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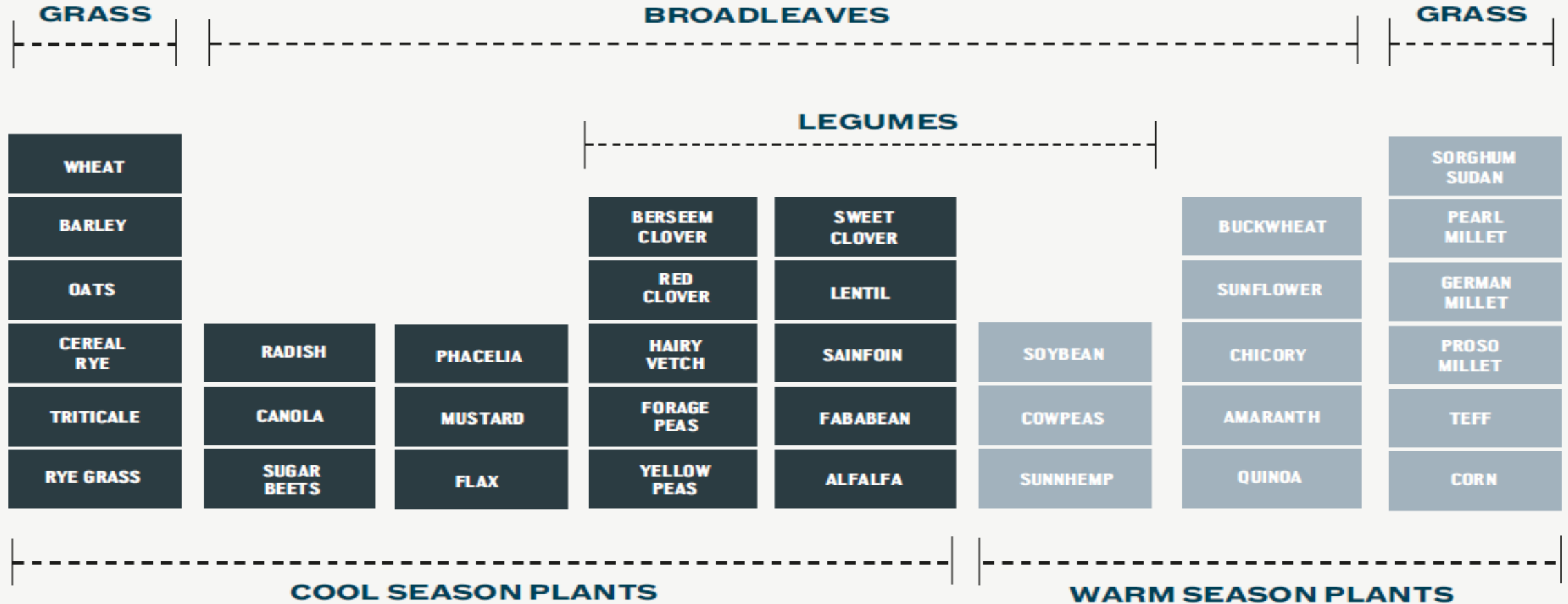
INTERCROPPING

Sunflower/Vetch

PLANT DIVERSITY GUIDE

COMMON PLANT SPECIES GROWN IN WESTERN CANADA AS COVER CROPS

VERSION 1.0



THE IDEA

- **Use vetch as a protein source for cattle to balance diet after sunflowers have been harvested**
- **Create more biomass**
- **Lower synthetic nitrogen need**
- **Utilize wasted sunlight**
- **Keep living root in the soil once corn has shutdown**
- **Extend grazing season**

