通威 为了生活更美好/TONGWEI FOR BETTER LIFE



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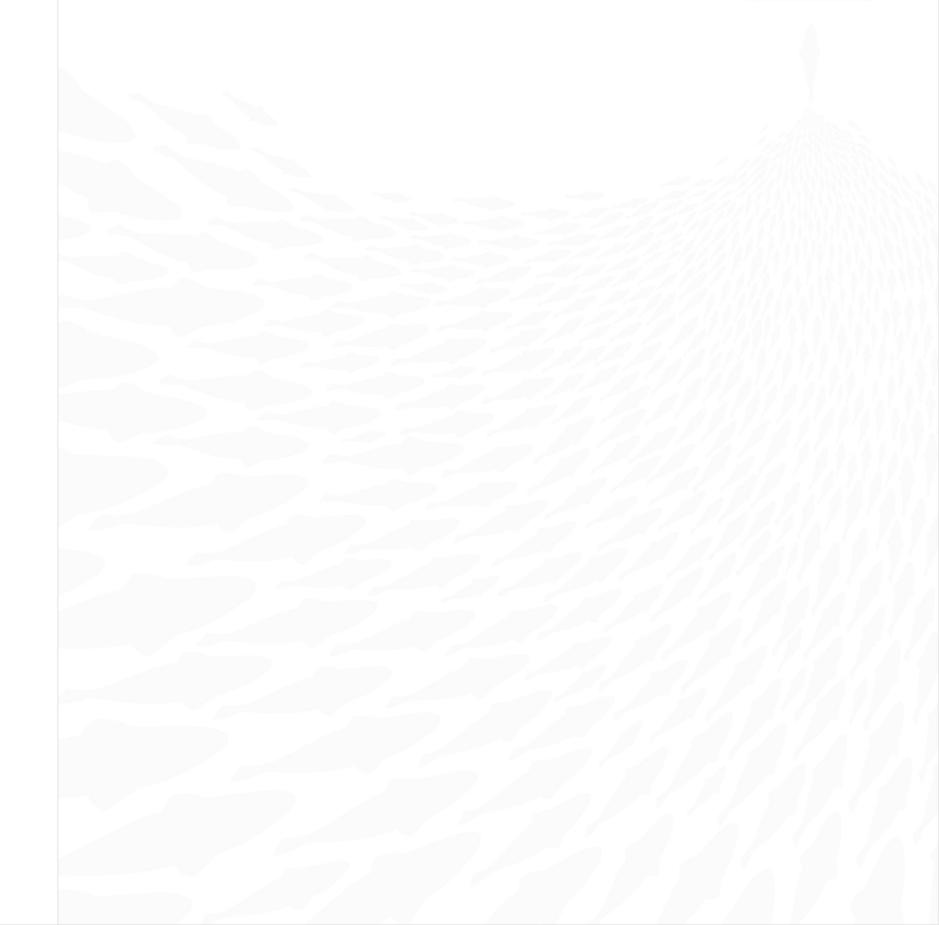
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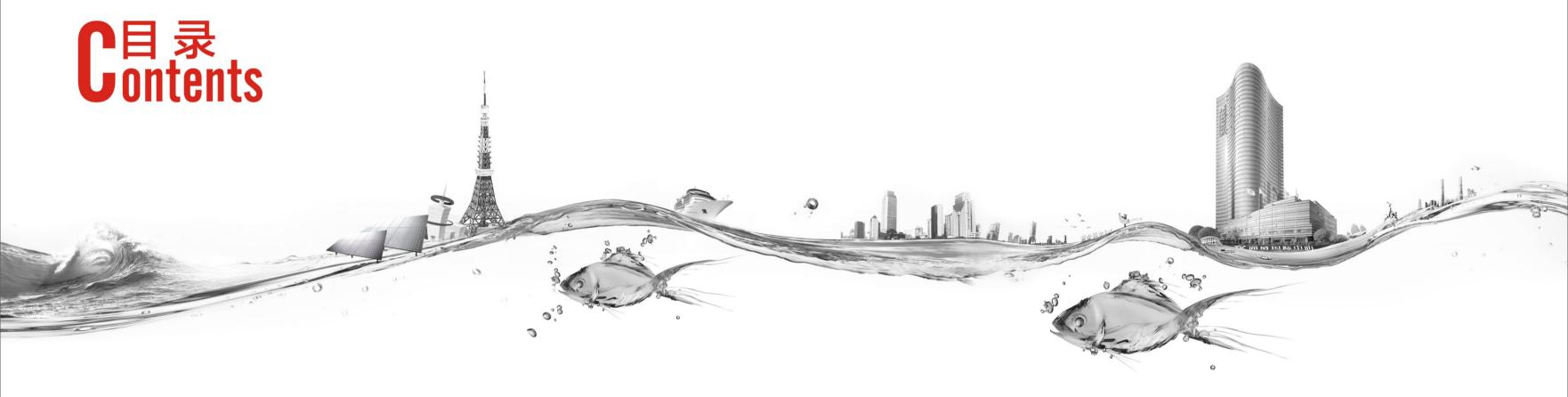
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通威 为了生活更美好/TONGWEI FOR BETTER LIFE



04/ **》** 通威概况 Profile of Tongwei Company

02/ 刘汉元主席 Chairman Liu Hanyuan

04/ 企业概况 Company Profile

05/ 分子公司分布图 Business Distribution Map

08/ 资质荣誉 Qualification Honors

09/ **》** 科技力量 Science and Technology

> 11/ 技术中心 Technology Center

11/ 通威研究院 Tongwei Research Institute

12/ 水产研究所 Aquaculture Research Institute

13/ 畜禽研究所 Livestock & Poultry Research Institute

13/ 特种水产研究所 Special Aquaculture Research Institute 14/ 海水种苗研究所 Seawater Seedling Research Institute

14/ 三文鱼研究所 Salmon Research Institute

15/ 动物保健研究所 Animal Healthcare Research Institute

16/ 威尔检测 Willtest Technology

17/ 设施渔业工程研究所 Facility Fishery Engineering Institute

18/ 水产工程中心 Aquatic Engineering Technology Research Center

20/ **》** 产业布局 Industry Distribution

> 21/ 农牧板块 Agriculture Sector

22/ <mark>通威种苗</mark> Tongwei Seedlings

22/ 苗种繁育 Seed Breeding

23/ 淡水种苗/海壹虾苗 Freshwater Seedlings/H.best Shrimp seed 24/ <mark>通威饲料</mark> Tongwei Feed

24/ 水产饲料 Aquaculture Feed

25/ 畜禽饲料 Livestock & Poultry Feed

26/ 复合预混料 Premix Feed

27/ 水产/畜禽特色服务 Aquaculture/Livestock & Poultry Special Service

29/ **通威动保** Tongwei Animal Health Products

29/ 通威药业 Tongwei Pharmaceutical

30/ 动保产品 Animal Healthcare Products

31/ **通威养殖设备** Tongwei Farming Equipment

31/ 通威自动化 Tongwei Automation

32/ 自动化产品/电化水设备 Automation Products/Electrochemical Equipment

33/ <mark>通威食品</mark> Tongwei Food 33/ 通威食品全产业链 Whole Industry Chain in Tongwei Food

37/ 农业担保 Agricultural Guarantee

38/ 新能源板块 New Energy Sector

39/ 永祥股份 Yongxiang Co., Ltd.

43/ 通威太阳能 Tongwei Solar

47/ 新能源终端 New Energy Terminal

50/ 通威 "渔光一体" Tongwei Fishery & PV Integration

52/ 通威现代渔业产业园 Tongwei Modern Fishery Industrial Park

57/ **》** 领导关怀 Care from the Leaders

交流合作 Communication and Cooperation

65/ **》** 奉献社会 Contributing to Society

7/ **》** 大事记 Events



十一届全国政协常委 Eleventh CPPCC Standing Committee

民建中央常委People's Republic of China Central Standing Committee

全国工商联新能源商会执行会长 Executive Chairman in New Energy Chamber of Commerce of ACFIC

● 中国投资协会民营投资委员会副会长
Vice chairman of China Investment Association Private Investment Committee

● 优秀中国特色社会主义事业建设者
Outstanding Chinese characteristics of the cause of socialism builders

全国杰出青年企业家 National Outstanding Young Entrepreneur

全国民营企业家杰出代表 National outstanding representative of private entrepreneurs

全国人大代表
Deputy to the National People's Congress

中国饲料工业协会常务副会长 Executive vice president of China Feed Industry Association

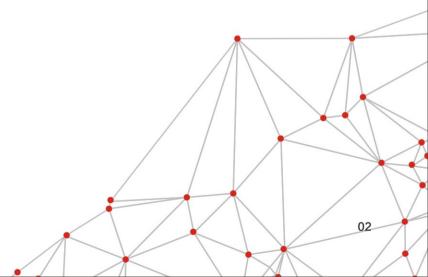
最具世界影响力的中国企业领袖 The most influential Chinese business leaders

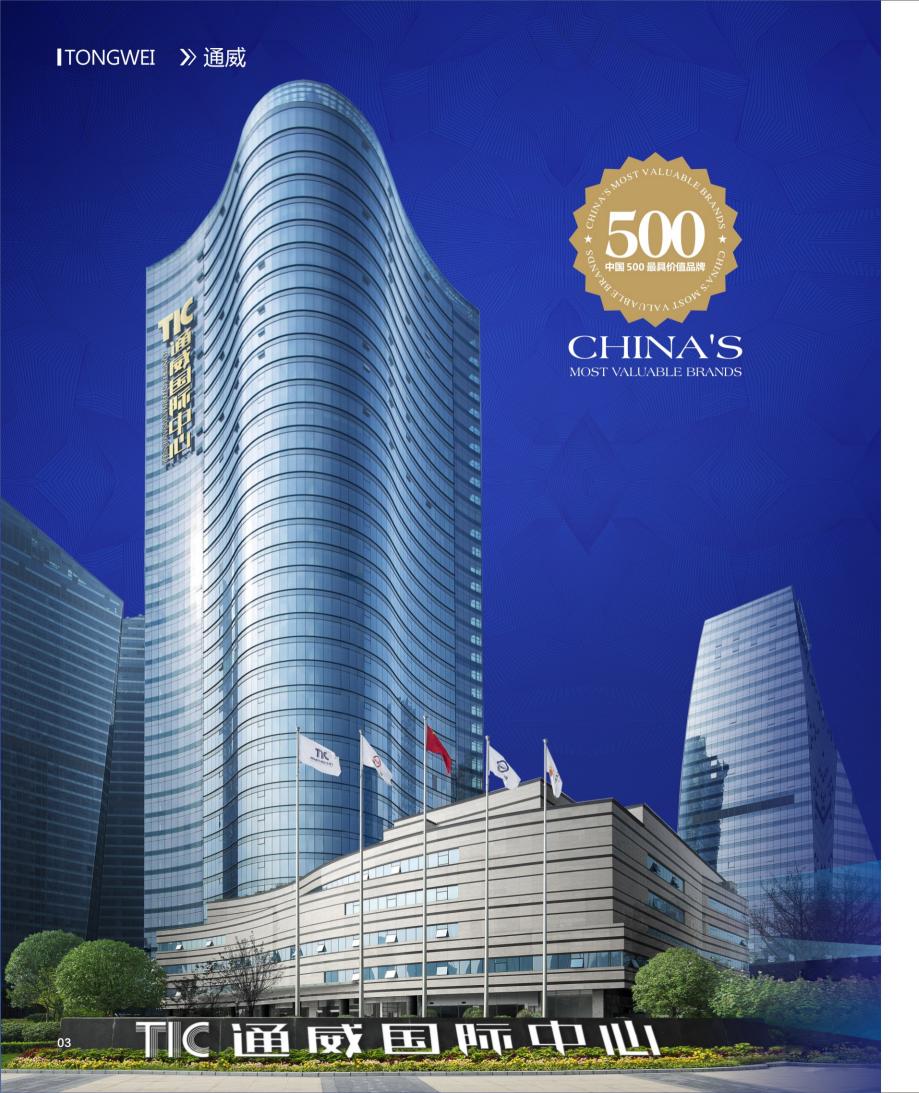
● 中国十大优秀民营企业家

全国十大民营企业家
The Top ten private entrepreneurs

全国饲料工业先进工作者
National feed industry advanced worker

● 全国星火科技标兵
National Spark technology pacesetter







通威股份董事长谢毅 Xie Yi, Chairman of Tongwei Co., Ltd.

