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### Supplementary Material

#### **Rapid elemental prediction of heterogeneous tropical soils from pXRF data: a comparison of models via linear regressions and machine learning algorithms**

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## Supplementary Material

Table S1 - Sampling sites' location. Lat = latitude; Long = longitude.

Lat	Long	Zone	Lat	Long	Zone	Lat	Long	Zone
7027140	420905	22 J	7647439	507907	23K	7652230	503358	23K
7053430	446293	22 J	7647448	507907	23K	7652230	503358	23K
7053239	447504	22 J	7647471	507710	23K	7652419	501662	23K
7105915	620248	22J	7647471	507710	23K	7652419	501662	23K
7105915	620248	22J	7647018	507609	23K	7652416	501866	23K
7105869	620194	22J	7647018	507609	23K	7652416	501866	23K
7105869	620194	22J	7660310	510071	23K	7652409	502015	23K
7105917	620889	22J	7660310	510071	23K	7652409	502015	23K
7105917	620889	22J	8181037	296305	23K	7652601	501680	23K
7113420	616124	22J	8181055	297496	23K	7652797	501689	23K
7113420	616124	22J	8181862	297342	23K	7652797	501689	23K
7112383	616388	22J	8181862	297342	23K	7652786	502985	23K
7112383	616388	22J	8181451	297094	23K	7652786	502985	23K
7112328	615785	22J	8181451	297094	23K	7652974	503922	23K
7112328	615785	22J	8181652	296899	23K	7652974	503922	23K
7437337	729300	22k	8181652	296899	23K	7652971	504104	23K
7437337	729300	22k	7651860	502239	23K	7652971	504104	23K
7437324	729720.1	22k	7651860	502239	23K	7653135	503904	23K
7437324	729720.1	22k	7651860	502426	23K	7653135	503904	23K
7464401	737829	22K	7651860	502426	23K	7653410	503721	23K
7464401	737829	22K	7651860	502851	23K	7653410	503721	23K
7464799	737166.4	22k	7651860	502851	23K	7652426	501339	23K
7464799	737166.4	22k	7652045	501680	23K	7652426	501339	23K
7464862	736538	22k	7652045	501680	23K	7651600	502743.4	23K
7464862	736538	22k	7652023	502053	23K	7651600	502743.4	23K
7436792	730909.5	22k	7652023	502053	23K	7653487	503422.4	23K
7436792	730909.5	22k	7652020	502188	23K	7653487	503422.4	23K
7465941	735132.6	22k	7652020	502188	23K	7939046	356680	23K
7465941	735132.6	22k	7652045	502798	23K	7648705	550501	23K
7647110	506922	23K	7652045	502798	23K	7775257	607805	23K
7647386	506920	23K	7652230	502053	23K	7652415	502239	23K
7647386	506920	23K	7652230	502053	23K	7856937	379932	23K
7647256	507198	23K	7652230	502239	23K	7661442	742567	23K
7647256	507198	23K	7652230	502239	23K	7648705	550501	23K
7647246	507598	23K	7652281	502327	23K	7652677	503964	23K
7647246	507598	23K	7652281	502327	23K	7671909	738219	23K

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Lat	Long	Zone	Lat	Long	Zone
7653463	503448	23K	7915293	395617	24K
7652779	504053	23K	7915293	395617	24K
7652309	502157	23K	7920416	400430	24K
7652094	502270	23K	7920416	400430	24K
7655996	500697	23K	7920416	400430	24K
7829217	387386	23K	7916279	392527	24K
7646282	391844	23K	7916279	392527	24K
7646282	391844	23K	7916279	392527	24K
7648515	390159	23K	7872832	391731	24K
7648515	390159	23K	7908575	401112	24K
7646815	392632	23K	8068607	322248	24K
7646815	392632	23K	8066252	321497	24K
7647917	390615	23K	8017860	439484	24K
7647917	390615	23K	7814563	376545	24K
7648045	395287	23K	7888543	388662	24K
7648045	395287	23K	8031163	437205	24K
7646205	397012	23K	7777252	364579	24K
7646205	397012	23K	7826401	389975	24K
7646205	397012	23K	8000219	369471	24K
7636694	410607	23K	8016141	436154	24K
7636694	410607	23K	8031340	435961	24K
7636694	410607	23K	7917901	395517	24K
7641098	504001	23K	7903315	402177	24K
7641098	504001	23K	8012390	410719	24K
7641108	503444	23K	8013141	421456	24K
7641108	503444	23K	7880331	384049	24K
7641154	503381	23K	8088314	452876	24K
7641154	503381	23K	7909840	408784	24K
7641222	503270	23K	8008015	355968	24K
7641222	503270	23K	7980979	425417	24K
7630924	223184	24 K	8066829	420647	24K
7651012	207088	24 K			
7889186	388272	24K			
7889186	388272	24K			
7889186	388272	24K			
7915293	395617	24K			

