# High quality grass silage - getting the basics right



**Padraig O'Kiely Teagasc Grange** 



#### **Teagasc National Liquid Milk Conference**

Navan

Wednesday 30 October 2013



#### Factors affecting

- ~ yield for silage
- ~ digestibility for silage
- ~ preservation of silage
- ~ aerobic stability of silage









#### Factors affecting

- ~ yield for silage
- ~ digestibility for silage
- ~ preservation of silage
- ~ aerobic stability of silage









## Yield for silage

- •Ryegrass swards (vs. poor pasture)
- Ensure adequate P, K and pH status (based on soil analysis and manure input)
- Avoid soil compaction (silage-making, slurry/fert. spreading, grazing, etc.)
- Sufficiently long growth duration
- First cut apply total 125-150(reseed) kg N/ha via inorganic fertiliser (urea/CAN) and slurry



## Quality

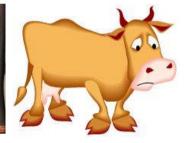
• Digestibility – is it leafy or stemmy?





• Preservation – is taste/smell OK for cows?





• Aerobic stability – is it heating or mouldy?









#### Factors affecting

- ~ yield for silage
- ~ digestibility for silage
- ~ preservation of silage
- ~ aerobic stability of silage









## Digestibility - is it leafy or stemmy?







### Digestibility - what difference does it make?



Milk yield (kg ECM)/day



|                           | Concentrates (kg/cow/day) |      |      |      |      |  |
|---------------------------|---------------------------|------|------|------|------|--|
| First cut                 | 0                         | 4    | 8    | 12   | 16   |  |
| <b>v. Early</b> DMD 79.4% | 23.4                      | 29.1 | 32.8 | 31.0 |      |  |
| <b>Early</b> DMD 75.6%    |                           | 27.1 | 29.3 | 28.8 |      |  |
| Intermed. DMD 69.0%       |                           | 24.9 | 27.3 | 30.1 | 28.7 |  |



Source: Randby et al. (2012)

### Digestibility - what difference does it make?



Milk yield (kg ECM)/day



|                           |      | <b>S</b> (kg/cow/day) |      |      |      |
|---------------------------|------|-----------------------|------|------|------|
| First cut                 | 0    | 4                     | 8    | 12   | 16   |
| <b>v. Early</b> DMD 79.4% | 23.4 | 29.1                  | 32.8 | 31.0 |      |
| <b>Early</b> DMD 75.6%    |      | 27.1                  | 29.3 | 28.8 |      |
| Intermed. DMD 69.0%       |      | 24.9                  | 27.3 | 30.1 | 28.7 |



Source: Randby et al. (2012)

### Digestibility - what difference does it make?



Milk yield (kg ECM)/day



|                           | Concentrates (kg/cow/day) |      |      |      |      |  |
|---------------------------|---------------------------|------|------|------|------|--|
| First cut                 | 0                         | 4    | 8    | 12   | 16   |  |
| <b>v. Early</b> DMD 79.4% | 23.4                      | 29.1 | 32.8 | 31.0 |      |  |
| <b>Early</b> DMD 75.6%    |                           | 27.1 | 29.3 | 28.8 |      |  |
| Intermed. DMD 69.0%       |                           | 24.9 | 27.3 | 30.1 | 28.7 |  |



Source: Randby et al. (2012)