Category, Title, Product description, Rationale, Market potential, Raw materials, Technology, Investment cost total, Land cost, Machinery cost, Working capital, Benefits, Location

Category, Title, Product description, Rationale, Market potential, Raw materials, Technology, ~~Investment cost total~~, Land cost, Machinery cost, Working capital, Benefits, Location

Category, RG[Project Title, Product description, Rationale, Market potential, Raw materials, Technology, Land cost, Machinery cost, Working capital, Benefits, Location])

Categories(Category)

Products(**Category**, Project Title, Product description, Rationale, Market potential, Raw materials, Technology, ~~Land cost~~, Machinery cost, Working capital, Benefits, ~~Location~~)

Landen(name)

Cost(machinery,working capital,land)

3 NV

Categories(id,name)

Products(id,title,description,rationale,potential,rawmaterials,technology,**catagoryId,landId,costId**)

Landen(id,name)

Cost(id,machinery,labor,land)

Beverages

(' Coffee Processing :Roasting, Grinding & Packing',1),

(' Molasses Based Alcohol Production Plant',1) ,

(' Processing or Fruit-Based Drinks',1) ,

(' Production of Malt for Breweries',1) ,

(' Purified Water Bottling Plant',1) ,

(' Soft Drinks Bottling Plant',1) ,

(' Wine Production',1) ,

(' Laundry Soap Making Plant',2) ,

(' Insecticide Aerosol Making Plant',2) ,

(' Wax Candle Manufacturing Plant',2) ,

(' Acid Slurry Making Plant',2) ,

(' Activated Carbon Making Plant',2) ,

(' Animal Glue Making Plant',2) ,

(' Basic Pharmaceutical Products Making Plant',2) ,

(' Bleaching Powder Production Plant',2) ,

(' Cleaning Powder (Vim Type) Making Plant',2) ,

(' Coated Abrasives Making Plant',2) ,

(' Cosmetics Products Making Plant',2) ,

(' Disinfectant Making Plant',2) ,

(' Formulated Perfumery Compound Making Plant',2) ,

(' Hair Cream Production Plant',2),

(' Hair Oil Making Plant',2),

(' Industrial Adhesives Making Plant',2) ,

(' Liquid Detergent Production Plant',2) ,

(' Mosquito Coils Making Plant',2),

(' Mosquito Repellants Making Plant',2) ,

(' Oxalic Acid Production Plant',2) ,

(' Oxygen Producing Plant',2),

(' Paints, Varnishes and Pigments Making Plant',2),

(' Plant for Organic Sulphonation',2),

(' Plant for Reprocessing of Waste Batteries',2),

(' PVC Resin Production Plant',2),

(' Safety Match Making Plant',2),

(' Sodium Silicate Making Plant',2),

(' Sodium Sulphide Making Plant',2),

(' Sulphur Powder Making Plant',2),

(' Synthetic Detergent Powder Making Plant',2),

(' Toilet Soap Making Plant',2),

(' Tooth Paste Production Plant',2),

(' Veterinary Medicine Production Plant',2),

(' Agricultural Mechanization Services',3),

(' Agro forestry Project',3),

(' Apple Production Farms',3),

(' Assorted Vegetable Production Farms',3),

(' Banana Plantations',3),

(' Broom Corn Production Farm',3),

(' Cattle Breeding, Fattening and Marketing Enterprises',3),

(' Coffee Plantations',3),

(' Commercial Production of Sesame',3),

(' Commercial Rice Production',3),

(' Cut Flower Production',3),

(' Fish Harvesting, Farming and Marketing',3),

(' Fodder Production and Distribution',3),

(' Natural Gum Production and Marketing',3),

(' Oranges and Other Citrus Fruits Plantations',3),

(' Popcorn Production Farm',3),

(' Poultry production Farm',3),

(' Rubber Tree Plantations',3),

(' Seedlings Production and Distribution',3),

(' Seed Multiplication and Distribution Centers',3),

(' Small Scale Pineapple Plantation',3),

(' Soybean Production Farm',3),

(' Table Grape Production Farm',3),

(' Tea Plantation',3),

(' Tree Farms or Plantations',3),

(' Aggregates Production Plants',4),

(' Bleaching Earth Production Plant',4),

(' Burnt Clay Bricks',4),

(' Cemental Products Making Plants',4),

(' Centrifugal Reinforced Pipe Making Plant',4),