COMPANY PROFILE

>> 企业概况

通威股份有限公司是由通威集团控股,以饲料工业为主,同时涉足水产研究、水产养殖、动物保健、食品加工等相关领域的大型农业科技型上市公司(股票代码:600438),系农业产业化国家重点龙头企业。目前,公司拥有遍布全国各地及东南亚地区170余家分、子公司,年饲料生产能力超过1000万吨,是全球主要的水产饲料生产企业及我国重要的畜禽饲料生产企业,是我国农、林、牧、渔板块销售规模位居前列的农业上市公司之一。

目前,通威正秉承"为了生活更美好"的企业 愿景和"追求卓越,奉献社会"的企业宗旨,坚定 不移发展农业和新能源两大主业,其中农业主业以 饲料工业为核心,全力延伸和完善水产及畜禽产业 链条。同时,在新能源主业方面,通威业已成为拥 有从上游高纯晶硅生产、中游高效太阳能电池片生 产、到终端光伏电站建设的垂直一体化光伏企业, 已形成拥有自主知识产权的完整光伏新能源产业链 条,并成为中国乃至全球光伏新能源产业发展的核 心参与者和主要推动力量。 Tongwei Co., Ltd. is a large agricultural science and technology listed company (stock code: 600438) held by Tongwei Group, mainly engaged in the feed industry, and also involved in aquatic research, aquaculture, animal health, food processing and other related fields. It is a national key leading enterprise in agricultural industrialization. At present, the company has more than 170 branches and subsidiaries all over the country and southeast Asia, with an annual feed production capacity of more than 10 million tons. It is a major aquatic feed production enterprise in the world, an important livestock and poultry feed production enterprise in China, and one of the leading agricultural listed companies in sales scale of the agricultural, forestry, animal husbandry and fishery sectors in China.

At present, adhering to the enterprise vision of "For a Better Life" and the enterprise purpose of "Striving for Excellence, Contributing to Society", Tongwei is determined to develop two major industries of agriculture and new energy, in which the main agricultural industry takes the feed industry as the core, making every effort to extend and improve the chain of aquatic and livestock industries. At the same time, in terms of the new energy industry, Tongwei has become a vertically integrated photovoltaic enterprise with the production of high-purity crystalline silicon in the upstream and high-efficiency solar cells in the midstream, as well as the construction of photovoltaic power stations in the terminal. It has formed a complete photovoltaic new energy industry chain with independent intellectual property rights, and has become a core participant and major driving force in the development of photovoltaic new energy industry in China and even in the world.

BUSINESS DISTRIBUTION MAP

>> 通威股份分子公司分布图

预混料片区

四川预混料厂 广东预混料厂

四川通威 长寿通威 昆明通威 昆明分公司 通威特种料 重庆通威 黔西通威

华西片区

华东片区

连云港通威 绍兴通威 淮安通威 扬州通威 大丰通威 江苏巴大 南通巴大 无锡通威 无锡通威特种料 大丰通威分公司

总部直管片

德阳通威 攀枝花通威 蓉崃通威 南通巴大宝鼎 银川通威

合资公司

无锡通威拜欧玛 海为拜欧玛

印尼通威 孟加拉通威

绍兴通威九鼎 茂名通威九鼎 合肥通威九鼎 黄梅通威九鼎

通威太阳能(成都) 通威太阳能(合肥) 永祥股份 永祥多晶硅 永祥新材料 永祥树脂 永祥硅材料 内蒙古通威高纯晶硅 永祥新能源 通威新能源 通威新能源(深圳) 通威新能源(北京) 渔光物联 通威新能源工程设计

华北一区

沈阳通威

华南一区

高明通威

佛山通威

广东通威

惠州通威

清远通威

海壹淡水

厦门通威

揭阳通威

揭阳海壹

动物营养

华南二区

福州通威威廉

哈尔滨通威 长春通威 天津通威

华中二区

华中一区

汉寿通威

合肥通威

常德通威

南昌通威

池州通威

沅江通威

武汉通威

沙市通威

黄冈通威

天门通威

洪湖通威

越南二区

越南海阳通威

越南和平通威

枣庄通威 河南通威 山东通威 淄博通威 廊坊通威

越南一区

华北二区

越南通威 越南前江通威 越南同塔通威

食品板块 新能源板块

成都水产食品 春源食品 海南食品 新太丰食品 成都通威鱼 通威三文鱼 四川食品 通威水产 四川三联水产

海壹种苗

珠海海壹 海南海壹 茂名通威 南宁通威 宾阳通威 海南水产

通威水产科技

南海水产科技 成都水产种苗 动物营养 三新药业 四川渔光物联 通威自动化 海南威尔检测 四川威尔检测 通威实业 西藏实业 通广建设 通威农业担保

南京水产科技



湛江海壹种苗 湛江海先锋 青岛海壬

虾特料片区

其他板块

天门水产科技









QUALIFICATION HONORS

>>> 资质荣誉

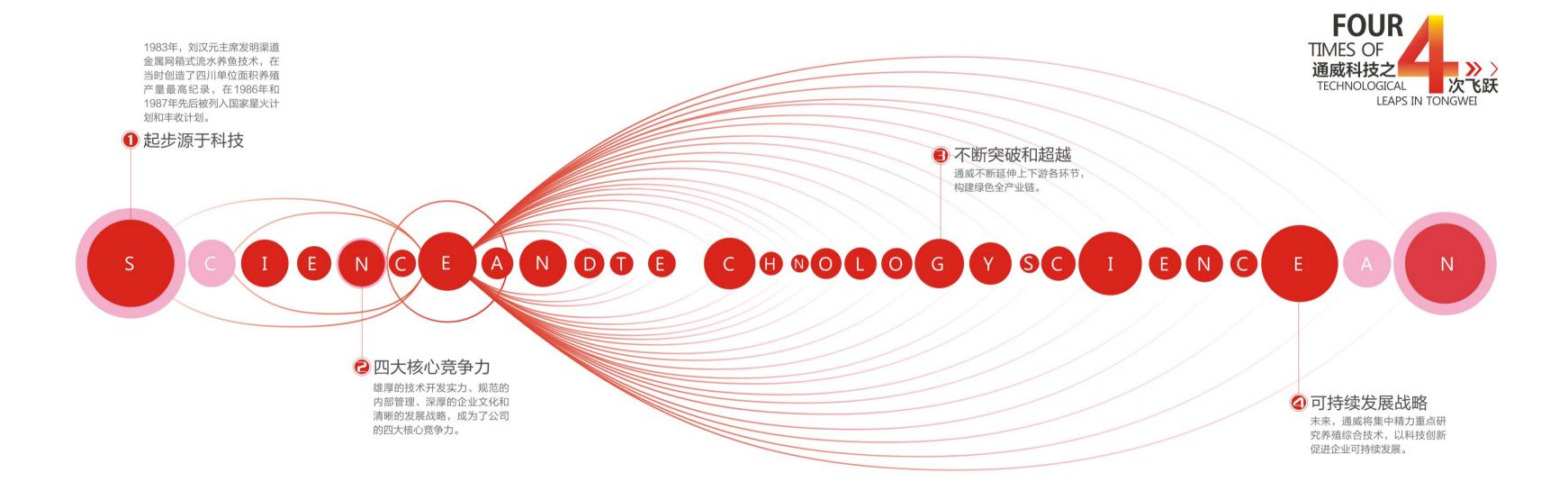
- 中国名牌
- 中国民营上市公司100强
- 中国饲料工业百强企业前十强
- 国家科学技术进步二等奖
- 第二届中国质量奖提名奖
- 中国水产科学院科技进步一等奖
- 农业部全国农牧渔业丰收奖一等奖
- 农业部中华农业科技奖一等奖
- 中国水产学会第三届范蠡科学技术奖二等奖
- 四川省科技进步一等奖
- 广东省农业技术推广奖一等奖
- 吉林省科学技术奖二等奖
- 四川省专利二等奖
- 成都市科技进步一等奖

- China Top Brand
- Top 100 Chinses private listed companies
- Top 10 China 100 Feed production Enterprises
- Second Prize of National Science and Technology Progress Award
- 2nd China Quality Award Nomination
- First Prize of Science and Technology Progress Award from China Academy of Fishery Sciences
- National First Prize of Agriculture, Animal Husbandry and Fishery from Ministry of Agriculture
- First Prize of China Agricultural Science and Technology Award from Ministry of Agriculture
- Second Prize of the third Fan Li Science and Technology Award from China Fishery Society
- First Prize of Sichuan Province Science and Technology Progress Award
- First Prize of Guangdong Province Agricultural Technology Promotion Award
- First Prize of Jilin Province Science and Technology Award
- Second Prize of Sichuan Province Patent Award
- First Prize of Chengdu Science and Technology Progress Award



SCIENCE & TECHNOLOGY

>> 科技力量



TECHNOLOGY CENTER

>> 技术中心

通威股份技术中心是国家认定企业技术中心,拥有水产养殖动物疾病防控技术国家地方联合工程实验室、国家认可实验室、农业部水产畜禽营养与健康养殖重点实验室。专业从事动物良种繁育、动物营养与安全饲料开发、健康养殖与动物保健、动物产品加工、高新生物科技等相关研究和技术集成。同时,中心还承担了部、省、市级科研项目38项,申报专利514项,授权专利414项,参与国家标准、行业标准等17项,荣获2项"国家科学技术进步二等奖"并获得42项部省级、市级等科技奖励。

As a national recognized enterprise technology center, the Technology Center of Tongwei Co., Ltd. is equipped with the National-Local Allied Engineering Laboratory for the Disease Prevention & Control of Aquatic Animals, the National Recognized Laboratory, and the Key Laboratory for the Nutritious and Healthful Aquaculture of Aquatic Livestock of the Ministry of Agriculture and Rural Affairs of the PRC. The Technology Center engages in researches and technology integration related to animal elite breeding, development of nutritious and safe feeds for animals, healthful aquaculture and animal health, animal products processing and biological high technology. Meanwhile, the Technology Center has undertaken 38 scientific research projects at the ministerial, provincial and municipal levels; applied for 514 patents; authorized 414 patents; and participated in 17 national and industrial standards. The Technology Center has been honored 2 "Second Prize of National Science and Technology Progress Award", and 42 science and technology awards at the ministerial, provincial and municipal levels.





TONGWEI RESEARCH

>> 通威研究院 INSTITUTE

通威研究院于2013年4月20日在通威第三届科技大会上正式 挂牌成立。研究院设置专家委员会,中国科学院院士,第三世界 科学院院士朱作言任委员会主任,并聘了请近百名国内外行业知 名专家、学者和高精尖人才,以搭建行业高端学术平台。

Tongwei Research Institute was established on April 20, 2013 at the third session of Science and Technology Conference. Research Institute sets up expert committee, Zhu Zuoyan, the academician from the Chinese Academy of Sciences and the third World Academy of Sciences serves as the director of the committee, and hires nearly 100 domestic and foreign industrial well–known experts, scholars and sophisticated talents are hired to build industrial high–end academic platform.









