 1.1 | 213.5 ± 6.3 | 22.3 | b |
| Human feces disposal | Fecal waste water treatment | 44°3' | 116°10' | Spring | 2018/5/21 9:00-5/28 8:50 | 3 | -27.4 ± 0.9 | 105.8 ± 1.8 | 22.1 | b |
| Human feces disposal | Fecal waste water treatment | 44°3' | 116°10' | Summer | 2017/7/24 8:45-7/31 8:25 | 3 | -26.3 ± 0.1 | 19.5 ± 2.4 | 25.4 | b |
| Human feces disposal | Fecal waste water treatment | 44°3' | 116°10' | Summer | 2018/7/23 9:40-7/30 9:40 | 3 | -30.0 ± 1.9 | 24.1 ± 0.8 | 29.4 | b |
| Human feces disposal | Fecal waste water treatment | 44°3' | 116°10' | Summer | 2018/7/30 9:40-8/6 10:55 | 3 | -29.6 ± 0.5 | 31.4 ± 1.2 | 30.9 | b |
| Human feces disposal | Fecal waste water treatment | 44°3' | 116°10' | Summer | 2018/8/6 10:55-8/13 9:00 | 3 | -29.2 ± 0.1 | 30.0 ± 0.8 | 27.1 | b |
| Human feces disposal | Fecal waste water treatment | 44°3' | 116°10' | Summer | 2018/8/13 9:00-8/20 9:20 | 3 | -28.6 ± 0.1 | 24.6 ± 0.2 | 26.8 | b |
| Human feces disposal | Fecal waste water treatment | 44°3' | 116°10' | Fall | 2017/10/17 10:10-10/24 10:15 | 3 | -32.2 ± 0.1 | 269.0 ± 5.0 | 12.6 | a |
| Human feces disposal | Fecal waste water treatment | 44°3' | 116°10' | Fall | 2017/10/24 10:15-10/31 10:35 | 3 | -26.6 ± 0.5 | 83.3 ± 0.2 | 9.8 | a |
| Human feces disposal | Fecal waste water treatment | 44°3' | 116°10' | Fall | 2017/11/7 9:20-11/14 9:45 | 3 | -27.8 ± 1.7 | 116.7 ± 2.45 | 5.5 | a |
| Human feces disposal | Fecal waste water treatment | 44°3' | 116°10' | Fall | 2018/9/24 12:20-10/1 11:10 | 3 | -34.1 ± 0.2 | 12.1 ± 0.4 | 16.4 | b |
| Human feces disposal | Fecal waste water treatment | 44°3' | 116°10' | Fall | 2018/10/1 11:10-10/8 11:50 | 3 | -28.1 ± 0.1 | 10.5 ± 0.5 | 16.3 | b |
| Human feces disposal | Fecal waste water treatment | 44°3' | 116°10' | Fall | 2018/10/8 11:50-10/15 11:35 | 3 | -31.9 ± 0.6 | 10.4 ± 0.7 | 11.6 | b |
| Human feces disposal | Fecal waste water treatment | 44°3' | 116°10' | Fall | 2018/10/15 11:35-10/22 12:15 | 3 | -35.5 ± 0.1 | 15.0 ± 0.5 | 11.1 | b |
| Human feces disposal | Fecal waste water treatment | 44°3' | 116°10' | Winter | 2018/1/5 8:10-1/12 9:40 | 3 | -33.6 ± 1.0 | 3.3 ± 0.9 | -3.7 | a |
| Human feces disposal | Fecal waste water treatment | 44°3' | 116°10' | Winter | 2018/1/12 9:40-1/19 10:00 | 3 | -37.3 ± 3.7 | 7.5 ± 0.6 | -1.7 | a |