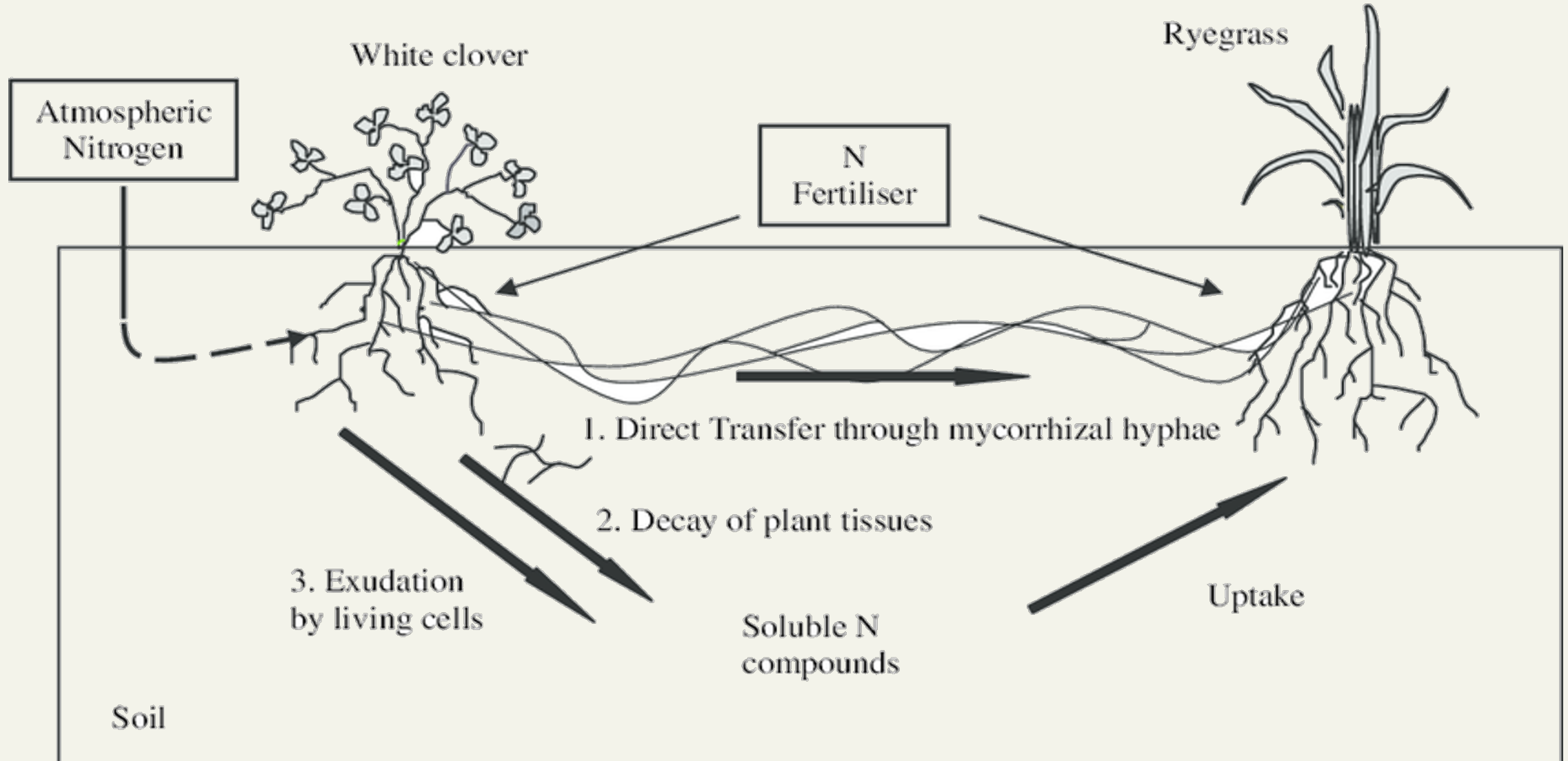




IMPLEMENTATION

- **Sunflowers sown at 19,000 plants per acre**
- **2 lbs of vetch with the air seeder.**
- **Applied no fertilizer**

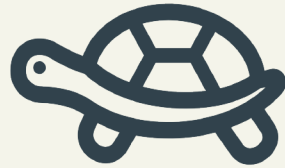
- **Pre-seed glyphosate was applied**
- **No in-crop herbicide**



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Table1. Carbon to nitrogen ratios of crop residues and other organic materials

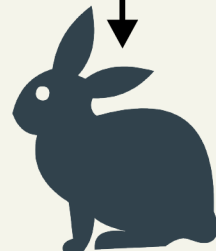
Material	C:N Ratio
rye straw	82:1
wheat straw	80:1
oat straw	70:1
corn stover	57:1
rye cover crop (anthesis)	37:1
pea straw	29:1
rye cover crop (vegetative)	26:1
mature alfalfa hay	25:1
Ideal Microbial Diet	24:1
rotted barnyard manure	20:1
legume hay	17:1
beef manure	17:1
young alfalfa hay	13:1
hairy vetch cover crop	11:1
soil microbes (average)	8:1



↑
Slower

Relative
Decomposition
Rate

faster
↓



C:N RATIO







GRAZING VALUE

1000 animals (cows, calves & bred heifers)
28 days / quarter section

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OPEN DISCUSSION

Best Practises