(' Chalk Sticks Production Plant',4),

(' Compressed Soil Blocks',4),

(' Concrete Pole and Pile Making Plant',4),

(' Cut-Stone Production Plants',4),

(' Graphite Crucibles Making Plant',4),

(' Grinding Stone Production Plant',4),

(' Gypsum Board Making Plant',4),

(' Gypsum Powder Production Plant',4),

(' Lime Production Plants',4),

(' Marble',4),

(' Mini Cement Plant',4),

(' Mosaic Tiles Making Plant',4),

(' Plaster Board Production Plant',4),

(' Plaster of Paris Making Plant',4),

(' Production of Ambo Type Stones',4),

(' Production of Gemstones',4),

(' Production of Water Filter Candle',4),

(' Reinforced Concrete Cement Pipes',4),

(' Roof Tiles from Clay',4),

(' Sheet Glass Making Plant',4),

(' Simple Glass Mirrors Making Plant',4),

(' Sprayed Polymer Mortar',4),

(' Wall Tiles Making Plant',4),

(' Electrical, Switches, Socket and Plug',5),

(' Assembly of Small Transformers',5),

(' Computer and Photocopiers Assembly',5),

(' Computer training center',5),

(' Dry Cell Battery Making Plant',5),

(' Electrical Dividers and Other Accessories',5),

(' Electric Backing Ovens Making Plant',5),

(' Electric Bulb Holders and Fluorescent Fixtures',5),

(' Electric Bulbs Making Plant',5),

(' Electric Iron Making Plant',5),

(' Electric Kettles & Egg Boilers Making',5),

(' Electric Stove Assembly Plant',5),

(' Fabrication of Electric Water Heaters',5),

(' Immersion Heaters Making Plant',5),

(' Low Cost radio Assembly',5),

(' Printed Circuit Boards Making Plant',5),

(' RUM, VERMOUTH AND VODKA',5),

(' Television Assembly Plant',5),

(' Ultra Violet Fly Repellant',5),

(' Welding Electrode Making Plant',5),

(' Floor covering & mat',6),

(' Animal feed',7),

(' Baby meal',7),

(' Baking powder',7),

(' Biscuits',7),

(' Brown sugar',7),

(' castor oil',7),

(' Commercial starch',7),

(' Composite flour',7),

(' Confectionery Making Plants',7),

(' Cornfleaks',7),

(' Dehydrated veg',7),

(' Dry milling',7),

(' Essential oil',7),

(' Fertilizer',7),

(' Fish meal',7),

(' Fruit processing',7),

(' Fruit and veg',7),

(' Gelatin',7),

(' Glucose',7),

(' Ground nut oil',7),

(' Honey',7),

(' Intravenous Solutions',7),

(' Iodized salt',7),

(' Jam and Jelly',7),

(' Maize starch',7),

(' Margarine',7),

(' Meat processing',7),

(' Milk',7),

(' Milk powder',7),

(' Modern Abattoirs',7),

(' Mushroom production',7),

(' Pasta',7),

(' PEA CANNING',7),

(' Peanut butter',7),

(' Pickling',7),

(' Potato',7),

(' Poultry feed',7),

(' Pulses',7),

(' small scale bakery',7),

(' soya bean processing',7),

(' Soya sauce brewing,7),

(' Spices',7),

(' starch derivative',7),

(' Sugar',7),

(' Tomato ketchup',7),

(' Veg oil',7),

(' Aluminum Household Utensil',8),

(' Blacksmith’s Hearth',8),

(' Chaff Cutter',8),

(' Chisels',8),

(' Galvanized Iron Bath Tubs',8),

(' Galvanized Iron Buckets',8),

(' Hammers',8),

(' Hand Sewing Needles',8),

(' Hand Stapling Machine',8),

(' Hospital Beds, Stretchers and wheel Chairs',8),

(' Insecticide Sprayers',8),

(' Iron and Steel Cots',8),

(' LPG Container and Pressurized Fire Extinguisher',8),

(' Metal Cabinets',8),

(' Metallic Buttons & Buckles',8),

(' Metal Safe Boxes',8),

(' Mouse Trap',8),

(' Pilfer Proof Bottle Caps',8),

(' Razor Blade',8),

(' Rural Household Hand Tools',8),

(' Safety Pins',8),

(' Saws',8),

(' Screw Drivers',8),

(' Shovels &Spades',8),

(' Sickles',8),

(' Snap Fasteners',8),

(' Solder Wire',8),

(' Spanners',8),

(' Stapler & Puncher',8),

(' Steel Storage Bins',8),

(' Steel Vaults, Safes and Cash Boxes',8),

(' Tin Containers',8),

(' Transmission belt,8),

(' Various Hand Tools',8),

(' Water Filter Containers',8),

(' Weights',8),

(' Wheel Barrow',8),

(' Wick Stoves',8),

(' Urban Amusement and Recreation Park',9),