| Human feces disposal | Fecal waste water treatment | 44°3' | 116°10' | Winter | 2018/1/19 10:00-1/26 10:15 | 3 | -35.5 ± 0.6 | 3.6 ± 0.3 | -6.4 | a |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Spring | 2017/5/10 10:10-5/17 9:15 | 3 | -34.7 ± 0.8 | 189.1 ± 0.9 | 21.3 | a |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Spring | 2017/5/17 9:15-5/24 9:40 | 3 | -34.4 ± 1.8 | 78.2 ± 2.4 | 24.1 | a |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Spring | 2017/5/31 9:10-6/7 10:10 | 2 | -28.7 ± 2.7 | 92.1 ± 1.9 | 24.1 | a |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Spring | 2018/5/2 12:15-5/7 8:40 | 3 | -35.1 ± 0.1 | 92.8 ± 3.6 | 18.7 | b |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Spring | 2018/5/7 8:40-5/14 8:30 | 3 | -32.4 ± 0.5 | 120.3 ± 1.9 | 20.6 | b |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Spring | 2018/5/14 8:30-5/21 9:00 | 2 | -30.3 ± 0.1 | 119.7 ± 0.3 | 22.3 | b |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Spring | 2018/5/21 9:00-5/28 8:50 | 3 | -32.9 ± 0.0 | 90.8 ± 4.6 | 22.1 | b |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Spring | 2018/5/28 8:50-6/4 10:05 | 3 | -33.7 ± 0.3 | 91.8 ± 3.4 | 24.5 | b |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Summer | 2017/7/24 8:40-7/31 8:20 | 3 | -25.0 ± 1.7 | 62.6 ± 1.3 | 25.4 | a |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Summer | 2017/7/31 8:20-8/7 9:10 | 3 | -34.9 ± 1.0 | 15.8 ± 0.4 | 28.8 | a |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Summer | 2018/7/23 9:40-7/30 9:40 | 3 | -31.3 ± 0.5 | 125.8 ± 8.9 | 29.4 | b |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Summer | 2018/7/30 9:40-8/6 10:50 | 3 | -34.3 ±0.1 | 221.7 ±4.1 | 30.9 | b |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Summer | 2018/8/6 10:50-8/13 8:55 | 3 | -33.3 ± 0.1 | 156.4 ± 4.3 | 27.1 | b |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Summer | 2018/8/13 8:55-8/20 9:20 | 3 | -31.7 ± 0.1 | 146.1 ± 3.5 | 26.8 | b |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Fall | 2017/10/17 10:15-10/24 10:20 | 3 | -25.3 ± 0.1 | 78.3 ± 1.3 | 12.6 | a |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Fall | 2017/10/24 10:20-10/31 10:40 | 3 | -32.3 ± 0.1 | 287.2 ± 4.5 | 9.8 | a |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Fall | 2017/10/31 10:40-11/7 9:25 | 3 | -30.6 ± 2.7 | 96.9 ± 1.9 | 8.1 | a |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Fall | 2017/11/7 9:25-11/14 9:50 | 3 | -40.4 ± 0.3 | 33.9 ± 0.8 | 5.5 | a |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Fall | 2018/9/24 12:20-10/1 11:05 | 3 | -32.2 ± 0.5 | 80.6 ± 0.7 | 16.4 | b |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Fall | 2018/10/1 11:05-10/8 11:45 | 3 | -34.5 ± 0.2 | 89.3 ± 2.7 | 16.3 | b |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Fall | 2018/10/8 