

\uparrow NH_4^+ , acidic pH

Release of glyphosate, AMPA, As, Heavy metals

- Oxidative stress
- Nitrosative stress
- Apoptosis
- Necrosis

- Glomerular sclerosis
- Glomerular collapse
- Proximal tubular damage
- Intestinal damage

proximal convoluted tubule

As, Cd, heavy metals, glyphosate, AMPA
 \uparrow in healthy individuals
 \downarrow Patients with CKDu

Further formation of Glyphosate-Metal Complex Within circulation

Dermal absorption, inhalation

Glyphosate

Fertilizer
As, Cd, Cr, Ni, Co, V

Hard Water
Ca, Mg, Sr, Fe

Formation of Glyphosate-Metal Complex

