IT in Agriculture and Automatic Data Acquisition

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IT in Agriculture I

• Today no complex farm machinery without electronics is used on professional farms in Germany
• About 30,000 mobile process computers are engaged for applications of mineral fertilizer and pesticides. All these process computers have no automatic data acquisition, actual values are not stored, documentation uses only set point values
• Automatic process data acquisition as an own farm task is still not realized
• Any farm software shows high deficits in the input of actual, precise and comprehensive data
IT in Agriculture II

- As a consequence of insufficient data and data quality, farm software is only slightly used.
- Integrated farm software (e.g. with a central data base) is still not available.
Automatic Data Acquisition I

• We installed a fully automatic data acquisition system on our experimental farm „Dürnast“
• All tractors are equipped with LBS and GPS, all implements have „Implement indicators (IMIs)
• Data acquisition is done in two different ways:
  - if no field coordinates are available, raw data are stored
  - otherwise standardized process data are processed and stored
• Integration of process data into farm software is on the way
  • Still, there is no interest neither by DLG nor by ministry of agriculture nor by farmers union nor by maschinery rings !!
Automatic Data Acquisition II

Farmers:
- do not like documentation (they feel controlled)
- have fear from tax administration
- still are not able to evaluate the importance of precise and comprehensive data

→ Information must be available
  - without additional work
  - without extra costs