通威股份荣获2017中国水产科技"年度十大杰出企业" Tongwei Co.,Ltd. won "Annual Top 10 Outstanding Enterprises" of Chinese Aquatic Science in 2017

AQUACULTURERESEARCH INSTITUTE

>> 水产研究所

水产研究所是负责水产营养与养殖模式研究、技术成果应用与转化及为分子公司提供淡水水产饲料设计、配方管理和精准投喂等专业技术支持的部门。现有高工、博士及硕士等研究专员和资深营养师近三十名,在四川、江苏和广东有配属专门的水产研发基地及配套的池塘、网箱及玻璃缸等800余口,连续荣获国家、省市及公司奖励的科研成果10余项。近年正致力于27类淡水鱼健康饲料模块化和高效环保养殖模式的系统研究与产业应用。

Aquaculture Research Institute is a sector proficient in researches into aquaculture nutrition & mode, and application & commercialization of technological achievements, as well as the provision of specialized technical support concerning the design, formula management and precision feeding of fresh water aqua feed for branches or subsidiary companies. At present, nearly 30 research specialists and senior nutritionists including senior engineers, doctors and masters have been employed; and specialized aquaculture R&D bases in Sichuan, Jiangsu and Guangdong, as well as more than 800 supporting ponds, net cages and aquariums have been in place. The Aquaculture Research Institute possesses over 10 scientific achievements successively awarded by the country, province, city and company. Over the past years, the Aquaculture Research Institute has been committed to the systematic research and industrial application of the healthy feed modularization and efficient & environmental–friendly aquaculture mode for 27 species of freshwater fish.







LIVESTOCK & POULTRY

RESEARCH INSTITUTE

>> 畜禽研究所

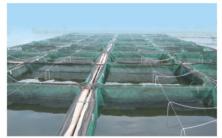
畜禽研究所负责畜禽饲料、相关养殖技术研究,为分子公司提供畜禽饲料产品设计,围绕客户价值最大化提供养殖技术方案。部门现有一支经验丰富的营养师队伍和研究员队伍,分别着力解决市场技术难题和公司中长期技术难题。现已获得专利30余项、荣获国家、省市及公司奖励的科研成果近10项。

Livestock & Poultry Research Institute is responsible for livestock and poultry feed, related farming technology research, providing the livestock and poultry feed product design for the subsidiaries, and aquaculture technology program to maximize the customer's value. It has an experienced nutritionists and researchers team to try to solve the market technical problems and middle and long-term technical problems. It has won more than 30 patents, and nearly 10 scientific research achievements winning the national, provincial and municipal and company awards.











SPECIAL AQUACULTURE RESEARCH INSTITUTE

>> 特种水产研究所

通威特种水产研究所,拥有一支高学历专业技术团队,致力于咸淡水特种鱼、虾、蟹等 动物的营养饲料、养殖模式及疾病防治技术研究和应用推广,目前已完成科研项目百余项, 并取得多项科研成果奖和国家发明专利。

Tongwei Special Aquaculture Research Institute has a highly educated professional technical team dedicated to the research and application promotion of nutrition feed, breeding mode and disease prevention and control technology for the special fish, shrimp, crab and other animals in the brackish water. Currently, it has completed over 100 scientific research projects, won many scientific research awards and national invention patents.

SEAWATER SEEDLING

RESEARCH INSTITUTE

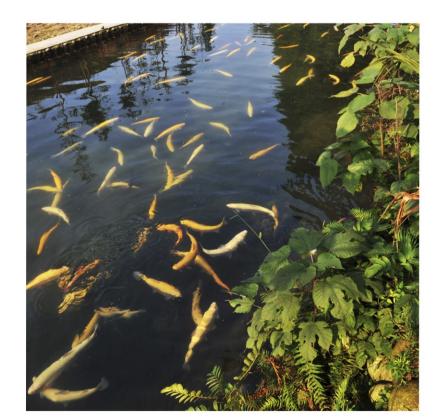
>> 海水种苗研究所







海水种苗研究所主要负责海水种苗繁育技术研究 与创新、海水种苗生产相关产品开发、海水种苗繁育技术生产示范、海水种苗板块生产技术指导、人才培养与培训等方面的工作,致力于提升海水种苗方面研发实力,推动了通威海水种苗板块的快速健康发展。 Seawater Seedling Research Institute is mainly responsible for the research and innovation of seawater seedling breeding technology, the development of related products for the production of seawater seedling, the demonstration of seedling breeding technology production, the technical guidance for the production of aquatic seedling sector, the talent cultivation and training and others, and it is dedicated to improving the research strength of seawater seedling and promoting the rapid and healthy development of Tongwei seawater seedling sector.



三文鱼研究所主要负责三文鱼品种资源、繁殖技术、饲料配方技术、加工研究,以及三文鱼产业模式研究。目前拥有面积为50亩的实验基地,已取得15项授权专利和2项科研成果。研发的银鲑产品被列入2017年成都市地方名优产品推荐目录。

Salmon Research Institute is mainly responsible for the salmon variety resource, breeding technology, feed formulation technology, processing research, and salmon industrial model research. Currently, it has an area of 50 acres of experimental base, won 15 authorized patents and 2 scientific research achievements. The researched salmon products were included in the 2017 Chengdu local famous product recommended directory.

14



ANIMAL HEALTHCARE

RESEARCH INSTITUTE

>> 动物保健研究所

动物保健研究所通过对养殖动物重大、常见疾病防治关键技术的系统研发、成果推广应用逐步实现"以防为主"、"快诊早治"、"合理用药",有效降低了疾病的发生率和死亡率,保证了养殖增产增收。目前,动物保健研究所已在快速诊断、综合防治技术以及疫苗、免疫增强剂、禁用药物替代品研究开发应用方面取得重大突破,并主持参研多项国家重点基础研究项目,已形成科技成果30余项,荣获行业、省市及公司科技成果奖励6项,申请发明专利35项(已授权20项),公开发表论文近60篇。



Animal Healthcare Research Institute realizes the "main prevention, quick and early treatment and reasonable medication" via the systematic research and achievement promotion application of major and common disease prevention and control key technologies for the animal, thus effectively reducing the incidence and mortality rate of the disease, and guaranteeing the increased production and income of farming. Currently, it has made major breakthroughs on the rapid diagnosis and treatment, vaccines, immunopotentiators and banned drug substitutes, participated in many national key basic research projects, and formed over 30 scientific and technological achievements, won 6 industrial, provincial and municipal and company scientific awards, 35 invention patent applications (20 have been authorized) and published nearly 60 papers.



WILLTEST TECHNOLOGY

>> 威尔检测

威尔检测是首家为农牧行业提供全产业链检测服务的第三方检测机构,为农田到餐桌每一个环节严格把关。公司配备了价值 5000余万元的仪器设备,50%以上员工具有中高级职称。公司是农业农村部和四川省重点实验室,主持或参与了20余项国家标准和行业标准制修订项目,已授权专利20余项、发表论文40余篇、出版译著1部,通过FAPAS、LGC、CNAS、CMA和CATL等组织的国内外能力验证400余项。威尔检测已获得CNAS、CMA、CATL资质,是农业农村部饲料和饲料添加剂检测任务承检机构、农业农村部授权的水产品抽检机构,威尔检测出具的检测报告在全球70余个国家和地区互认。

Willtest Technology Co., Ltd. is the leading independent third-party testing institution in agriculture industry, which provide professional testing services from farm to table. Willtest has equipped with 50 million RMB sophisticated analytic instruments, and more than 50% qualified staffs have engineer or senior engineer degree. Willtest is the key laboratory of the Ministry of Agriculture and Rural Affairs, and the key laboratory of Sichuan province. Willtest has been in charge of 20 sets of national standards or industry standards, granted 20 patents, published 40 papers and 1 monograph, and passed 400 proficiency testing organized by FAPAS, LGC, CNAS, CMA and CATL. Willtest has achieved the following certificates: CNAS, CMA and CATL. Willtest has been authorized the Testing Institution of feed and feed additive, aquatic product by the Ministry of Agriculture and Rural Affairs. The test reports issued by Willtest are recognized globally.











FACILITY FISHERY

ENGINEERING INSTITUTE

>> 设施渔业工程研究所

通威设施渔业工程研究所遵循环保、生态、低碳的理念,立足水产和畜禽养殖一线,开展关键性问题攻关研究。创新研发了包括池塘底排污、生态电化水、"渔光一体"设施养殖、池塘内循环流水养殖、箱式循环水养殖、陆基圆形池循环水养殖、畜禽养殖环境控制、饲料加工环境控制等在内的多项成果,先后承担省部级等政府科研项目30余项(其中7项经科技成果被鉴定为国际先进、国内领先水平),获国家授权发明专利18件、实用新型专利30件,政府科技成果奖16项,发表SCI和国内一级学术期刊论文30余篇。研究所还取得了农业综合开发生态工程资质(乙级),可对外提供现代渔业园区规划、循环水系统安装、农业机械推广、水产养殖技术指导等业务。





The Facility Fishery Engineering Institute of Tongwei Co., Ltd. has been insisting on the concept featuring environmental protection, ecology and low carbon, engaging in the front lines of aquaculture and livestock breeding, and implementing studies to solve crucial problems. The Facility Fishery Engineering Institute has meanwhile creatively researched and developed such achievements as pond bottom pollution discharge, ecological electrochemical water, "Fisheries and PV Integration" facility aquaculture, inner-pond recirculating aquaculture, box-type recirculating aquaculture, land-based circular pond recirculating aquaculture, livestock breeding environmental control, and feed processing environmental control; successively undertaken over 30 governmental scientific research projects at the provincial and ministerial levels (including 7 authenticated as internationally advanced and domestically leading levels); obtained 18 national authorized patents for invention, 30 patents for utility models, and 16 Government Scientific Achievement Awards; and published over 30 theses on SCI and domestic first-class academic journals. The Institute has also obtained the Grade B Qualification of Ecological Engineering for Comprehensive Agricultural Development, enabling it to provide businesses such as the planning of modern fishery parks, installation of circulating water system, promotion of agricultural machinery and technical guidance of aquaculture.

AQUATIC ENGINEERING TECHNOLOGY RESEARCH CENTER 》水产工程中心





水产工程技术研究中心作为通威种苗研发中心,积极与政府部门、科研院所、高校和企业展开合作,在成都、眉山、佛山等地设多个基地,以鲤鱼、鲫鱼、草鱼、鲈鱼、斑点叉尾鮰、黄颡鱼、罗非鱼等为研究对象,开展了苗种繁育、遗传育种、种质鉴定、良种培育、技术推广及部分营养学等方面的研究,同时为市场提供优质苗种。

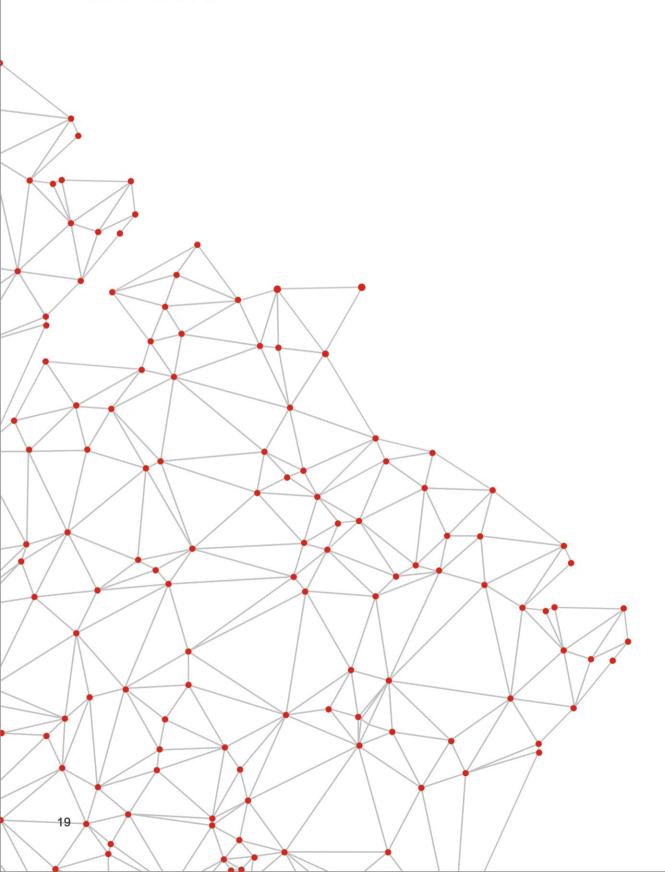
As a R&D center of Tongwei for fingerling breeding, the Aquatic Engineering Technology Research Center has actively made joint efforts with government departments, scientific research institutes, colleges and enterprises to establish numerous bases in Chengdu, Meishan, Foshan and other places. With carp, crucian carp, grass carp, perch, channel catfish, yellow catfish, tilapia and other fishes as research objects, researches have been carried out in these bases in such aspects as fingerling breeding, genetic breeding, germplasm identification, improved variety cultivation, technology promotion and nutrition. Quality fingerling are provided for the market as well.

