


**TABLE 4.** Effect of lime application on soil chemical properties and crop yield in an Andisol of the highlands of Ecuador.

Lime, t/ha	Soil pH	Ca	Mg	K cmol (+)/kg	Al	CEC	Faba beans Yield, t/ha	Barley Yield, t/ha	Oats
0	4.9	2.54	0.36	0.30	2.1	6.0	13.9	2.2	3.6
3	5.2	3.30	0.39	0.29	1.6	6.6	17.1	2.9	4.3
6	5.3	4.69	0.40	0.28	0.6	7.2	19.2	3.9	4.7
12	5.4	5.59	0.40	0.30	0.2	8.4	21.6	4.1	4.8
15	5.8	8.60	0.42	0.29	0.1	10.4	21.0	4.3	4.7

reactive surfaces. When lime is applied to these soils it reacts with the clay surfaces, creating charge (increase in CEC) while failing to increase pH or to precipitate Al. The amount of lime needed to precipitate Al varies with the age and weathering of the volcanic ash. For this reason, it is necessary to conduct simple field trials which can indicate precisely the amount of lime needed at a specific site.

Regardless of the method used to determine lime requirement in tropical soils, it is advisable to avoid excessive

lime applications. Usually this happens when such soils are limed to neutrality. Tropical soils should only be limed to neutralize exchangeable Al, which generally brings soil pH to values in the 5.5 to 6.0 range. Overliming leads to soil structure deterioration, reduced boron (B), zinc (Zn) and manganese (Mn) availability, and lower yields. 

*Dr. Espinosa is Director of INPOFOS, the PPI/PPIC program in northern Latin America. He is located in Quito, Ecuador.*

## ***Dr. R.L. Yadav Receives 1995 PPIC-FAI Award for Research***

**T**he 1995 award for best research on Management and Balanced Use of Inputs in Achieving Maximum Yield went to Dr. R.L. Yadav, Project Directorate for Cropping Systems Research, Modipuram, Uttar Pradesh, India. The award is presented annually by the PPIC-India Programme and The Fertiliser Association of India (FAI).

Dr. Yadav obtained his Ph.D. degree from GBPUA&T, Pantnagar and started his research career as Sr. Scientist at IISR, Lucknow, where he worked for about 18 years. He has 276 papers to his credit and nine awards, including the FAI Silver Jubilee Award in 1988. His main research interests are integrated use of chemical fertilizers and organic manures, particularly recycling of organic farm wastes. 