(' Center for Cultural and Musical Shows for Tourists',9),

(' Clean Hotels and Restaurants for Tourists',9),

(' Convention/Conference Centers',9),

(' Establishment of a Zoo at Bahir Dar',9),

(' Hotel and Restaurant at the Blue Nile Falls',9),

(' Information Centers for Tourists', 9),

(' Modern Hotels & Restaurants', 9),

(' Physical Fitness Centers and Gymnasiums', 9),

(' Production of Handcrafts for Tourists', 9),

(' Special Bus Services to Tourists', 9),

(' Training Center for hotel and Restaurant Services', 9),

(' Training Center for Hotel & Restaurant Management', 9),

(' Training Center for Tour Guides', 9),

(' Wild Life Parks/Sanctuaries', 9),

(' Canvas Shoes Making Plant', 10),

(' Chrome Tanned Hides and Skins Preparation Plant', 10),

(' Finished Leather Making Plant', 10),

(' Laminated leather belt, 10),

(' Leather Footwear Making Plant', 10),

(' Leather Garments Making Plant', 10),

(' Leather Goods Making Plants', 10),

(' Leather Shoe Uppers', 10),

(' Leather Sole Making Plant', 10),

(' Lining Leather from Goat & Sheep Skins', 10),

(' Aluminum Frames Making Plant', 11),

(' Barbed Wire Making Plant', 11),

(' Bolts and Nuts Making Plans', 11),

(' Capped Nails Making Plant', 11),

(' Corrugated Iron Sheets Making Plant', 11),

(' Cupboard and Drawer Locks Making Plant', 11),

(' Curtain Rails, Stoppers & Runners', 11),

(' Door Locks Making Plant', 11),

(' Draft (Drawing) Machine Making Plant', 11),

(' Gabion Making Plant', 11),

(' Galvanized Iron Sheet Products Making Plant', 11),

(' Hinges Making Plant', 11),

(' Metallic Doors, Windows & Frames', 11),

(' Metallic Sanitary Fittings Making Plant', 11),

(' Metal Polishes Making Plant', 11),

(' Pad Locks Making Plant', 11),

(' Reinforcement Iron Bars Making Plant', 11),

(' Sieve for Building Materials Making Plant', 11),

(' Steel Fabrication and Ironwork Factory', 11),

(' Steel Pipes Making Plant', 11),

(' Steel Profile Making Plant', 11),

(' Water Flow Meter Making Plant', 11),

(' Water Line Fittings', 11),

(' Wire and Wire Products Making Plants', 11),

(' Wire Gauge Making Plant', 11),

(' Wood Screw Making Plants', 11),

('Newsletter', 12),

(' Ball Point Pen Refills', 13),

(' Blue Print Papers Making Plant', 13),

(' Carbon Paper Making Plant', 13),

(' Clips and Paper Pins', 13),

(' Corrugated Board and Boxes Making Plant', 13),

(' Egg Trays from Waste Paper', 13),

(' Envelops and Other Paper Bags Making Plant', 13),

(' Exercise Book Making Plants', 13),

(' Gummed Paper (Other than Stamps) Producing Plant', 13),

(' Hand Made Paper', 13),

(' Kraft Bag Making Plant', 13),

(' Paper Bobbins and Tubes', 13),

(' Paper Ruling Plant', 13),

(' Pencil Sharpener Making Plant', 13),

(' Printing Ink Making Plant', 13),

(' Printing Plant', 13),

(' Production for Paper Cups and Plates', 13),

(' Production of Paper from Straw', 13),

(' Re-Pulped Waste Paper Making Plants', 13),

(' Sanitary Napkin Making Plants', 13),

(' Screen Printing Making Plants', 13),

(' Sensitizing Paper Making Plant', 13),

(' Straw Pulp and Yellow Board Making Plant', 13),

(' Toilet Paper (Rolls and Sheets) Making Plant', 13),

(' Transparent Sheet Making Plant', 13),

(' Writing Pads Making Plant', 13),

(' Plastic Sanitary Fittings Making Plant', 14),

(' Rigid Polyvinyl Chloride Corrugated Plastic sheet Making Plant', 14),

(' Recycled Plastic Products Making Plant', 14),

(' Paraffin Wax Making Plant', 14),

(' Plastic Gutters down Pipes and Conduits Making Plant', 14),

(' Black Insulating Tape Making Plant', 14),

(' Disposable Surgical Gloves Making Plant', 14),

(' Erasers (Rubber) Making Plant', 14),

(' Fiber Glass Reinforced Plastic Products Making Plant', 14),

(' Formica Sheets Making Plant', 14),