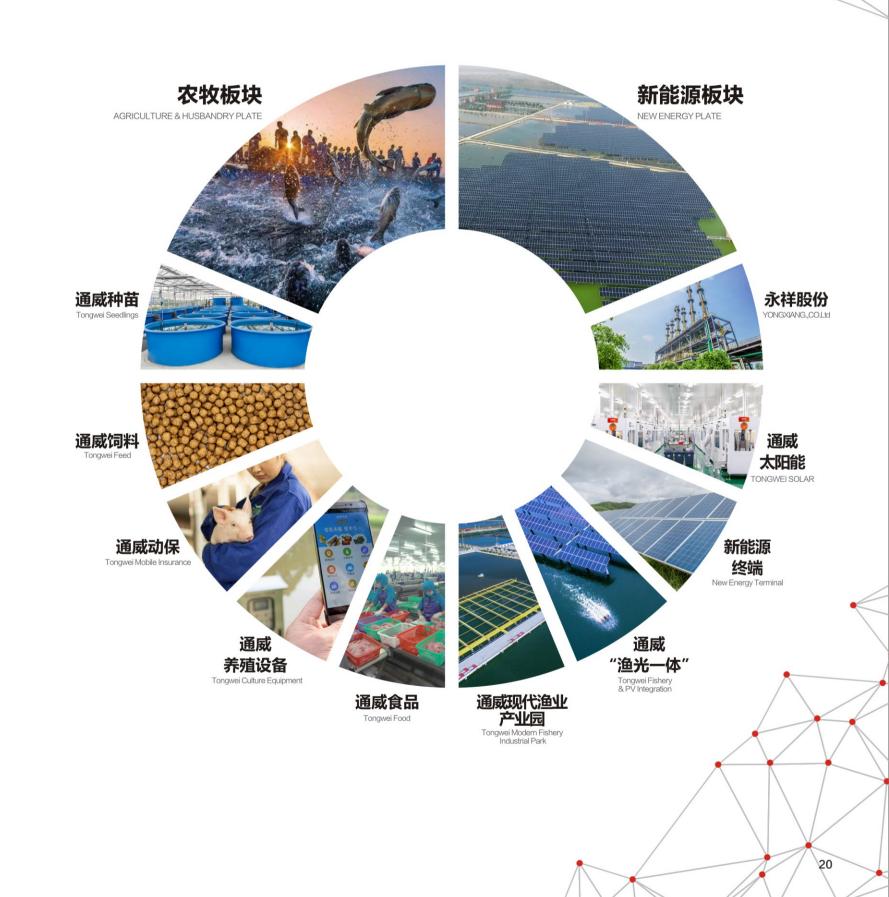


改善人类生活品质 成就世界水产品牌 Enhancing Life Quality Of Mankind By Creating A World-class Brand Of Aquatic products

INDUSTRY DISTRIBUTION

>> 产业布局





农牧板块 AGRICULTURE SECTOR

通威种苗 • 通威饲料 • 通威动保 通威养殖设备 • 通威食品



SEED BREEDING

>> 苗种繁育

通威水产工程技术中心原种场经过多年的选育和研究,在斑点叉尾鮰、鲤鱼以及鳊鱼的苗种方面取得重大成果。同时,通威通过与中科院水生态所、武汉水科所、上海松江研究所以及湖南农大等研究单位战略合作,共同推出和推广大量生长速度快、抗病力强的优质苗种。

海南海壹水产种苗有限公司坚持准生态培育种苗的理念,坚持只做优质"一代苗",并制定标准化"5A虾苗"技术规范,在海南、广东、浙江等地育苗水体近3万立方,年可生产无节幼体400亿尾,培育虾苗近200亿尾,虾苗遍销全国各地市场。

The original field of Tongwei Aquatic Engineering Technology Center has made significant achievements on the channel catfish, carp and bream fish seed via many years' breeding and research. Meanwhile, Tongwei has jointly launched and promoted a large number of high-quality seed with fast growth speed and disease resistance via the strategic cooperation with Chinese Academy of Sciences Institute of Water Ecology, Wuhan Institute of Water Research, Shanghai Songjiang Institute and Hunan Agricultural University and other research units.

Hainan Sea One Aquatic Seedling Co.,Ltd. adheres to the concept of quasi-ecological cultivation of seedlings and high-quality "generation of seedlings", formulates the technical specifications of standardized "5A shrimp", nurses nearly 30,000 cubes of water for seedlings in Hainan, Guangdong, Zhejiang and others with the annual production of naive larvae of 40 billion and nearly 2 billion shrimps, and the shrimps are all over the market in the country.





FRESHWATER SEEDLINGS

>> 淡水种苗

和一个示范基地,主要从事水产优质品种及新品种选 育,技术成果转化、推广。主要品种有:建鲤、纯系 草鱼、乌鲫、异育银鲫"中科3号"、黄颡鱼"全雄 1号"、团头鲂"浦江1号"、吉富罗非鱼"中威1 基础上均进行了二次选育,其中吉富罗非鱼"中威 1号"和翘嘴鳜"华康1号"是通威自主研发,拥有自 主知识产权的国家级新品种。

通威淡水种苗拥有三个自营的核心研发生产基地 Tongwei Freshwater Seedlings has three self-employed core R&D and production bases and a demonstration base engaged in the aquatic qualified variety and new variety breeding, technological achievement transformation and promotion. The main varieties include Jian carp, pure grass carp, black crucian carp, allogynogenetic silver crucian carp "Zhongke No.3", Pelteobagrus fulvidra "Quanxiong No.1", head 号"、翘嘴鳜"华康1号"等,通威在各优良品种的 bream "Pujiang No.1", Kyrgyzstan Lu tilapia "Zhongwei No.1", Alice mouth Siniper "Huakang No.1" and others. Tongwei has made the second breeding based on the fine varieties, Kyrgyzstan Lu tilapia "Zhongwei No.1" and Alice mouth Siniper "Huakang No.1" are researched by Tongwei independently with the independent intellectual property right.





H.BEST 5A SHRIMP SEED >>> 海壹5A虾苗



1. 严格检测:全程对育苗水进行监测,出苗前26项检测指标综合判定虾苗质量。

2. 洁净水质: 大投入配套充足的水处理池和完善的水处理设备, 水处理工艺科学先进。

3. 平衡生态: 禁用抗生素药物, 合理选用有益微生物, 维持平衡稳定的微生态系统。

4. 新鲜活饵:采用角毛藻、海链藻、轮虫、卤虫等生物活饵,保证幼苗的活性营养供给。

5. 精心呵护:注重育苗操作的细节,出苗、运输环节的每一个节点标准化,降低虾苗应激。

- 1. Strict testing: monitor the nursery water in the whole process, and comprehensively judge the quality of shrimp via 26 test indicators before the sprouting.
- 2. Clean water quality: Invest the adequate supporting water treatment pool and perfect water treatment equipment, the water treatment technology is scientific and advanced.
- 3. Balanced ecology: the antibiotics are forbidden, rationally use the beneficial micro organism, maintain the balanced and stale micro ecosystem.
- 4. Fresh live bait: use the Chaetoceros, sea algae, rotifer, Artemia and other biological live baits, and ensure the active nutrition supply
- 5. Careful care: focus on the details of nursery operation, standardize each node in the emergence and transportation link, and reduce the shrimp stress.

AQUACULTURE FEED

>> 水产饲料

通威水产饲料是利用几代研究人员的潜心研究成果与实践经验和成果精制而成,代表了当今我国水产饲料的 最高水平,销量居全国榜首。它包括了淡水养殖、海水养殖在内的多个饲料产品,适合于不同的养殖条件和养殖 品种。

Tongwei Aquaculture Feed is made from several generations of researchers' painstaking research achievements and practical experience and results, thus representing the highest level at current aquaculture feed in China with the top sales. It includes many feed products including the freshwater aquaculture and mariculture, and it is suitable for different breeding conditions and breeding species.



特种水产饲料产品主要有南美白对虾配合饲料、斑节对虾配合饲料、鲈鱼料、生鱼料、河豚料、金鲳鱼 料、河蟹料、蛙料、罗氏沼虾料、日本沼虾料等多个品种。

The special aquatic feed products include South American white shrimp matching feed, spotted shrimp matching feed, bass material, raw fish material, puffer material, gold pomfret fish, crab material, frog material, Macrobrachium material, Japan expound material and other varieties.







LIVESTOCK & POULTRY FEED

>> 畜禽饲料



通威畜禽料针对畜禽的不同品种(猪、鸡、鸭、奶牛)、生长阶段和不同地域 特性设计而成,是结合公司多年来的研发成果及国内外研究进展的结晶,重点关注养 殖效益,具有安全、养殖全程性价比最优的特点,主要包括配合饲料、浓缩饲料、预 混料等三大系列。

Tongwei Livestock & Poultry Feed is designed according to different varieties (pig, chicken, duck, dairy cow), growth stage and different geographical feature of the livestock and poultry combined with years' research achievements in the company and domestic and foreign research progresses. It mainly focuses on the farming efficiency featured with the safety and optimal cost-effective farming process. It mainly includes three major series of matching feed, concentrated feed and premix feed.



PREMIX FEED >> 复合预混料

通威系列复合预混料及功能 性预混料秉承了"通威"牌配合 饲料的特点,在使用时,由成都 通威动物营养科技公司专业技术 人员根据用户的实际情况,针对 性地设计实用的参考配方,确保 用户获得优质的畜禽、水产产品 以及高效的生产性能和更大的经 济效益。



Tongwei series of premix and functional premix adhere to the feature of Tongwei matching feed. When using, the professional technician from Chengdu Tongwei Animal Nutrition Technology Company designs the targeted practical reference formula according to user's actual situation, and ensures that the user gets the high-quality livestock and poultry, aquatic product, efficient production performance and greater economic



优良的通威饲料原料是品质的保障 Excellent Tongwei feeding raw material is the guarantee for the quality.

AQUACULTURE LIVESTOCK & POULTRY SPECIAL SERVICE → 水产/畜禽特色服务

科技服务 科技比武

Techonlogy Based service and Contest

为彰显通威股份"科技的力量",长期与国内顶尖知名专家展开合作,聘请行业内资深人士对用户进行专业技能培训,形成以股份一片区一公司为主体的"三级技术服务体系"。

同时,通威一直致力于打造具有通威特色的"专业化技术服务团队",所有营销服务人员配备先进的服务工具——"通威科技箱",并在全国建立100余个药敏实验室,全面开展以终端用户服务为中心的"科技大比武",每年举行超过3000场以上的创富技术培训会,为广大养殖户进行全方位服务,提供完善的技术解决方案,让通威"随时随地服务于您"成为广大养殖户信心的保障。





In order to highlight the "power of science and technology", Tongwei Co.,Ltd. carries out the cooperation with the domestic famous experts for a long time, hires the industrial veterans to make the professional skill training for users, and form the "three technical service system" of share-area-company.