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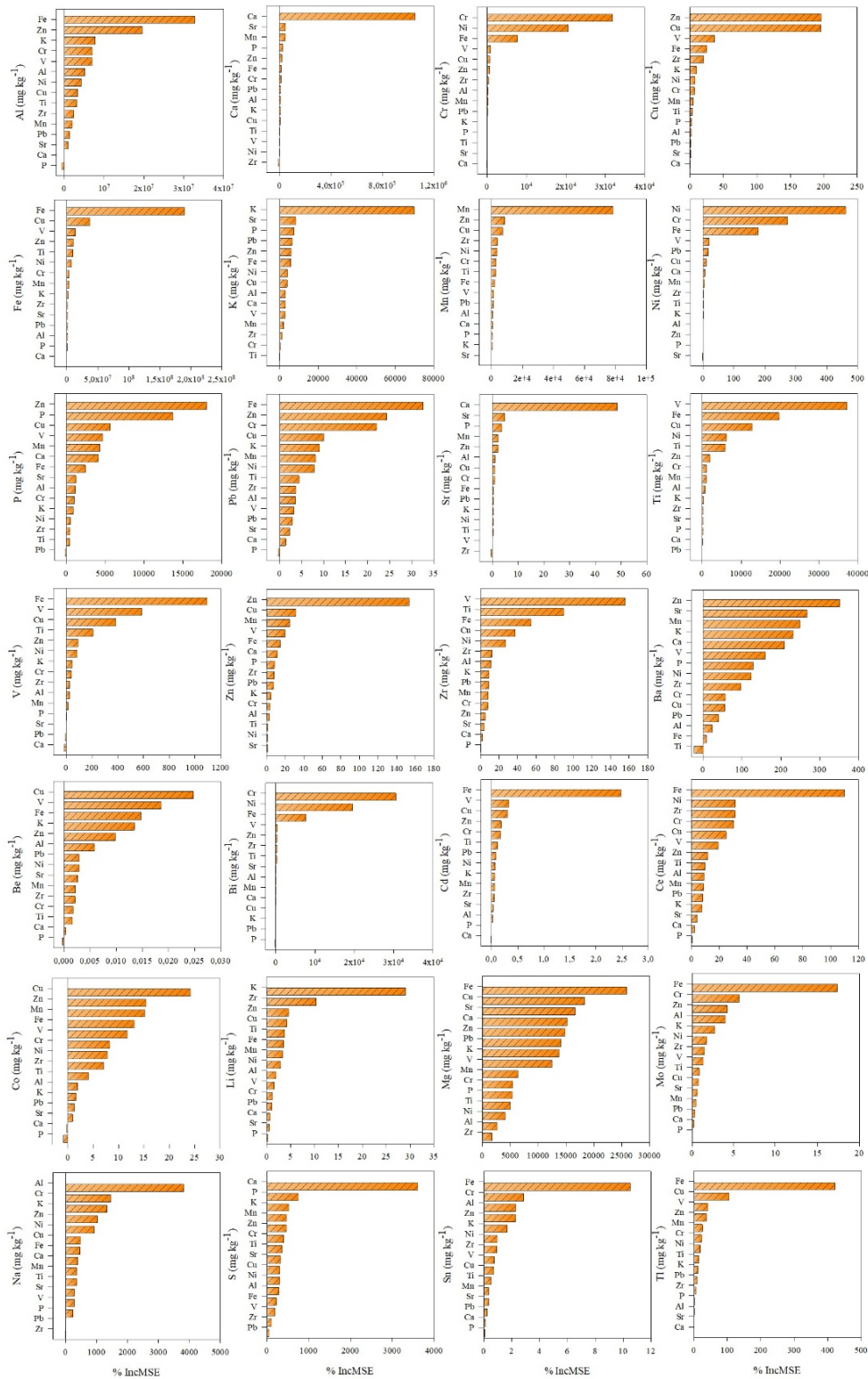


Fig. S1 - Importance of variables in decreasing order expressed by percentage increase in mean square error (% IncMSE) for models built using the Random Forest (RF) algorithm trained from data generated by pXRF in Brazilian tropical soils.