(' Hard Rubber Battery Container Making Plant', 14),

(' H.D.P.E Woven Sacks Making Plant', 14),

(' Infusion and Transfusion Kits Making Plant', 14),

(' Injection Molded Products Making Plant', 14),

(' Injection Moulded Plastic Educational Materials', 14),

(' Latex Foam Products Making Plant', 14),

(' Melamine Table Wares Making Plant', 14),

(' NRP Ballistic Helmet Making Plant', 14),

(' Paint Brushes Making Plant', 14),

(' Medical facilities making Plant', 14),

(' Plastic and Polyester Zippers Making Plant', 14),

(' Plastic Buttons Making Plant', 14),

(' Plastic Chairs and Tables Making Plant', 14),

(' Plastic Combs and “Midos” Making Plant', 14),

(' Plastic Containers Making Plant by Blow Molding', 14),

(' Plastic Filament Twine and Rope Making Plant', 14),

(' Plastic File Covers and Folders Making Plant', 14),

(' Plastic Helmets/Hats Making Plant', 14),

(' Plastic Plates, Dishes and Lunch Boxes M. Plant', 14),

(' Plastic Products by Rotary Thermoforming of Plastomers', 14),

(' Plastic Raincoats Making Plant', 14),

(' Plastic Tanks (Sintex Type) Making Plant', 14),

(' Polyester Spin Fiber and Filament Making Plant', 14),

(' Pvac (Polyvenyl-Cetate) Wall Coating Making Plant', 14),

(' PVC Cables Making Plant', 14),

(' PVC Flooring making plant', 14),

(' PVC Foot Wears Making Plant', 14),

(' PVC Pipes, Conduits and Other Fittings Making Plants', 14),

(' PVC Wall Covering Making plant', 14),

(' PVC Windows Making Plant', 14),

(' Rubberized Fabrics Making Plant', 14),

(' Rubber Shoe Soles Making Plant', 14),

(' Self-Adhesive Labels Making Plant', 14),

(' Spectacle Frames by Fabrication Plant', 14),

(' Synthetic Marble Producing Plant', 14),

(' Toothbrush Making Plant', 14),

(' Plastics', 15),

(' Building Condominiums for Rent', 16),

(' Building Houses for Rent', 16),

(' Private High Schools', 16),

(' Private Hospitals', 16),

(' 3-Wheelers Assembly Plant', 17),

(' Assembly & Fabrication of Bicycles', 17),

(' Assembly & Fabrication of Mechanical Seed Cleaners', 17),

(' Assembly & Fabrication of Walking Tiller & Tractor', 17),

(' Assembly of Centrifugal Pumps', 17),

(' Assembly of Small Diesel Engines', 17),

(' Assembly of Water Pumps', 17),

(' Boilers Manufacturing Plant', 17),

(' Citrus Juice Extractor Making Plant', 17),

(' Compressors Assembly Plant', 17),

(' Crown Cork Making Plant', 17),

(' Express Coffee Maker Machine Making Plant', 17),

(' Fabrication and Assembly of Grain Mills', 17),

(' Fabrication and Assembly of Oil Crushers', 17),

(' Fabrication & Assembly of Hand Pumps', 17),

(' Fabrication & Assembly of Small Mechanical Threshers', 17),

(' Fabrication & Assembly of Welding Machines', 17),

(' Fabrication & Assembly of Wind Mills', 17),

(' Sunlight Energy in to Electrical Energy', 17),

(' Fabrication of Household Hand Knitting Machines', 17),

(' F.H.P. (Fractional Horse Power) Motors Making Plant', 17),

(' General Purpose Engineering Workshop', 17),

(' Manufacture of Bench Grinders', 17),

(' Poultry Equipment Making Plant', 17),

(' Sewing Machines Assembly Plant', 17),

(' Small Scale Foundry Plant', 17),

(' Small Scale Steel Plant', 17),

(' Solar Cookers Producing Plant', 17),

(' Solar Water Heater Making Plant', 17),

(' Solar Water Heaters Making Plant', 17),

(' Winnowers up To 5.H.P. Making Plant', 17),

(' Absorbent Cotton Making Plants', 18),

(' Acrylic Yarn Production Plant', 18),

(' Bed cover, sheets & table linen', 18),

(' Carpet Making Plant', 18),

(' Children Garment Making Plants', 18),

(' Cotton Blankets Making Plant', 18),

(' Cotton Ginnery Plant', 18),

(' Cotton Under-Garments Making Plant', 18),

(' Cotton yarn', 18),

(' Grain Mill Belt Production Plant', 18),

(' Inner fabrics', 18),

(' Jeans Garments Making Plant', 18),

(' Knit Wear Making Plants', 18),