11:45-10/15 11:30 | 3 | -33.0 ± 0.2 | 55.8 ± 0.8 | 11.6 | b |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Fall | 2018/10/15 11:30-10/22 12:15 | 3 | -30.5 ± 0.5 | 64.1 ± 0.5 | 11.1 | b |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Winter | 2018/1/5 8:10-1/12 9:40 | 3 | -35.0 ± 1.4 | 125.1 ± 8.2 | -3.7 | a |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Winter | 2018/1/12 9:40-1/19 10:00 | 3 | -34.7 ± 1.0 | 119.9 ± 9.7 | -1.7 | a |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Winter | 2018/1/19 10:00-1/26 10:15 | 3 | -34.3 ± 1.1 | 126.0 ± 10.8 | -6.4 | a |
| Human feces disposal | Fecal residue | 44°3' | 116°10' | Winter | 2018/1/26 10:15-2/2 9:40 | 3 | -34.1 ± 9.8 | 187.5 ± 4.7 | -4.9 | a |
| Fertilizer application | Urea fertilizer (Wheat) | 40°08' | 116°12' | Spring | 2017/4/28 7:35-5/12 7:40 | 3 | -27.1 ± 0.3 | 11.2 ± 0.6 | 20.4 | a |
| Fertilizer application | Urea fertilizer (Wheat) | 40°08' | 116°12' | Spring | 2017/5/19 7:00-5/26 7:20 | 3 | -39.9 ± 2.5 | 22.1 ± 0.7 | 23.5 | a |
| Fertilizer application | Urea fertilizer (Wheat) | 40°08' | 116°12' | Spring | 2017/5/26 7:20-5/31 7:15 | 3 | -28.7 ± 0.5 | 30.9 ± 0.9 | 23.5 | a |
| Fertilizer application | Urea fertilizer (Wheat) | 40°08' | 116°12' | Spring | 2018/4/6 12:00-4/11 13:00 | 3 | -34.6 ± 1.6 | 12.8 ± 2.8 | 11.8 | b |
| Fertilizer application | Urea fertilizer (Wheat) | 40°08' | 116°12' | Spring | 2018/4/11 13:00-4/20 13:30 | 3 | -37.1 ± 1.3 | 17.2 ± 0.9 | 16.3 | b |
| Fertilizer application | Urea fertilizer (Wheat) | 40°08' | 116°12' | Spring | 2018/4/20 13:30-5/2 9:30 | 3 | -31.5 ± 1.5 | 5.8 ± 0.2 | 17.7 | b |
| Fertilizer application | Urea fertilizer (Corn) | 40°08' | 116°12' | Summer | 2017/5/31 13:30-6/10 12:50 | 2 | -37.9 ± 5.2 | 27.3 ± 14.9 | 22.4 | a |
| Fertilizer application | Urea fertilizer (Corn) | 40°08' | 116°12' | Summer | 2017/6/10 12:50-6/16 14:05 | 3 | -37.1 ± 1.6 | 22.9 ± 0.9 | 24.5 | a |
| Fertilizer application | Urea fertilizer (Corn) | 40°08' | 116°12' | Summer | 2017/6/29 15:00-7/8 14:45 | 3 | -31.6 ± 0.9 | 20.1 ± 0.3 | 26.7 | a |
| Fertilizer application | Urea fertilizer (Corn) | 40°08' | 116°12' | Summer | 2017/7/15 14:00-7/25 14:10 | 3 | -30.5 ± 6.5 | 25.3 ± 3.1 | 27.4 | a |
| Fertilizer application | Manure (Corn) | 40°08' | 116°12' | Summer | 2018/6/11 7:30-6/15 7:50 | 3 | -38.6 ± 10.1 | 26.1 ± 5.1 | 18.2 | b |
| Fertilizer application | Manure (Corn) | 40°08' | 116°12' | Summer | 2018/6/15 7:50-6/18 7:50 | 3 | -33.0 ± 0.1 | 21.7 ± 1.7 | 21.9 | b |