Meanwhile, Tongwei has been committed to creating a "professional technical service team" with Tongwei feature, all marketing service staff are equipped with the advanced service tools— "Tongwei technology box", more than 100 drug sensitivity laboratories are set in the whole country to fully carry out the "technology contest" with the center of terminal user service. Over 3000 capital investment technical trainings are held at each year to fully serve the majority of farmers and provide the perfect technical solution, thus making Tongwei's "serving for you at any time anywhere" as the guarantee for the majority of farmers.









AQUACULTURE LIVESTOCK

& POULTRY SPECIAL SERVICE

>> 水产/畜禽特色服务

成都通威三新药业有限公司是集科研、生产、销售、服务于一体的大型兽药企业,总投资 5千多万元,主要生产、批发、零售,兽药、饲料药物添加剂、微生态制剂及动物健康用品;拥有通过兽药GMP认证的粉针、水针、粉散剂、消毒剂、口服液等5个现代化的加工车间和10条工艺先进的生产线。三新药业是最早通过国家GMP认证国家通过GMP的药业公司之一,2016年再次通过复检,获得中华人民共和国兽药GMP证书,并先后获得《十大安全渔药品牌》,《中国农牧业十大渔药品牌》,《十大绿色调水品牌》,《年度十大动物保健企业》等荣誉。

Chengdu Tongwei Sanxin Pharmaceutical Co.,Ltd. is a large-scale veterinary pharmaceutical enterprise integrating the scientific research, production, sales and service with the total investment of more than 50 million yuan. The veterinary medicine, feed drug additive, microecological preparation and animal health supplies are mainly produced, wholesaled and retailed; It has 5 modern processing workshops of needle, water needle, powder, disinfectant and oral liquid certified by veterinary drug GMP and 10 production lines with advanced technology. Three New Medicine is one of the first batches of medicine companies passing the national GMP certification. It passed the re-examination again in 2016, and won the veterinary drug GMP certificate in People's Republic of China. It has won Top Ten Safe Fishing Drug Brand, Chinese Farmers Animal Husbandry Top Ten Fishing Drug Brand, Top Ten Green Water Transfer Brand, Annual Top Ten Animal Health Enterprise and other honors.



Ingredients of Tongwei's health products for aquatic animals are mainly composed of traditional Chinese medicine or microecologics without any antibiotics. The using principle is to "prevent disease first and persist in feeding aquatic animals with health products and conducting water quality control". The water quality control is carried out to prevent diseases. By using biological health products, the immunity of aquatic animals can be improved, thus reducing the occurrence of diseases. Currently, Tongwei's plan of "controlling water quality to prevent diseases" has been implemented in 58 aqua feed sales companies, benefiting an aquaculture water area of over one million mu. As a result, the good water environment has been maintained, the incidence of diseases and the use of antibiotics effectively reduced, and the quality of aquatic products improved.

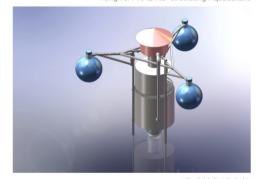
通威动保产品多以中药提取或微生态制剂为主要成分,不添加抗生素,并提出"以防为主、内服保健、外用调水"的使用原则。调水防病开展在发病之前,以预防保健为主,通过生物型保健产品的使用,提高水产养殖动物免疫力,减少疾病的发生。目前,通威调水防病方案已经覆盖旗下58家水产饲料销售公司,惠及数百万亩养殖水面,用以保持水环境优良,切实降低疾病发生和抗生素使用的机率,提高水产品品质。

TONGWEI AUTOMATION

>> 通威自动化



通威PRAS循环水养殖

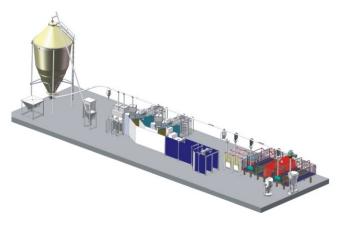


通威养鱼活水机 Tongwei Raising-fish Fresh Water Machine



深海网箱投料

成都通威自动化设备有限公司是一家致力于提高养殖行业自动化 水平、智能化程度的国家高新技术企业。公司主要从事水产养殖设备、 畜牧养殖设备、饲料行业电控设备的研发、生产、销售。现有各类专业 技术人员40余人,各类专利40余项。



31

全自动猪场饲喂系统——"饲养家"



饲养家猪场设备

Chengdu Tongwei Automation Equipment Co.,Ltd. is a national high-tech enterprise dedicated to improving the automation level and intelligence level in the aquaculture industry. The company mainly engages in the research, production and sales of aquaculture equipment, livestock breeding equipment and feed industry electronic control equipment. There are more than 40 professional technicians and over 40 patents in each

AUTOMATION PRODUCTS

ELECTROCHEMICAL EQUIPMENT

>> 自动化产品/电化水设备

通威自动化设备有限公司先后推出了可实现猪场自动化管理的 "饲养家"牌猪场管理设备;水产养殖行业内的第一款正压风送式投饵 机;第一台水产养殖用改底机;第一套可自由移动的曝气装置;面向深 海网箱养殖客户的深海网箱养殖投料解决方案; 2016年, 与通威水产 科技公司共同推出通威PRAS池塘循环水养殖模式,具有节水节地、生 产稳定、单位产出耗电低、高产环保等特点。

通威电化水项目创新研发一种生态电化水综合水处理设备体系, 该体系以电气浮、电催化、电子轰击、高压脉冲电场处理、电化学反 应、超声雾化和超声空化等技术为核心,以物理方式代替化学药品实现 杀菌、灭藻、除虫、增氧、改良水质、节能减排,不产生二次污染。国 内首创生态电化水成套装备及技术应用于水产养殖产业链,为水产品质 量安全提供保障。



通威正压风送式投饵机

Tongwei Automation Equipment Co., Ltd has launched the "breeder" brand pig farm management equipment realizing the automated management, first positive pressure wind-fed feeding machine in the aquaculture industry, first aquaculture change, first set of free-moving aeration device; and deep-sea cage culture feeding solution for the deep-sea cage culture customers; In 2016, it launched Tongwei PRAS pond circulating water culture model jointly with Tongwei Aquatic Technology Company featured with water and land saving, stable production, low unit output power consumption, high yield and environmental protection.

Tongwei Electrochemical Project researches a kind of ecological electrochemical comprehensive water processing equipment system innovatively. With the core of electric floatation, electrocatalysis, electron bombardment, high voltage pulsed electric field treatment, electrochemical reaction, ultrasonic atomization and cavitation and others, the chemical drug is replaced by the physical drug to realize the sterilization, algae removal, de-worming, oxygen, improved water quality and energy saving, and the secondary pollution is not produced. The application of China's first eco-electrochemical water equipment and technology on the aquaculture industry chain can provide the guarantee for the quality and safety of aquatic product.



通威空气净化处理机



通威干雾空间灭菌机



通威渔用净化器



WHOLE INDUSTRY CHAIN

IN TONGWEI FOOD

>> 通威食品全产业链

通威股份旗下的通威食品以打造世界级健康安全食品供应商为宗旨,致力于为消费者提供健康安全的优质产品。通威食品主要涉足水产、畜禽两大领域,为确保每一款产品的健康安全,多年来全力整合产业资源,不断延伸并完善水产和畜禽的两大产业链条,全面实现从育种、养殖到加工,再到销售的每一个环节的全程品质管控。

通威食品已在全国建立了十万余亩通威鱼绿色无公害养殖基地,打造了中国第一条品牌鱼"通威鱼",并在四川、海南等地建有水产食品加工基地,严格按照HACCP质量管理体系、欧盟及美国FDA卫生注册的要求加工生产,每一个环节都有严格的检测和控制,确保卓越的产品品质,真正实现全产业链管理,提供安全健康食品。

公司通过产业的垂直整合与延伸,从饲料到育种,从养殖场到终端销售,整个供应链上各环节进行全面监督管控,系统保障了食品的安全,为消费者建立了全程可追溯系统平台,实现了"源头到餐桌"的全程质量监控和追溯,全面提升产业链价值和竞争力

With the purpose to create the world's health and safety food supplier, Tongwei Food under Tongwei Co.,Ltd. is dedicated to providing the health and safe high-quality products for customers. Tongwei Food mainly involves the aquatic, livestock and poultry. In order to ensure the health and safety of each product, it has fully integrated the industrial resource, constantly extended and perfected the two major industrial chains of aquatic product, livestock and poultry, and fully realized the whole-process quality management and control from the breeding to farming, processing and sales for many years.

Tongwei Food has established over 100,000 acres of Tongwei fish green pollution-free breeding base in the country, created the first brand fish of "Tongwei fish" in China, and set up the aquatic food processing base in Sichuan and Hainan and others. The processing and production are according to the HACCP Quality Management System, European and US FDA health registration requirements strictly. Each link has the strict testing and control to ensure the excellent product quality, truly realize the whole industrial chain management, and provide the safe and healthy food.

Via the vertical integration and extension of industrial chain, each link in the whole supply chain is fully supervised and monitoring from the feed to breeding and from the farm to the sales terminal. The system guarantees the food safety. The whole-process traceability system platform is established for the consumers, thus realizing the whole-process quality monitoring and trace from the source to the table, and fully improving the industrial chain value and competitiveness.



通威食品 安全健康 TONGWEI FOOD SAFETY AND HEALTH

通威食品,产销一体化,从源头到餐桌 Tongwei food, production and sales integration, from the source to the table

WHOLE-PROCESS TRACEABILITY

>> 全程可追溯

公司通过产业链的垂直整合与延伸,从饲料到育种,从养殖场到销售终端,整个供应链上 各环节进行全面监督监控,系统保障了食品的安全,为消费者建立了全程可追溯系统平台,实 现了"源头到餐桌"的全程质量监控和追溯,全面提升产业链价值和竞争力。

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新能源板块 LNEW ENERGY SECTOR

永祥股份 • 通威太阳能 • 新能源终端



通威农业融资担保有限公司是四川省第一家由民营企业注资成立的专业从事农业融资的担保公司。公司定位于服务通威 股份产业链,在为终端养殖户、经销商提供融资服务的同时为主业信用销售提供风险控制手段,从而促进主业的快速健康发 展。截止2016年末,公司累计为通威产业链下游客户完成融资担保近20亿元,取得了较好的经济效益和社会效益。

Tongwei Agricultural Financing Guarantee Co.,Ltd. is the first professional guarantee company engaged in the agricultural financing invested by the private enterprise in Sichuan Province. The company is located to serve the industrial chain of Tongwei Co.,Ltd., provide the risk control means for the main industry credit sales when providing the financing service for the end farmers and dealers, thus promoting the rapid and healthy development of the main industry. Until the end of 2016, the company completed nearly 2 billion yuan of financing guarantee for the customers at the downstream of Tongwei industrial chain, achieved the better economic benefit and social benefit.





YONGXIANG CO.,Ltd.

>> 永祥股份

永祥股份致力于打造和完善化工及新能源产业链, 实现了从"盐卤、烧碱、聚氯乙烯到电石渣水泥"和从 "氯化氢、三氯氢硅到多晶硅新能源"的新能源与化工 完整结合的循环经济产业链。永祥历经四次技改升级, 不断研发突破,在技术、工艺、设备等方面持续保持领 先优势,成本和能耗水平进一步大幅下降,满足P型和 N型单晶需求,部分质量达到半导体电子级晶硅水平。 2018年,位于乐山的四川新能源公司和位于包头的内蒙 古通威项目建成后,永祥股份高纯晶硅产能达到8万 吨,跻身于全球第一军团。 Yongxiang Co., Ltd. is committed to building and improving the industrial chain of chemical engineering and new energy, realizing a circular economy industrial chain that integrates new energy and chemical engineering from "bittern, caustic soda, polyvinyl chloride to carbide slag cement" and from "hydrogen chloride, trichlorosilane to polysilicon new energy". Yongxiang has gone through four technological upgrading and continuous R&D breakthroughs. It has maintained its leading edge in technology, process and equipment. Its level of cost and energy consumption has further decreased dramatically to meet the needs of P-type and N-type single crystals. Some of its quality has reached the level of semiconductor electronic grade crystalline silicon. In 2018, after the completion of Sichuan New Energy Company in Leshan and Inner Mongolia Tongwei Project in Baotou, Yongxiang's high purity crystalline silicon production capacity reached 80,000 tons, ranking first in the world.