(' Mattress and Pillow Making Plants', 18),

(' Military Supplies Production Plant', 18),

(' Modern Garment Making Plant for Export and Re-export', 18),

(' Nylon Yarn Production Plant', 18),

(' Plant for Dyeing, Pointing and Finishing Fabrics', 18),

(' Polyester Fabrics Production Plant', 18),

(' Self- Gripping Woven Fabric Tapes', 18),

(' Sewing Thread Making Plant', 18),

(' Silk fabrics', 18),

(' Small Scale Weaving Plant', 18),

(' Socks Manufacturing Plants', 18),

(' Stove Wicks Making Plant', 18),

(' Surgical Bandages Making Plant', 18),

(' Surgical Dressing Making Plant', 18),

(' Sweater Making Plants', 18),

(' Terry Towel Making Plant', 18),

(' Textile Welding for Garments Making Plant', 18),

(' Umbrella Assembly Plant', 18),

(' Bamboo Furniture Making Plant', 19),

(' Briquettes from Coal Making Plant', 19),

(' Charcoal Making Plant', 19),

(' Chip or Particle Board Making Plant', 19),

(' Fuel Briquette from Biomass Making Plants', 19),

(' Mobile saw mill', 19),

(' Modern or High Standard Office and Household Furniture', 19),

(' Organic Fertilizer', 19),

(' Pallet Production', 19),

(' Pencil Making Plant', 19),

(' Plywood Making Plant', 19),

(' Production of Brushes from Natural Bristles/Fibers', 19),

(' Production of Chemically Treated Wood Poles', 19),

(' Seasoned Wood Producing Plants', 19),

(' Straw Board for Building', 19),

(' Tongue Depressor, Tooth Pick and Ice Cream Spoon Making Plant', 19),

Beverage

Chemicals

Commercial Agriculture

Construction

Donate

Electrical and Electronics

Floor covering and mat

Food Processing

Hand tools

Home based businesses

Hotel and Tourism

Leather

Metal Based Construction

Miscellaneous

Newsletter

Paper, Printing, Stationery

Plastics and Rubber Products

Projects for the poor

Real Estate

Small Machines

Textile

Wood Products

Addis Ababa,4000

Nazret,2000

Dire Dawa,2000

Bahir Dar,2000

Dese, 2000

Harar, 2000

Gonder, 2000

Awasa, 2000

Jīma, 2000

Giyon, 2000

Shashemene, 2000

Adigrat,1000

Mekele, 3000

Hosa’ina, 2000

Asela, 2000

Nek’emtē, 2000

Debre Mark’os, 2000

Arba Minch, 2000

Sodo, 2000

Debre Birhan, 2000

Jijiga, 2000

Aksum, 2000

Dila, 2000

Hagere Hiywet, 2000

Yirga Alem, 2000

Goba, 2000

Gimbi, 2000

Asosa, 2000

Dembi Dolo, 2000

Bati, 2000

Dolo Bay, 2000

Negele, 2000

Gore, 2000

Semera, 2000

Gambela, 2000

(' Coffee beans are sold to the consumer either as “raw” beans or roasted, ground (made to powder) and packed. Usually roasted coffee is sold to hotels, coffee shops, restaurants, pastries, etc. and “raw” coffee beans are sold to households where the roasting aspect of coffee making is as important as the coffee drinking itself. This project idea is to establish coffee roasting … enterprises in the Amhara region where roasting of coffee on commercial scale is virtually unknown. ' ,

' ',

'The main consumers of roasted coffee are restaurants, hotels, coffee and tea shops, etc. While there are hundred of coffee roasting, grinding and packing enterprises in Addis Ababa and in areas south of Addis Ababa, there are no such enterprises in the Amhara region. Like the “raw” coffee, the Amhara Region also imports roasted coffee from other regions of the country. With 2.1 million people living in the urban areas of the Region, the consumption of processed coffee (roasted and ground) is substantial. It is understandable why the Region imports the “green” coffee beans, but it does not give economic sense to import the processed coffee while it is possible to do the processing in the region. The present consumption of processed coffee in the urban centers of the Amhara Region is estimated to be about 4015 tons, and this consumption level will grow with further urbanization and increased population. ' ,

