**Supplementary Material**

Table S1δ13C and in δ15N values of all carabid species represented by a unique individual in the dataset. Carabid species codes are as presented in Table 1. W=Wheat; OSR=Oilseed rape.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| Carabid species | Crop type | δ13C | δ15N |
|  |  |  |  |
|  |  |  |  |
| AGsexpu | W | -27.039 | 9.508 |
| CHnigri | W | -27.056 | 4.599 |
| PTanthra | W | -23.085 | 8.595 |
| SYfovea | W | -25.869 | 7.505 |
| AMcommu | OSR | -27.419 | 5.821 |
| CIcindel | OSR | -25.714 | 8.193 |
| NOpalu | OSR | -28.977 | 11.614 |

Table S2Results of GLM analyses including only the most abundant carabid species common between the two crop types. The effect of the carabid species, the crop type and their interaction on δ13C and in δ15N variation were tested.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  | Variable |  | df | Resid. Dev | P |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  | δ13C |  |  |  |  |
|  | Species |  | 11 | 257.57 | <0.001 |
|  | Crop |  | 1 | 103.16 | <0.001 |
|  | Species × Crop |  | 11 | 115.57 | <0.01 |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  | δ13N |  |  |  |  |
|  | Species |  | 39 | 512.02 | <0.001 |
|  | Crop |  | 1 | 36.72 | <0.001 |
|  | Species × Crop |  | 21 | 46.21 | <0.001 |

Table S3 Summary of the two carabid groups evidenced following GLM-based contrast analyses. Species are grouped according to whether their δ13C isotopic signature differed (group 2, red) or not (group 1, green) from the interaction crop\*field. Bold lines delineate the two major arbitrary groups of response. In orange are represented all marginally significant cases. Numbers represent p-values of t-tests with significance thresholds as follows: ‘\*\*\*’ <0.001 ‘\*\*’ <0.01 ‘\*’ <0.05 ‘.’ <0.1.



Fig. S1. Distribution of the total abundance of carabid beetles across the 8 sampled dates between April and May 2012. At each date, two fields (1 wheat and 1 oilseed rape) were sampled by placing about 45 pitfall traps per field and per date. All fields were situated in the LTER area « Armorique », Brittany, France.

Fig. S2. Distribution of the total carabid species richness across the 8 sampled dates between April and May 2012. At each date, 2 fields (1 wheat and 1 oilseed rape) were sampled by placing about 45 pitfall traps per field and per date. All fields were situated in the LTER area « Armorique », Brittany, France.