YONGXIANG HIGH-PURITY

CRYSTALLINE-SILICON

>> 永祥高纯晶硅

四川永祥多晶硅有限公司位于乐山五通桥,周围有丰富的水、电、盐卤、石灰石、工业硅等资源,是全国唯一一家 化工与清洁能源结合的企业,是首批获得国家工信部《光伏制造行业规范条件》企业。

永祥注重高纯晶硅生产技术的研发,高纯晶硅产品纯度达到或超过99.9999999%,全面满足P型单晶、N型单晶硅 片使用要求,部分达到电子级半导体水平,是半导体工业、电子信息产业以及太阳能光伏产业最重要、最基础的功能性 材料。

目前,公司已打造出了全球单体规模最大、综合能耗最低、技术集成最新、品质最优的生产线,已形成8万吨高纯 晶硅产能,位于全球前三,各类指标和成本行业领先。2018年10月和12月,位于包头、乐山的高纯晶硅项目先后顺利投 产,随着两个项目分别于2018年12月、2019年2月成功出炉高纯晶硅正品,将进一步缓解国内进口依赖,实现高纯晶硅 "中国制造"。

Sichuan Yongxiang Polysilicon Co., Ltd. is located in Wutongqiao, Leshan, surrounded by abundant water, electricity, bittern, limestone, industrial silicon and other resources. It is the only enterprise in China that combines chemical industry with clean energy, and is also one of the first batch of enterprises to obtain the Standard Conditions for Photovoltaic Manufacturing Industry issued by the Ministry of Industry and Information Technology.

Yongxiang attaches great importance to the R&D of high purity crystalline silicon production technology. The purity of high purity crystalline silicon products reaches or exceeds 99.9999999%, which fully meets the requirements of P-type and N-type single crystal silicon wafers. Some of the products reach the level of electronic semiconductor, and are the most important and basic functional materials in the semiconductor industry, electronic information industry and solar photovoltaic industry.

At present, the company has built a production line with the largest individual building scale, the lowest comprehensive energy consumption, the latest technology integration and the best quality in the world, and has formed 80,000 tons of high purity crystalline silicon production capacity, ranking the top three in the world, and leading the industry in various indicators and costs. In October and December 2018, the high purity crystalline silicon projects in Baotou and Leshan were successfully put into operation. With the successful production of high purity crystalline silicon products in December 2018 and February 2019 respectively, the domestic import dependence will be further alleviated and the high purity crystalline silicon "made in China" will be realized.





TONGWEI SOLAR

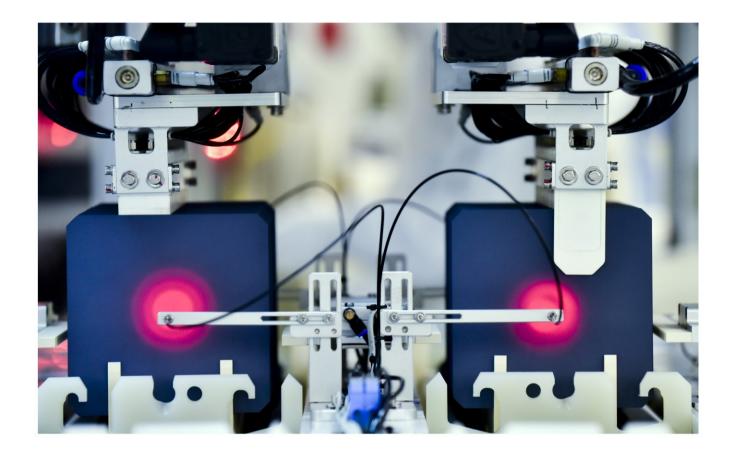
>> 通威太阳能

通威太阳能有限公司深度切入太阳能发电核心设备和产品的研发、制造和推广,旗下拥有合肥、成都两大生产基地。2017年9月20日,通威太阳能世界首条工业4.0高效电池片生产线正式投产,标志着通威制造正式步入工业4.0时代,树立了行业智能制造的新标杆。自2014年满产以来,截至2019年5月,通威太阳能实现连续57个月持续盈利、连续57个月满产满销、连续57个月开工率100%,获得全球前5大组件企业连续4年全球电池片最佳供应商、电池片免检,连续4年实现全球电池品质最优,刷新了光伏行业新纪录。

Tongwei Solar Energy Co., Ltd. is deeply involved in the R&D, manufacture and promotion of solar power generation core equipment and products. It has two major production bases in Hefei and Chengdu. On September 20, 2017, the world's first Industry 4.0 high-efficiency battery production line of Tongwei Solar Energy was officially put into operation, marking that Tongwei manufacturing formally entered the Industry 4.0 era, setting a new benchmark for intelligent manufacturing in the industry. Since its production in a full capacity in 2014, as of May 2019, Tongwei Solar Energy has achieved continuous profits, full production and sales, and a 100% operating rate for 57 consecutive months. It has won the world's top five component enterprises, the best supplier of global batteries and exemption from inspection for 4 consecutive years. It has achieved the best global battery quality for 4 consecutive years, setting a new record in the photovoltaic industry.











TONGWEI SOLAR

>> 通威太阳能

通威太阳能有限公司拥有全球单体规模最大的太阳能电池生产基地以及全球自动化程度最高、单车间产能规模最大的高效晶硅电池生产 线。截至目前,通威太阳能电池片产能已达到13GW,产能规模全球第一,电池片平均转换效率最高可达22.15%。未来1-3年,通威太阳能电池 片环节产能有望超过30GW,进一步夯实其全球最大、最具竞争力和影响力的太阳能电池片生产企业地位。

Tongwei Solar Energy Co., Ltd. has a solar cell production base with the largest individual building scale in the world and a high-efficiency crystalline silicon cell production line with the highest degree of automation and the largest single workshop capacity in the world. Up to now, the capacity of Tongwei solar cells has reached 13GW, and its capacity scale ranks first in the world. The average conversion efficiency of solar cells is up to 22.15%. In the next 1–3 years, the capacity of Tongwei solar cells is expected to exceed 30GW, further consolidating its position as the world's largest, most competitive and influential solar cell manufacturer.

NEW ENERGY TERMINAL

>> 新能源终端

通威股份以自主筹建、联合开发及兼并收购等形式,积极发展"渔光一体"项目及农光互补地面电站,成立了包括通威新能源有限公司、通威惠金新能源有限公司、深圳新能源有限公司、通威渔光一体科技(北京)有限公司等专注光伏发电项目开发的公司。

Tongwei Co.,Ltd. actively develops "Fishery & PV integration" project and agricultural light complementary ground power station via the self-preparation, joint development, merger and acquisition, and establishes the companies focusing on the photovoltaic power generation project including Tongwei New Energy Co.,Ltd., Tongwei Huijin New Energy Co.,Ltd., Shenzhen New Energy Co.,Ltd. and Tongwei Fishery & PV Integration Technology (Beijing) Co.,Ltd. and others.







现代渔业 MODERN FISHERY

通威"渔光一体" • 通威现代渔业产业园

通威365养殖模式 • 内循环养殖模式

箱式循环水养殖模式



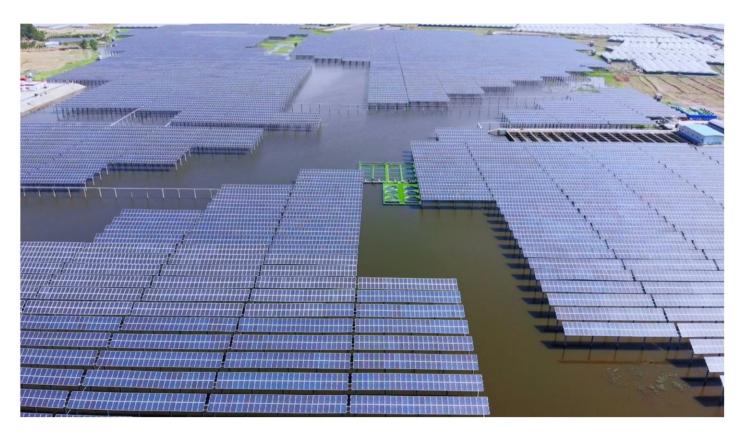
TONGWEI FISHERY

& PV INTEGRATION

》 通威"渔光一体"

通威"渔光一体"以水产养殖为基础,在池塘、水库养殖水面架设太阳能组件,改良传统"渔光互补"项目以光伏发电站为主,渔业养殖为辅 的模式,结合通威"365健康养殖模式",拓展通威太阳能光伏技术应用领域,形成"上可发电、下可养鱼"水下养殖和水上发电作业同时进行的 创新养殖模式。既不占用耕地,也没有改变原有土地用途,是一种高效、生态的复合用地创新模式,更是太阳能光伏产业与传统渔业跨界整合 的创新发展模式,真正实现"渔、电、环保"三丰收。我国拥有的养殖水面高达1.2亿亩, 若将其中4500万亩精养鱼塘建成"渔光一体"电 站,将达1200GW-1500GW,相当于2015年全国装机发电总量。若将全国900万亩优质池塘进行新建和改扩建,实施"渔光一体"项目,水 产养殖产量可达1350万吨/年,同时可建设300GW-450GW光伏电站,年发电量相当于三峡水电站的5-8倍,具有十分广阔的前景。

Based on aquaculture industry, the "Fisheries and PV Integration" of Tongwei aims at establishing solar module over the water in ponds or reservoirs, and improving the traditional mode of "Fisheries and PV Integration" Program dominated by photovoltaic power stations and supplemented by fishery breeding. By combining Tongwei's "365 Healthy Breeding Mode" and expanding the application field of its photovoltaic technology, an innovative breeding mode in which "breeding fishes underwater and generating photovoltaic power over the water" has been formed. It does not occupy the cultivated land or change the original land use, which is an efficient, ecological and innovative mode of compound land use, and also an innovative development mode of cross-border integration of solar photovoltaic industry and traditional fishery, truly achieving benefits of "fishing, power generation and environmental protection". China has 120 million mu of aquaculture water. If 45 million mu of intensive fish breeding ponds are built into the "Fisheries & PV Integration" power stations, the total power generation will reach 1,200GW-1,500GW, equivalent to the national total installed power generation in 2015. If 9 million mu of high-quality ponds in the country are rebuilt, renovated and expanded to implement the "Fisheries & PV Integration" project, the aquaculture yield can reach 13.5 million tons per year; and at the same time, photovoltaic power stations with a capacity of 300GW-450GW can be built, with an annual power generation equivalent to 5-8 times of that of the Three Gorges Hydropower Station, which has a very broad prospect.





TONGWEI MODERN FISHERIES INDUSTRIAL PARK

>> 通威现代渔业产业园

的水面战略计划以来,通威股份相继在滨海新滩盐场、灌 东盐场、射阳、宿迁等地陆续建成2000亩级产业园35个, 整合养殖上下游优势资源,凸显通威技术、产品、模式、 线,推进水产养殖转型升级,实现从传统渔业向高效健康 渔业的过渡。

自2016年确定建设全球最大的现代渔业产业园区平台 Since 2016, when the water surface strategic plan for the construction of the world's largest modern fishery industrial park platform was determined, Tongwei Co., Ltd. has successively built 35 2,000-mu industrial parks in Binhai Xintan Saltern, Guandong Saltern, Sheyang, Sugian and other places, integrating the superior resources of aquaculture upstream and downstream, highlighting Tongwei's advantages in technology, 服务、管理等优势。园区主要分布在228国道及灌东沿 products, models, services and management. The Park is mainly distributed along the National Highway 228 and Guandong, promoting the transformation and upgrading of aquaculture and realizing the transition from traditional fishery to efficient and healthy fishery.