'The principal raw materials are coffee beans; and the beans will be imported from other parts of the country. Until the Region becomes self – sufficient in coffee production. ',

'Major processing stages include cleaning of the beans, grading, roasting grinding and packaging. Major machinery units will include cleaning machine, roasting, grinding and packing machines. ',

' More value added, promotes self sufficiency, saves financial resources'),

(' Industrial alcohol is an important input in the manufacture of pharmaceutical and veterinary spirits, perfumes and alcoholic beverages. One major “raw material” for producing alcohol is molasses which is a by product of sugar factories. ',

' ',

' Alcohol is in demand in pharmaceuticals, veterinary services, health care institutions such is health centers, clinics and hospitals, perfume producing factories, liquor producing beverage factories. Alcohol is also needed in households for emergency purposes, in barber shops and beauty salons. Many developing countries meet their alcohol requirements from imports. Molasses from which alcohol is produced is a by product of the country’s sugar factories. Domestic production of alcohol between 2000 and 2004 was on the average 14,400 hectoliters per year. On the other hand, average annual production of molasses during the same period was 50,300 tons; Molasses is used for alcohol production and as an ingredient in animal feed. Some portion of the product is exported. For a long time there has been a surplus in the production of molasses and the surplus product is dumped into streams or is used to maintain roads within the factory and plantation sites of the sugar factories.

All alcoholic beverages produced in the country are manufactured in and around Addis Ababa. These beverages are put in glass bottles and are distributed to all parts of the country near or far. The Amhara Region which is on the average about 500 km from Addis Ababa receives its share of alcoholic beverages from Addis Ababa. As the beverages are packed in glass bottles they are heavy, cumbersome and expensive to transport long distances. Between 2000 and 2004, the liquor consumption share of the Amhara Region was about 10,000 hecto liters per year on the average. Beverage products which use bottles for packaging are located near major consumer centers to avoid excessive transportation costs.

Currently, it is estimated that more than 20 thousand hector liter of ethyl alcohol per annum is used in Ethiopia. Here, this figure is taken as a base for the future demand projection. And, in line with the economic growth, it is also assumed that for the coming ten years the annual utilization of ethanol will increase at 10 % per annum. Based on these assumptions, the future demand for ethyl alcohol is projected as follows.

These products are produced in different consumer centers and distributed regional or local markets. The liquor market in the Amhara region can justify the establishment of a liquor factory in the region. This factory will require alcohol as one of the major inputs. To supply the liquor factory with the required amount of alcohol, a factory that will refine molasses to produce alcohol will be needed. The raw material- molasses will be transported in big containers to the factory site to be used as input for the alcohol factory. The remaining part of the molasses will be used to produce animal feed which is in short supply in the region. Molasses for the alcohol factory will be transported from the existing factories until such a time that the Amhara Region establishes its own factory. The alcohol to be produced will not only used to make liquor; it will also be used for other purposes in health care institutions, barber shops, beauty salons, etc. ',

'The main raw materials are molasses, sulphuric acid and nutritive salts (ammonia phosphate). For every 100 liters of alcohol distilled about 1.5 kgs of sulphuric acid and 0.35kg. of nutritive salts are required. The acids will be imported and the molasses will be obtained from domestic sources.',

'The process of alcohol production is based on the fermentation of molasses and extracting the alcohol there from by using column distilleries. The molasses is diluted with water and allowed to ferment. From the fermented molasses, the alcohol is finally extracted. The required equipment and facilities include equipment for receiving and diluting molasses, pre-fermentation and fermentation equipment, distillation equipment, storage tanks, steam boiler and electric generating nit, laboratory equipment, truck mounted tanker for transporting the molasses. ',

'Similar to other projects. '),

(' There are a number of fruit types from which drinks or juices can be made. The common fruits from which fruit drinks or juices are made are organizes, grapes, pineapples, mangoes, papayas and other fruits of the citrus family. The juices or drinks are consumed usually during breakfast time or in refreshment hours. Processed fruits and drinks are normally packed in cans, bottles, plastic pouches or even in cartons.',

