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“A Registrants View on Herbicide Registration”

Key Points:

- The basic manufacturers of herbicides are merging/consolidating. 16 basic manufacturers in 1992, 6 in 2004.
- Some of these 6 manufacturers have integrated “seeds and biotechnology” into their pesticide platforms.
- The 6 basic registrants are all spending between 10 and 13 % of their sales receipts on Research, Technology and Development.
- Herbicides occupy a significant portion of Syngenta’s sales receipts.
- The “traditional” herbicide development process is being challenged and changed by several factors, i.e. new technologies, demand for healthy food, biotechnology, market maturation, Wall Street and investors looking at R+D spend
- R+D efforts are now being targeted to business outputs.
 - New chemical products
 - Product life cycle management
 - Crop enhancement
 - New Ventures
 - Out licensing
- The rapid growth of biotech crops is affecting the herbicide market and R+D efforts are being directed to capturing opportunities. Input and output traits of biotech crops are being targeted.
- Many traditional R+D dollars are being spent on new/novel plant protectants, life cycle management, improving quality, and reducing production costs.
- High speed screening of new products is essential to meet R+D budgets and to accelerate market access. New products are selected by:
 - Target activity
 - Selectivity
 - Field activity-climates, crops
 - Toxicology
 - Ecotoxicology
 - Environmental safety
 - Production-feasibility and cost
 - Patents
- Product life cycle management is key, due to the high cost and time required (6-9 years and up to \$200M) to bring a product to market. Life cycle management could include:
 - Formulation changes
 - Adjuvant research to increase activity
 - IPM and resistance management requirements

- Alliances with user groups for key product registrations. Such as, SLNs, novel registration concepts, indemnification.
 - Out licensing.
- Product development process has been altered to increase the toxicology screens earlier in the development process.