| Fertilizer application | Manure (Corn) | 40°08' | 116°12' | Summer | 2018/6/30 8:45-7/5 8:45 | 2 | -37.1 ± 11.1 | 22.3 ± 7.9 | 24.6 | b |
| Fertilizer application | Manure (Corn) | 40°08' | 116°12' | Summer | 2018/7/5 8:45-7/8 6:10 | 3 | -37.9 ± 7.7 | 23.2 ± 4.4 | 24.5 | b |
| Fertilizer application | Urea fertilizer (Corn) | 40°08' | 116°12' | Summer | 2018/7/14 15:35-7/16 13:50 | 3 | -35.3 ± 0.5 | 212.3 ± 4.0 | 28.3 | b |
| Fertilizer application | Urea fertilizer (Corn) | 40°08' | 116°12' | Summer | 2018/7/18 12:40-7/20 13:15 | 3 | -37.2 ± 0.5 | 58.8 ± 3.0 | 28.7 | b |
| Fertilizer application | Urea fertilizer (Wheat) | 40°08' | 116°12' | Fall | 2018/9/25 13:00-9/29 16:00 | 3 | -39.5 ± 0.8 | 29.3 ± 1.6 | - | b |
| Livestock | Fattening house | 41°0' | 116°35' | Spring | 2017/3/9 8:00-3/10 8:00 | 1 | -38.3 | 2614.3 | - | a |
| Livestock | Fattening house | 41°0' | 116°35' | Spring | 2017/3/9 8:00-3/10 8:00 | 1 | -40.8 | 3787 | - | a |
| Livestock | Fattening house | 41°0' | 116°35' | Spring | 2017/3/9 8:00-3/12 8:00 | 1 | -41.6 | 6905.7 | - | a |
| Livestock | Fattening house | 41°0' | 116°35' | Spring | 2017/3/28 11:00-3/31 9:20 | 2 | -40.6 ± 0.1 | 3169.5 ± 859.2 | - | a |
| Livestock | Fattening house | 41°0' | 116°35' | Spring | 2017/3/29 9:00-3/30 8:00 | 2 | -39.2 ± 0.6 | 4401.1 | - | a |
| Livestock | Fattening house | 41°0' | 116°35' | Spring | 2018/4/13 8:00-4/14 8:25 | 2 | -34.4 | 1463.7 ± 2.8 | 14.0 | b |
| Livestock | Fattening house | 41°0' | 116°35' | Spring | 2018/4/14 8:25-4/15 8:30 | 2 | -35.1 ± 0.1 | 1453.5 ± 4.2 | 13.3 | b |
| Livestock | Fattening house | 41°0' | 116°35' | Spring | 2018/4/15 8:30-4/16 8:40 | 2 | -35.1 ± 0.1 | 1451.9 ± 15.8 | 15.5 | b |
| Livestock | Fattening house | 41°0' | 116°35' | Spring | 2018/4/16 8:40-4/17 8:45 | 2 | -34.2 ± 0.1 | 1417.3 ± 32.9 | 17.7 | b |
| Livestock | Fattening house | 41°0' | 116°35' | Spring | 2018/4/17 8:45-4/18 8:35 | 2 | -33.0 ± 1.2 | 1412.6 ± 30.6 | 18.7 | b |
| Livestock | Fattening house | 41°0' | 116°35' | Summer | 2018/6/26 5:05-6/26 17:50 | 2 | -27.4 ± 0.6 | 1632.5 ± 4.1 | 28.4 | b |
| Livestock | Fattening house | 41°0' | 116°35' | Summer | 2018/6/27 5:00-6/27 19:55 | 2 | -30.6 | 1330.8 ± 18.8 | 27.0 | b |
| Livestock | Fattening house | 41°0' | 116°35' | Summer | 2018/6/27 19:55-6/28 5:05 | 2 | -30.2 ± 0.4 | 3270.2 ± 57.6 | 25.6 | b |
| Livestock | Fattening house | 41°0' | 116°35' | Summer | 2018/6/28 5:05-6/28 20:05 | 4 | -30.5 ± 2.1 | 859.1 ± 157.0 | 27.6 | b |
| Livestock | Fattening house | 41°0' | 116°35' | Summer | 2018/6/28 20:05-6/29 5:05 | 2 | -30.5 ± 2.1 | 3839.5 ± 116.3 | 24.5 | b |