' ',

'Currently, there are three main sources for the supply of fruit-based drinks and juices in the country. The largest supply comes from households, snack shops, pastries, coffee shops, restaurants, hotels and “juice houses”. It is almost impossible to estimate the volume of supply from scattered sources. The other domestic source is Merti Fruits Processing Plant located in the Awash Valley. This plant has produced an average of about 1300 tons of fruit drinks per year between 1986 and 1995; and during this period production by the plant had grown by 1.5 percent per year. The third source of supply is import. During the last 15 years, because of related foreign exchange control, imports of fruits drinks and juices have been growing fast. Now all the so-called super-markets and even small and large grocery stores are filled with imported fruit drinks and juices. In fact, this has negative impact on domestic production. Some newly established “milk Processing” enterprises supply what they call “fruit juices” to the market. (How a milk, processing plant can produce fruit juice is not clear.) The main determining factors for the demand of fruit juices and drinks are income and population size especially urban population. Admittedly, consumption of fruit juices and drinks in the Amhara Region is confined to a small section of the urban population. If we assume only 20 percent of the 400,000 urban families in the Region consume fruit juices and drinks regularly, the size of consumers in the Region is about 80,000. if we assume that a family of five consumes at least two liters of fruit juice or drink every day, the annual consumption of these products in the Region is 58,400 tons = (80,000X2 lit. X 365/100Kgs; 1000 lits.=1000Kgs.). One can feel this is optimistic estimate. To be on the safe side, let us say the estimated demand is one-half of the above estimate. This leaves us with a potential demand of 26000 tons per year. This can justify the establishment of medium size fruit-based drinks and juices producing plant. (project ideas have proposed the establishment of citrus fruits plantations in the Region.) ',

' Citrus fruits plantations in the Region and outside the Region.',

'It is assumed that orange juices and drinks will be the main products of the plant. The Process of producing these products require cleaning of the raw material (organs), warming the fruits peeling, juice extracting, pre-heating and cooling, centrifugalization, deaeration, seasoning, sterilization, filling, cooling, labeling and packing.The main plant and machinery required are, receiving line and bins, inspection, washing and sizing, juice, extractors, finishers, pasteurizer, filler and sealer, cooling machine, labeler, centrifuge, evaporator, vessels with pumps, boiler, conveying unit, laboratory, concentrate production machinery and equipment. ',

' Saves foreign exchange and regional financial resources, stimulates regional production of citrus fruits promotes self-sufficiency in food production'),

(' Malt is the major input to produce beer. It is what is known in Amharic as “bikil”. The raw material from which malt is made is malt barley which can be grown in many localities of the Region. Basically, malt is prepared by soaking barley in water for a period for germination, drying it and making it into flour before it is used as an ingredient to make bear or whisky. ',

'There are two large breweries in the Amhara Region (Dashen and Bati) established in the last 10 years. These breweries either obtain their malt requirement from the Asella Malt Factory or they import it from abroad. Most likely they import the malt. This requires foreign exchange which has always been in short supply in our country. The type of barley needed for malt production is being grown in Arsie and Bale. This barley can be grown in the highland areas of the Amhara Region. Hence it is possible to produce malt in the Region. ',

' Domestic production of malt between 1999/200 and 2003/2004 was on the average 13,650 tons per year. This production volume is perhaps one-half of the malt requirements of the existing breweries. Subject to detail market study, the existing deficit in the supply for malt is estimated to be between 5000 to 8000 tons. The proposed malt producing plant is to fill this supply gap and to make the Region self-sufficient in the production of malt.',

' The raw material which is malt barley could be obtained from the high-land parts of the Region provided that malt barley seeds are distributed to farmers so that they grow the barley.',

'Malt barely is fed into grading machines to obtain uniform malting parameters; germination is carried out in “germinating boxes”, adding water from time to time to keep the product moisture constant. The germinating process normally lasts five to six days; kilning process takes place; after clearing, the malt is stored in silos. Main production machinery include barley intake and pre-cleaning, barley main cleaning and grading, germinating boxes, kiln conveyors, cooling plant, silos, etc. ','Saving in foreign exchange and regional financial resources, stimulating the farming sector of the Region, introduction of new skills and technology, self-sufficiency in this particular product. '),

(' Purified water has become popular among foreigners and high-income groups during the last 5 to 7 years. Now there are more than five purified water bottling plants in the country clustering in and around Addis Ababa. The product has in some areas become a conspicuous consumption item. ',

' When factory bottled purified water appeared in the market for the first time, many people doubted about the market success of the product because they believed that with low per capita income, not very many people will buy the product. But because of robust demand not only there is one bottling plant but more than 5 in a matter of six years. However, like many other factories, bottling plants of purified water are concentrated around Addis Ababa. Bottled water is one of those products which is expensive to transport long distances. Because purified water can be processed from springs, rivers, wells, etc., the bottling plant could be established any place where there are these water sources. So far, except for one or two bottling plants in North Shewa, there are no new purified water bottling plants in the Amhara Region. Consumers in the Region get their plastic bottled purified water from Addis Ababa which makes the price of the water almost twice that of Addis Ababa. The Region should be self-sufficient in the supply of purified water that people consume; and one or two bottling plants should be established in the region.',

