Ruling Blind: Regulation without Information.
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Regulation without complete information happens all the time. This is not a great mystery. We all make decisions everyday with less than 100% knowledge. As we learn more, we adjust our decision-making criteria to use the new information. Our public policies must also be adaptive.

There is a naïve political assumption that writing restrictive regulations will fill a void of limited information. Concepts like the Precautionary Principal[1] fuel the myth that government authority can replace and supersede access to technical knowledge. These prescriptive rules mandate specific inputs and practices in the wild hope of affecting a desired outcome. Without sufficient science, these regulations do not work, and suggest a government that is ruling blind.

The good news is that we already have effective policy and market mechanisms in place that use limited, reliable information. Regulations for fertilizers, animal feeds and animal health target the desired outcomes. These outcome-based rules work, are transparent, and provide the opportunity to make adjustments as new information becomes available.

Effective, transparent mechanisms can be developed without relying on costly practice-mandated regulations. Certified authority, product labels and market uses of branded products are a few good examples of effective alternatives.

Prescriptive regulations. Early environmental laws made innocent attempts to protect the environment by restricting inputs and practices. Decisions made thirty years ago, due to limited knowledge and experience, are not acceptable today. Three factors interfere with prescriptive regulations working. They minimize wastes rather than develop resources, they target undesirable factors, and they lock future activities at levels that didn't work in the past.

Rules that minimize waste transform carbon (captured solar energy in green plants) from a valuable source of food, fiber and energy into a pollutant. Once carbon is legally defined as BOD[2], a green house gas, or an odiferous VOC; it is difficult to develop it into a marketable resource. These laws create a *prohibition* on residual production. A better policy solution would *promote* complete utilization of these resources-out-of-place with more intensive management.

In agriculture, inputs are targeted prescriptively by specifying animal units to control the land application of manure or 'protecting' an endangered species by limiting use of designated habitat. Writing a regulation creates a sense of control for policy makers. When the regulation does not work, the value of 'control' is lost.

Prescribed and regulated management practices are based on years of historical research conditions that clearly differ from the conditions of today's farming systems. Planning ahead while bound to past practices is like moving forward and only looking back at steps just taken.

Certified authority. Certified authorities work well when data is limited. Certified authorities are accredited as qualified to make decisions. Examples of these are Certified Public Accountants (CPA) or Certified Crop Advisers (CCA). Standards of certification are also set for conditions. USDA accredits the diagnostic labs in our national animal health programs as qualified authorities in animal pathogen diagnostics. Certified authorities must continually document their competence to maintain certification and their work is verified through audits.

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[1] Documented at the UN Conference on Environment and Development, Rio de Janeiro, Brazil, 1992.
[2] BOD is Biological Oxygen Demand and is and indirect measure of carbon available for microbial growth, green house gases containing carbon such as methane gas, and VOC is Volatile Organic Compounds attributed to odor.

Product labels. We are buried in labels. Some labels work well. Some are completely ineffective. Effective is different than good and bad. Labels for radioactivity, poisons and flammability are all very effective at alerting the product user of danger. A label can be a tremendous policy tool if properly written. When labels are poorly written they are awful. It is important to understand that the structure of a label determines whether it is effective.

Labels report results. They state a minimum standard of an outcome. Regulations that are outcome-based rely on labels of some kind to achieve the regulatory objective. Labels do not have to be regulatory. We all use commercial brand labels.

Policy labels work like commercial labels. An *effective label* efficiently conveys practical information to the product user. If label facts are not usable by the reader it cannot be effective. Even worse, if the label is confusing, it not only does not work, it will create greater chaos.

Regulatory uses of labels include fertilizer and feed labels. The guaranteed analysis of fertilizers and feeds provides a regulated minimum on the ingredients contained in the products. The regulated products themselves, like meat and bone meal, are established by the definition of the material contained within (nutrients, protein, moisture, etc.).

Branded products. Branded products are a subset of the category of product labels. Branded products are the 'gold standard' of product labels but without all the details. Consumer confidence and trust are implicit in the brand name. Generally brand loyalty goes well beyond the ingredients listed on the product label. Branded product companies go to great lengths to protect and cultivate their consumer loyalty. We saw a few years ago that it can be less costly for a baby food company to ban ingredients produced from a sister biotechnology company, than to risk loss of valuable patronage from brand-loyal baby food consumers.

Conclusion. Limited or incomplete information is no excuse for ineffective regulation. Transparent, effective alternatives to prescribing practices already exist. Certified authorities, product labels and branded products leverage limited information into economic benefits. Outcome-based regulations are not used in environmental regulation only because they have not been tried. Regulations written to relieve political pressure based on the claim that the science is incomplete suggest a government that is ruling blind.

Perception	Driving Mechanism	Resulting Policy Tools	Examples	Policy Effect
Usable Information	Based on measurable outcomes	Branded products	Maytag, Pampers, Frito-Lay, Tyson, Firestone	Beneficial and **Efficient**
		Product labels	Seed, fertilizers, feed ingredients	
		Certified authority	Certified Crop Advisers, Certified Organic, Certified Pathogen-Free	
Insufficient Information	Based on prescriptive practices or inputs	Permits, BMPs*	CAFO/NPDES permits, TMDLs, ESA - habitat definitions	Costly and **Inefficient**

* BMPs = best management practices; CAFO = concentrated animal feeding operation; NPDES = national pollution discharge elimination system; TMDL = total maximum daily load; ESA = endangered species act.