| Livestock | Fattening house | 41°0' | 116°35' | Fall | 2018/10/1 10:10-10/2 9:50 | 3 | -33.8 ± 0.2 | 2031.5 ± 743.3 | 20.1 | b |
| Livestock | Fattening house | 41°0' | 116°35' | Fall | 2018/10/2 9:50-10/3 9:50 | 3 | -35.9 ± 1.9 | 516.4 ± 235.0 | 20.6 | b |
| Livestock | Fattening house | 41°0' | 116°35' | Fall | 2018/10/3-10/4 9:45 | 3 | -31.9 ± 0.4 | 751.7 ± 104.0 | 20.5 | b |
| Livestock | Fattening house | 41°0' | 116°35' | Winter | 2018/1/13 7:00-1/13 18:00 | 3 | -35.4 ± 1.1 | 9097.2 ± 127.8 | - | a |
| Livestock | Fattening house | 41°0' | 116°35' | Winter | 2018/1/14 7:00-1/14 18:00 | 3 | -38.4 ± 1.1 | 8430.0 ± 116.1 | - | a |
| Livestock | Nursery house | 41°0' | 116°35' | Spring | 2017/3/9 8:00-3/10 8:00 | 1 | -38.8 | 2590.6 | - | a |
| Livestock | Nursery house | 41°0' | 116°35' | Spring | 2017/3/9 8:00-3/11 8:00 | 1 | -41.1 | 3764.5 | - | a |
| Livestock | Nursery house | 41°0' | 116°35' | Spring | 2017/3/9 8:00-3/12 8:00 | 1 | -37.8 | 6951.6 | - | a |
| Livestock | Nursery house | 41°0' | 116°35' | Spring | 2017/3/28 11:00-3/30 8:00 | 2 | -39.9 ± 1.3 | 3099.3 ± 853.6 | - | a |
| Livestock | Nursery house | 41°0' | 116°35' | Spring | 2017/3/29 9:00-3/30 18:00 | 2 | -35.2 ± 4.2 | 4309.6 ± 449.9 | - | a |
| Livestock | Nursery house | 41°0' | 116°35' | Summer | 2017/7/24 7:15-7/24 19:00 | 3 | -25.7 ± 0.3 | 1057.2 ± 20.1 | - | a |
| Livestock | Nursery house | 41°0' | 116°35' | Summer | 2017/7/25 7:15-7/25 19:05 | 3 | -25.7 ± 0.8 | 441.5 ± 9.2 | - | a |
| Livestock | Sow house | 41°0' | 116°35' | Spring | 2017/3/18 10:00-3/19 15:25 | 1 | -37.8 | 2620.9 | - | a |
| Livestock | Sow house | 41°0' | 116°35' | Spring | 2017/3/18 10:00-3/20 15:25 | 1 | -38.5 | 3689 | - | a |
| Livestock | Sow house | 41°0' | 116°35' | Spring | 2017/3/18 10:00-3/21 15:25 | 1 | -35.4 | 5946.7 | - | a |
| Livestock | Sow house | 41°0' | 116°35' | Spring | 2017/3/28 11:00-3/31 8:23 | 2 | -38.8 | 3226.0 ± 945.7 | - | a |
| Livestock | Sow house | 41°0' | 116°35' | Spring | 2017/3/29 9:00-3/30 8:20 | 1 | -34.1 | 5858.2 | - | a |
| Livestock | Sow house | 41°0' | 116°35' | Winter | 2018/1/13 7:00-1/13 18:00 | 3 | -29.7 ± 2.3 | 5417.2 ± 333.8 | 22.0 | a |
| Livestock | Sow house | 41°0' | 116°35' | Winter | 2018/1/14 7:00-1/14 18:00 | 3 | -32.3 ± 0.6 | 6511.6 ± 71.2 | 22.0 | a |

a represent the samples that hydroxylamine (NH2OH) was used as reductant in isotope analysis of δ15N signatures;

b represents the samples sodium azide (NaN3) was used as reductant in δ15N analysis.

1. **References**

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