' The main consumers of bottled purified water in the Amhara Region are the urban high-income groups and outsides who travel through the Region, such as tourists, businesspeople and civil servants. If we assume that at least five percent of the urban population (95,000) of the Region consumes one bottle of purified water per day, this amounts to an annual consumption of 35 million bottles which is more than one half of the production capacity of the Ambo Mineral Water Bottling Plant. With increasing population and modest annual increase of income, annual consumption of purified bottle water will also increase. In short, the current demand for purified bottled water will justify the establishment of about two bottling plants.',

'Springs, wells, creeks, rivers where the plant is to be established. ',

'The main stages of purification and bottling are pumping water from source to storage tanks, passing the water through a series of purification tanks, adding some chemicals at certain stages to further purify the water and bottling the water. Main machinery include water pumps with accessories, storage tanks, purification tanks, and bottling machine. ',

'Economic utilization of a natural resource, promotion of self-sufficiency, introduction of new skills and technology, saving of regional financial resources. '),

('A soft drink is a type of man-made drink mainly composed of water (87%), sugar (12%), citric acid, color/essence, and sodium, benzonite. A bottling plant is a plant which mixes and bottles the above ingredients in a factory set-up. Non-alcoholic drinks or beverages like Coca Cola, Pepsi Cola, Fanta, etc are some examples of soft drinks. ',

'There are two old and small soft drinks bottling plants in the Amhara Region- in Dessie and in Gondar. These plants are not only old but they produce only Pepsi products which limits the choice of consumers. Besides, their production capacity is small and does not satisfy the demand for soft drinks in the Region. Considering the volume of soft drinks which the Region imports from Addis Ababa, it can be concluded that there is a need to establish one soft drink bottling plant in Bahir Dar. ',

'Annual production of soft drinks in the country is about 300 million bottles of which only 16 million bottles are the production of the Amhara Region. Annual consumption of soft drinks in the Region is about 80 million bottles which is 5 times the production capacity of the two soft drinks plants located in the Region. Regional deficit of soft drinks supply is compensated by supply from Addis Ababa. The current demand of soft drinks of the Region which is satisfied through imports can absorb the production of a new bottling plant and this will replace imports of the products from outside the Region.',

'The two major raw materials- water and sugar will be obtained from domestic sources while others such as essence will be imported. If possible, the new plant should be affiliated with the two giant multi-nationals Coca Cola or Pepsi Cola. ', 'The main processing stages are washing of bottles, premixing with concentrate, mixing of the sugar and syrup, carbonation of the mix, filling, cap fitting, inspection, and packing. Main machinery includes, automatic bottle washer, automatic filling machine, blending and carbonating unit, syrup concentrate mixing unit, water treatment plant, carbon dioxide supply equipment, cap fixing machine, etc. ',

' Self-sufficiency, saving of financial resources,'),

(' Wine is an alcoholic beverage product made from grapes which grow in Mediterranean type of climate. The product is consumed by people of different age groups, income and social classes. Though at an early stage, there is a new culture developing in large urban areas where people drink wine during meal times and in the evenings. There is growing medical evidence that drinking wine moderately is good from normal blood circulation and for regular hear beat.',

' ',

'The supply of wine to the national market is composed of domestic production and imports. Some quantities of wine are also exported. Domestic production of wine is concentrated in and around Addis Ababa. The Amhara Region imports all its wine consumption from Addis Ababa and from abroad. Endowed with different types of soil and climate, the region has the potential of growing grapes from which wine is made of. The region has the potential not only to be self-sufficient in wine production for regional consumption but also for export. ',

'For the first few years, grapes will be imported and then much of the grapes will be produced in local farms. ',

' Like many other beverage products with alcohol content the main process of producing wine includes preparing the raw material by making it undergo different processes, fermentation addition of sugar and other additives, purifying or clearing the final product and bottling. There are a series of machines and tanks needed for producing wine.',

'Saves regional financial resources, promotes self-sufficiency ');

(' ', ' ', ' ', ' ', ' '),

Projectline(machineryCost,workingCapital,projects\_id,products\_id,Landcost\_id)

(1000000,300000,1,1,1),

(1300000,800000,2,2,1),

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