TONGWEI 365 BREEDING MODE

>> 通威365养殖模式

"渔光一体"水下养殖的智能化程度得以全面提升。

通过"通威365健康养殖模式"的植入,通威 Through the implementation of "Tongwei 365 Healthy Breeding Mode", the degree of intelligence of Tongwei's "Fisheries & PV Integration" underwater cultivation has been improved in an all-round way.

三种鱼类合理搭配混养



以主养鱼获得增值,以调水鱼改善水质,以调底鱼改良底质。根据地域特性、养殖习惯,通威技术人员为客户量身推荐池塘养殖的三类优良品 种鱼,规划各类鱼的放养时间、顺序、规格、尾数和重量密度,掌控养殖期各类鱼的出塘时间、规格和比例等。

The main cultivated fish is used to acquire value, and the other two species of fish are cultivated to improve water quality and the quality of the pond bottom. According to the regional characteristics and breeding habits, Tongwei technicians will recommend three species of excellent fish for pond breeding, plan the stocking time, sequence, size, number and weight density of all kinds of fish, and control their release time, size and proportion during the breeding period for customers.

6 六大技术专业管理



底排污系统-解决池塘清淤问题

Pond Bottom Sewerage System
- Solve The Problem Of Pond Dredging



风送投饵系统-解决池塘投饲问题

heumatic Feeding System
- Solve The Feeding Problem Of Ponds



智能复合增氧系统-解决池塘增氧问题

telligent Compound Oxygenation System
Solve The Problem Of Pond Oxygenation







水源保障技术-净化水质调节水温

Water Source Guarantee Technology - Purify Water Quality And Regulate Water Temperature



通威电化水技术-确保用药安全、降低成本提升鱼类品质

ingwei Electrochemical Water Technology Ensure Drug Safety, Reduce Costs And Improve The Quality Of The Fish



智能渔业技术-节约劳动力、提高养殖效益

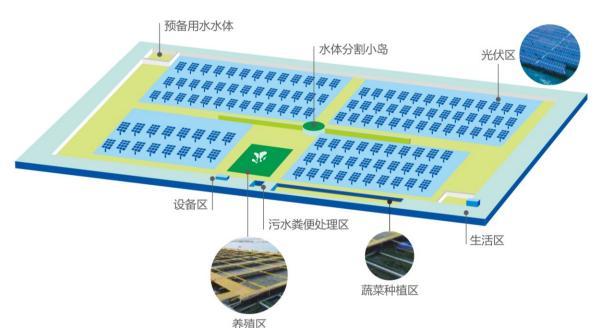


AQUACULTURE MODEL

OF INTERNAL CIRCULATION

>> 内循环养殖模式

通过对池塘2%的面积进行标准化循环流水池 改造,其余98%作为水质净化区域,叠加光伏 区,采用通威气提推水、底排污、智能投饵、均 衡增氧等技术,进行的一种低碳、生态、高效、 健康的水产养殖模式。相比传统养殖具备产能高 (提高至原池塘的1.5-3倍)、肉质好、捕捞方 便、饵料系数低等优势。 A low-carbon, ecological, efficient and healthy aquaculture model is implemented by transforming 2% of the pond area into a standardized circulation water pond, while the remaining 98% is used as a water quality purification area and superimposed with a photovoltaic area, using technologies such as Tongwei air stripping and water pushing, bottom pollution discharge, intelligent bait casting, balanced oxygen enrichment, etc. Compared with traditional aquaculture, it has the advantages of high productivity (increased to 1.5–3 times of the original pond), good meat quality, convenient fishing, low bait coefficient, etc.

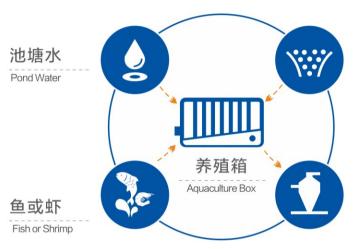




BOX-TYPE CIRCULAR

AQUACULTURE MODE

>> 箱式循环水养殖模式



投放饲料等

Put in the Feed

经旋流分离器 处理后排入池塘

Discharge into the Pond After Cyclone Separator Treatmen



"渔光一体"箱式循环水养殖模式,是一种以陆地为基础,用养殖箱为载体,运用高新技术全面有效地人为控制养殖环境和养殖过程,其养殖水体采用封闭再循环的模式,能摆脱自然水域环境对水产养殖的影响,能同时开展淡水与海水水产养殖的全新模式。

The "Fisheries and PV Integration" box-type circular aquaculture mode is a kind of aquaculture environment and aquaculture process based on land, using aquaculture boxes as the carrier and adopting new and high technologies for comprehensive and effective human control. Its closed recirculation mode adopted in the aquaculture water can get rid of the influence of the natural water environment on aquaculture and develop a brand-new model of freshwater and seawater aquaculture simultaneously.

CARE FROM THE LEADERS

>> 领导关怀

通威的发展离不开社会各界的关心、爱护、支持和帮助,同时也受到了党和国家各级领导的高度重视和充分的肯定,这些都极大地鼓舞了通威人的创业热情,公司全体员工将一如既往地不断努力做出新的更大的贡献。

The development of Tongwei is inseparable from the care, love, support and help from all sectors of society. In the meantime, it has also been highly valued and fully recognized by leaders of the Party and the state at all levels, which greatly encouraged the entrepreneurial enthusiasm of Tongwei people, and all the employees will continue to make new and greater contributions as always.



中共中央总书记、国家主席、中央军委主席习近平视察通威海南水产食品公司 General Secretary of the CPC Central Committee, President of the People's Republic of China, and Chairman of the CPC Central Military Commission Xi Jinping met with Mr. Liu Hanyuan at Tongwei (Hainan) Aquatic Products (TWAP).



中共中央政治局常委、国务院总理李克强亲切接见通威集团董事局主席刘汉元先生 Standing committee member of the Political Bureau of the CPC Central Committee, Premier of the State Council Mr. Li Keqiang met with Mr. Liu Hanyuan



中共中央政治局常委、全国人大常委会委员长栗战书 亲切接见通威集团董事局主席刘汉元先生

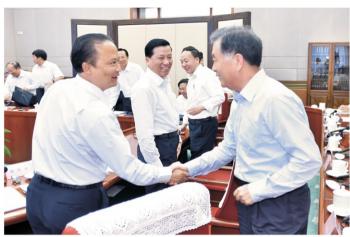
Standing Committee Member of the Political Bureau of the CPC Central Committee, Chairman of the standing committee of the NPC Li Zhanshu met with Mr. Liu Hanyuan



中共中央政治局委员、国务院副总理孙春兰莅临通威太阳能有限公司视察 Member of the Political Bureau of the CPC Central Committee, Vice Premier of the State Council Sun Chunlan visited Tongwei Solar Co., Ltd



中共中央委员、全国政协副主席刘奇葆视察通威 Member of the Central Committee of the CPC, Vice Chairman of the CPPCC National Committee Mr. Liu Qibao inspected Tongwei



中共中央政治局常委、全国政协主席汪洋亲切接见通威集团董事局主席刘汉元先生

Standing Committee Member of the Political Bureau of the CPC Central Committee, Chairman of the CPPCC Mr. Wang Yang met with Mr. Liu Hanyuan



中共中央政治局委员、上海市委书记李强视察通威如东"渔光一体"基地 Member of the Political Bureau of the CPC Central Committee, Secretary of Shanghai Municipal Committee of the CPC Mr. Li Qiang inspected Tongwei Rudong "Fishery & PV Integration" Base



中共中央委员、全国人大常委会副委员长王东明 视察通威太阳能(成都)有限公司 Vice Chairman of the Standing Committee of the NPC Mr.Wang Dongming Visited Tongwei Solar (Chenadu) Co., Ltd.



全国人大常委会副委员长、民建中央主席郝明金莅临通威调研 Vice Chairman of the Standing Committee of the NPC, Chairman of China Democratic National Construction Association Central Committee Mr. Hao Mingjin inspected Tongwei



全国政协副主席、全国工商联高云龙莅临通威调研 Gao Yunlong, Vice Chairman of CPPCC and Chairman of ACFIC, Visited Tongwei



中共十八届中央政治局常委,时任国务院副总理张高丽 亲切接见通威集团董事局主席刘汉元先生

Member of the Central Committee of the CPC, Vice Chairman of the CPPCC National Committee Mr. Liu Qibao inspected Tongwei



全国政协副主席、民建中央常务副主席辜胜阻一行 莅临通威太阳能(成都)有限公司调研

Gu Shengzu, Vice Chairman of CPPCC and Executive Vice Chairman of China Democratic National Construction Association, and His Delegation Visited Tongwei Solar (Chengdu) Co., Ltd



中共十八届中央政治局常委,十二届全国政协主席俞正声 亲切接见通威集团董事局主席刘汉元先生

Standing Committee Member of the Political Bureau of the 18th CPC Central Committee, Chairman of the 12th CPPCC National CommitteeMr. Yu Zhengsheng met with Mr. Liu Hanyuan



十一届、十二届全国人大常委会副委员长, 民建中央原主席陈昌智一行调研通威太阳能(成都)有限公司

Chen Changzhi, Vice Chairman of the 11th and 12th NPC Standing Committee and former Chairman of the China Democratic NationalConstruction Association, and his delegation investigated Tongwei Solar (Chengdu) Co., Ltd



刘汉元主席(右一)出席习近平总书记主持召开的民营企业座谈会并发言 President Liu Hanyuan (the 1st person on the right) attends the private enterprise forum presided over by General Secretary Xi Jinping and delivers a speech.

COMMUNICATION & COOPERATION → 合作交流

为更快、更好地顺应全球经济一体化,通威在角逐 国内市场的同时,放眼国际市场。通威人一边走出国门 积极学习、探索先进技术和管理经验,一边又以自身迅 猛的发展势头吸引了国内外众多关注的目光,不断有国 内外各种考察团、企业代表、专家等访问公司,寻求技 术交流合作。

In order to better adapt to the global economic integration more quickly, Tongwei takes a broad view into the international market, while competing in the domestic market. On the one hand, Tongwei people actively go abroad to study and explore advanced technologies and management experience. On the other hand, it has attracted a lot of attention at home and abroad with its own rapid development momentum. Various investigation groups, enterprise representatives and experts from home and abroad are constantly visiting the company, seeking technical exchanges and cooperation.



刘汉元主席与美国加州州长杰瑞·布朗洽谈新能源产业合作 Chairman Liu Hanyuan met with Governor Jerry Brown of California to Discuss New Energy Industry Cooperation.



新加坡共和国驻成都总领事颜呈吉莅临通威太阳能(成都)有限公司考察 Mr. Yan Chengji, Consul General of Republic of Singapore in Chengdu, Visited the Tongwei Solar (Chengdu) Co. Ltd.



