

## **Short training Courses**

### **1.Hands-on Training of Feed Analysis**

Sample, sampling techniques, collection and handling of samples, determination of moisture and dry matter, estimation of crude protein, estimation of crude fat/ether extract, determination of crude ash, determination of crude fiber, determination neutral detergent fiber (NDF), determination of acid detergent fiber (ADF), determination of acid detergent lignin, estimation of pH and determination of acid insoluble ash (AIA).

### **2. Feed Formulation in livestock nutrition**

Nutrients requirements of large ruminates, nutrients requirement of small ruminates. Introduction to various feed stuffs. Nutrient composition of available feed ingredients. Introduction to feed formulations, how to fulfil the nutrients requirements of animal, Feed formulation using Pearson square method, Feed formulation on Computer.

### **3.Feeding systems and TMR Feeding**

Introduction to local feeding systems, Benefits of TMR Feeding, Different forms of Feeds, Nutrients requirements of Animals, Formulation of TMR, Preparation of TMR, Introduction to different types of TMR Machine.

### **4.Feed Supplements for livestock**

Introduction to feed supplements, Preparation of Urea-Molasses Block (UMB), Preparation of Urea- Molasses Licks, Feeding Management of Urea-Molasses Block and Urea-Molasses Lick.

### **5.Conservation of fodders and Forages**

Importance of Forage conservation, Drought seasons in Cholistan area. Methods of Forage Conservation, Hay making, Silage making, Haylage making, Urea treatment of straws/ stover to enhance their nutritional value. Conservation of Cholistani local grass/ indigenous grass.

### **6.Feed Formulation for dairy animals**

Nutrients requirements of dairy animals. Introduction to various feed stuffs. Nutrient composition of available feed ingredients. Introduction to feed formulations, how to fulfil the nutrients requirements of dairy animals, Feed formulation using Pearson square method, Feed formulation on Computer and feed formulation on software.

## **7.Feed Formulation for small ruminants**

Nutrients requirements of small ruminants. Introduction to various feed stuffs. Nutrient composition of available feed ingredients. Introduction to feed formulations, how to fulfil the nutrients requirements of small ruminants, Feed formulation using Pearson square method, Feed formulation on Computer and feed formulation on software.

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