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March 15, 2007

From: Sajid Alavi, Ph.D., Asst. Professor

To: Mangala Rai, Ph.D., Director General- Engineering, ICAR
Nawab Ali, Ph.D., Deputy Director General- Engineering, ICAR
Tushar Pandey, Country Head, Govt. Initiatives, Yes Bank
Anjan Mandal, Vice President, Ag, Micro & Rural Banking, Yes Bank
S. Raghu Vardhan Reddy, Ph.D., Vice Chancellor, Acharya NG Ranga University
Subu Kota, The Boston Group, U.S.A.

Cc: Richard Hahn, Ph.D., Head, Grain Science, K.S.U.
Bhadriraju Subramanyam, Ph.D., Grain Science, K.S.U.
Barry Michie, Ph.D., International Programs, K.S.U.
Doug Baldwin, Director – Sales and Mktg., Wenger Mfg, U.S.A
Raj Kapoor, Assocom-India
Suresh Itapu, Ph.D., Sr. Technical Director-Asia, American Soybean Association
Vijay Anand, Ph.D., Technical Director, American Soybean Association
Gary Glatz, CBT Solutions, U.S.A.
Peter Barrett, TopicWare, U.S.A.

Re: Establishment of extrusion center for food and feed processing in India

As you are aware, extrusion is an important technology for processing and adding immense value to grain-based raw materials ranging from corn, wheat and rice to sorghum, oats and soybeans. In the past two decades, this technology has gained widespread use in the food industry because of its several benefits including economics and versatility. Today extruded food and feed products comprise of a $ 30-40 billion market in the U.S. alone, and this technology is rapidly being adopted by Indian food and feed processors as well. In the Indian context, this technology is especially important for development of agri-processing businesses and providing farmers a means to add immense value to their commodities. Extruded products include - foods like breakfast cereal, crunchy snacks, pasta, confectionery and meat-imitation products (or texturized vegetable proteins); and products for animal consumption including pet food, aquatic feed, and feed for farm animals like cattle and poultry.

It is my intention to discuss with you the establishment In India of a pilot scale extrusion center for industrial training, research and development, commercialization, general education, and distance learning with regards to food and feed processing. This center of excellence will be modeled after the KSU Extrusion Center and will be funded by a public-private initiative involving interested financial institutions, Indian businesses, state and national governments, and universities. Specific plans on the infrastructure and support needed for this center will be developed following discussions during my meetings with you in March 2007, and a detailed proposal submitted for the same. Follow up discussions will be held during visit to India by Dr. Bhadriraju Subramanyam (Professor, Grain Science) in May-June, 2007.

It is proposed that the capital investment for the aforementioned extrusion center be generated through a public-private partnership. The equipment cost for such a center would be approximately $1,000,0000 (or roughly 4.5 crore rupees). Please see attached estimate of the same. Additionally, there will be costs associated with the construction of the building to house such a center. The land for this center can be obtained through state government incentive plans. The cost of personnel, and day to day operation, maintenance and other related activities for such a center will be generated by service fees charged to users.

As mentioned above, a detailed proposal will be developed with participation of interested parties after initial discussions. This proposal will have information on project concept, technical and economic feasibility, impact assessment , roles of various parties and also associated risks.

I am looking forward to discussing the above concept with you during my visit to India in March 2007.

Enclosure: Initial cost-estimate of equipment for extrusion center

Initial cost-estimate of equipment for extrusion center

(submitted by Wenger Manufacturing, Inc., Sabetha, KS, U.s.A.)

Item	Quantity & Description	Price	
1	One each Wenger Raw Material Mixing System	$	25,000
2	One each Screw Conveyor	$	20,000
3	One each Wenger TX-57 MAG ST Twin Screw Extrusion Cooker	$	500,000
4	One each Wenger Reversing Belt Conveyor	$	15,000
5	One each Mechanical Conveyor	$	40,000
6	One each Wenger Series IV Model 4800, Modular Design Dryer	$	200,000
7	One each Wenger Vibrating Finished Product Screener	$	20,000
8	One each Mechanical Conveyor	$	40,000
9	One each Wenger Model 36 x 72 Coating System	$	80,000
10	One each Mechanical Conveyor	$	40,000
Total, Items 1 through 10, unpacked, Ex-Works, Sabetha, Kansas		**$**	**980,000**