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REDUCTION OF PHOSPHORUS EXCRETION OPTIMIZING DAIRY COWS' SUPPLEMENTATION

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INTRODUCTION

P in cows feeding is important because:

- ✓ **environmentally** damaging (excreted P spread on fields and eroded causes eutrophication);
- ✓ weighing upon farm **profitability** (P supplementation cost is increasing; +300% in last year);
- ✓ possible purpose for future **regulation** (as for N).

AIM

To evaluate:

- ✓ P excretion by P **balance method** in commercial dairy cattle farms;
- ✓ adoptable strategies to **reduce P excretion**;
- ✓ **relationship** between P intake and cow's **fertility**.

MATERIAL AND METHODS

In 15 **Friesian** dairy cows herds (1,790 heads):

- ✓ feed **consumption**;
- ✓ mineral **supplementation**;
- ✓ **feed** samples (to be analysed);
- ✓ cows **live weight** and **production** (weight gains; calves born/year; milk production);
- ✓ **reproductive indexes** (delivery-conception period, birth/year, insemination/conception).

P BALANCE METHOD

P intake - P retention = P excretion

P **feed** intake
+
P **mineral** supplementation

P **cow's gain** content
+
P **milk** content
+
P **calf** content

CHARACTERISTICS OF HERDS

| | Cows | Heifers | Calves |
|------------------|-------------|-------------|-------------|
| Heads (n) | 119 ± 55 | 50 ± 23 | 49 ± 24 |
| Live weight (kg) | 657 ± 23 | 425 ± 26 | 260 ± 30 |
| P in ration (%) | 0.43 ± 0.03 | 0.37 ± 0.09 | 0.38 ± 0.08 |

(mean ± s.d.)