Amir Shlomo Laty, Consul General of Consulate General of Israel in Chengdu, Visited Tongwei

德国SST公司创始人史密德一行到访通威 Mr. Schmid, the founder of German SST Company, Visited Tongwei

以色列驻成都总领事蓝天铭访问通威



日本韩国越南柬埔寨四国驻华记者团到访通威 Japanese, Korean, Vietnamese and Cambodian press corps stationed in China Visited Tongwei



时任农业部副部长牛盾、金砖五国农业部部长莅临通威考察 Niu Dun, the former Vice Minister of the Ministry of Agriculture, BRICS Agriculture and Agrarian Development Minister Vsited Tongwei



隆基绿能科技股份有限公司董事长钟宝申一行到访通威 Mr. Zhong Baoshen, president of Longgi Silicon Co., Ltd, Visited Tongwei



格力电器董事长兼总裁董明珠考察通威太阳能(成都)有限公司 Dong Mingzhu, Chairman and President of Gree Electric Appliances Inc., Inspected Tongwei Solar (Chengdu) Co., Ltd



通威集团董事局主席刘汉元先生与协鑫集团董事长朱共山先生互赠礼物 Mr. Liu Hanyuan, the chairman of Tongwei group and Mr. Zhu Gongshan, the Chairman of GCL, Exchanged Gifts



阳光电源董事长曹仁贤莅临通威集团考察 Mr. Cao Renxian, the Chairman of Sungrow Group, Visited Tongwei Group



通威集团董事局主席刘汉元先生会见华为公司来宾 Mr. Liu Hanyuan, the Chairman of the Board of Directors of Tongwei Group, Met with the Guests from Huawei Company

CONTRIBUTING TO SOCIETY

>>> 奉献社会

通威集团自成立以来,在获得自身稳健发展的同时,刘汉元先生始终坚持以一个成功企业家的高度社会责任感,情系民生,饮水思源,用真情和爱心回馈社会各界的厚爱,积极参与社会公益事业、光彩事业和思源工程。迄今为止,通威集团各种捐款捐物总额已超过3.5亿元人民币。

Since its establishment, Tongwei Group has achieved steady development. At the same time, Mr. Liu Hanyuan has always insisted on a high degree of social responsibility as a successful entrepreneur, caring for people's livelihood, drinking from the source, giving back the deep love from all sectors of society with true feelings and love, and actively participating in social public welfare undertakings, glorious causes and Siyuan Projects. So far, Tongwei Group has donated more than RMB 350 million, including both money and supplies.



汶川大地震发生后,通威集团董事局刘汉元主席第一时间捐赠1200万元

May 12, 2008, Tongwei Board Chairman Mr. Liu Hanyuan donated ¥12 million yuan right after the 8-magnitude earthquake happened at Wenchuan.



通威每年捐赠500万元,十年共捐资5000万元成立"思源工程 阳光计划"
Tongwei budgets an annual fund of ¥5 million yuan for 10 consecutive
years and set up "China Siyuan Project Sunshine Plan" with an
exclusive donation of¥50 million yuan in total.



通威集团捐资1500万元建设的光伏电站在新疆阜康产业园举行揭牌仪式 The opening ceremony of photovoltaic power plant constructed with the donation of 15 million yuan from Tongwei Group was held in Xinjiang Fukang Industrial Park



通威捐助400万元在眉山市永寿镇建成通威文化广场 Tongwei donated 4 million yuan to build Tongwei Cultural Square in Yongshou Town, Meishan City



Lushan Earthquake Donation Ceremony



通威集团理塘公益项目太阳能发电站 Tongwei Group Litang Public Service Project Solar Power Station



通威集团工会主席李思宇与德阳市通威第六中学师生合影留念photo of Li Siyu, Labor Union Chairman of Tongwei Group and student and faculty of Tongwei No. 6 Middle School of Deyang

EVENTS >>> 大事记

1983年: 刘汉元先生发明"渠道金属流水网箱养鱼技术",1986年被列入农业部"星火计划"正式向全国推广; 1986年: 通威前身眉山县渔用配合饲料厂开业; 1992年: 诵威集团成立: 1993年: 刘汉元先生荣获"中国杰出青年企业家"光荣称号; 1994年: 通威集团总部从眉山移师成都,全面完善管理机构和文化结构; 1995年: 通威集团被国家工商总局、中国企业评价协会评为"中国500家最大私营企业"第二名; 1997年: 通威集团在中国饲料行业首家通过ISO9002质量体系认证和产品方圆认证; 2002年: 中国第一条品牌鱼"通威鱼"在成都隆重上市; 2004年: 通威股份(600438)在上交所成功上市; 2005年: 通威牌系列配合饲料和浓缩饲料荣获首批"国家免检产品"称号; 2006年: 通威被中国品牌研究院评定为中国饲料行业唯一标志性品牌; 2007年: 通威水产饲料继畜禽饲料之后, 再次荣获"中国名牌"称号; 2007年: 通威技术中心获得国家级企业中心评定; 2009年: 通威股份荣列"2009全国五十强饲料企业"; 2010年: 刘汉元主席荣获"2010年中国饲料企业领军人物"; 2011年: 刘汉元主席荣获"2011全球华商饲料行业十大领军人物": 2013年: 通威股份荣获国家科学技术进步二等奖; 2013年: 刘汉元主席荣膺"2013财经影响力人物"殊荣; 2013年: 通威集团以8.7亿元价格成功接收合肥赛维, 重构全球光伏发展格局: 2013年: 通威太阳能(合肥)有限公司投产仪式隆重举行; 2014年: 第四届通威科技大会在成都降重举行; 2014年: 2014年"中国500最具价值品牌"榜单在北京发布,通威品牌价值突破256亿元大关; 2014年: 全国人大副委员长、民建中央陈昌智主席莅临通威国际中心视察; 2014年:以"科技引领营销争锋"为主题的2014年通威股份科技营销年会在通威国际中心隆重召开; 2015年: 2015通威科技大会在通威国际中心完美落幕; 2015年:越南通威喜获产品质量评价A级免检企业; 2015年: 通威集团荣获"2015最佳品牌形象奖"; 2015年: 通威集团入围中国企业500强; 2015年: 汪洋副总理关注通威"渔光一体" 刘汉元主席详解传统农业升级路径; 2015年: 通威股份荣获2014-2015年度中华农业科技奖科学研究成果一等奖; 2015年: 刘汉元主席荣获2015年度"四川经济影响力人物"殊荣; 2016年: CCTV-7隆重播出通威"渔光一体"深度新闻; 2016年: 刘汉元主席当选中国光伏农业联盟联合主席; 2016年: 刘汉元主席"两会"期间接受央视《新闻联播》专访; 2016年: 第三届中国光伏农业高峰论坛暨2016通威科技大会举行; 2016年: 2016年"中国500最具价值品牌"榜单在京隆重发布,通威品牌价值突破400亿元大关; 2016年: 通威股份入围《财富》2016年中国500强榜单; 2016年: 2016中国民营企业500强发布会隆重举行,通威集团荣登2016中国民营企业500强; 2016年: 通威集团荣列"2016成都企业100强"前三甲; 2018年: 通威股份独立完成的"现代水产产业链技术创新工程"项目、以及合作完成的"草鱼健康养殖营养技术创新与应用"项目同时荣获四川省科技进步奖一等奖; 2019年,通威参与的《猪抗病营养技术体系创建与应用》荣获国家科技讲步二等奖: 2019年: 通威股份召开第七届董事会第一次会议, 谢毅先生出任公司新一届董事长职务。

- In 1983: Mr. Liu Hanyuan invented "channel metal water cage fish technology", and it was included in the "Spark Plan" in the Ministry of Agriculture in 1986 for the official promotion to the country.

 In 1986: Meishan County Fishing Matching Feed Factory, the predecessor of Tongwei, was established.

 In 1992: Tongwei Group was established;

 In 1993: Mr. Liu Hanyuan won the glorious title of "China's Outstanding Young Entrepreneur".

 In 1994: The headquarter of Tongwei Group was moved to Chengdu from Meishan to fully perfect the management institution and cultural structure.

 In 1995: Tongwei Group was awarded as the Second Prize of "China's 500 Largest Private Enterprises" by the State Administration for Industry and Commerce and China Enterprise Evaluation Association.

 In 1997: Tongwei Group passed ISO9002 Quality System Certification and Product Circumference Certification firstly among China's feed industry.

 In 2002: China's first brand fish "Tongwei Fish" was listed grandly in Chengdu;

 In 2004: Tongwei Co.,Ltd. (600438) was listed successfully in Shanghai Stock Exchange.
- In 2006: Tongwei was awarded as the only iconic brand in China's feed industry by China Brand Research Institute.

 In 2007: Tongwei aquatic feed won the title of "China's Famous Brand" again after the livestock and poultry feed.

 In 2007: Tongwei Technology Center was awarded by the National Enterprise Center.

In 2005: Tongwei brand series matching feed and concentrated feed won the title of "National Inspection—Free Product" in the first batch.

- In 2009: Tongwei Co.,Ltd. was listed in "2009 National Top 50 Feed Enterprises".

 In 2010: Chairman Liu Hanyuan was awarded as "2010 China's Feed Enterprise Leader".
- In 2011: Chairman Liu Hanyuan was awarded as "2010 Global Chinese Merchant Feed Industry Top Ten Leaders".
- In 2013: Tongwei Co., Ltd. won the Second Prize of National Scientific and Technological Progress Award.
- In 2013: Chairman Liu Hanyuan won the award of "2013 Financial Influence Figure"
- In 2013: Tongwei Group merged Hefei Peacekeeping successfully with the price of 870 million yuan, and reconstructed the global PV development pattern.
- In 2013: Production ceremony of Tongwei Solar (Hefei) Co., Ltd. was held grandly.
- In 2014: The 4th Tongwei Technology Conference was held grandly in Chengdu.
- In 2014: 2014 "China's 500 Most Valuable Brand" list was released in Beijing, and the brand value of Tongwei exceeded 25.6 billion yuan
- In 2014: Chairman Chen Changzhi, the vice chairman of NPC and Construction Central visited Tongwei International Center
- In 2014: 2014 Tongwei Co.,Ltd. Science · Marketing Annual Meeting with the theme of "Science Leading · Marketing Contest" was held in Tongwei International Center grandly.
- In 2015: 2015 Tongwei Technology Conference was ended perfectly in Tongwei International Center
- In 2015: Vietnam Tongwei won the Product Quality Evaluation A-level Inspection-Free Enterprise
- In 2015: Tongwei Group won "2015 Best Brand Image Award"
- In 2015: Tongwei Group was awarded as China's Top 500 Enterprises
- In 2015: Vice Premier Wang Yang concerned Tongwei "Fishery & PV Integration" Chairman Liu Hanyuan explained the traditional agricultural upgrading path in details
- In 2015: Tongwei Co., Ltd. won the First Prize of 2014-2015 China Agricultural Science and Technology Award Scientific Research Achievement
- In 2015: Chairman Liu Hanyuan won the award of 2015 "Sichuan Economic Influential Figure"
- In 2016: CCTV-7 broadcasted the depth news of Tongwei "Fishery & PV Integration" grandly
- In 2016: Chairman Liu Hanyuan was elected as the co-chairman of China's PV Agricultural Union
- In 2016: Chairman Liu Hanyuan accepted the interview from CCTV News during "two sessions"
- In 2016: The 3th China's PV Agricultural Summit Forum and 2016 Tongwei Technology Conference were held
- In 2016: 2016 "China' s 500 Most Valuable Brand" List was released in Beijing grandly, and the brand value of Tongwei exceeded 40 billion yuan.
- In 2016: Tongwei Co.,Ltd. was included in 2016 China's Top 500 List from Fortune
- In 2016: 2016 China's Top 500 Private Enterprise Conference was held grandly, and Tongwei Group was awarded as 2016 China's Top 500 Private Enterprise
- In 2016: Tongwei Group was listed as the top three among "2016 Top 100 Chengdu Enterprise"
- In 2018: The "Technological Innovation Project of Modern Aquatic Industry Chain" independently completed and the "Innovation and Application of Healthy Aquaculture and Nutrition Technology of Grass Carp" jointly completed by Tongwei Co., Ltd. won the First Prize of Sichuan Provincial Science and Technology Progress Award simultaneously;
- In 2019: The Establishment and Application of Nutritional Technology System for Disease Resistance of Pigs with Tongwei's participation won the Second Prize of National Science and Technology Progress Award
- In 2019: The First Meeting of the 7th Board of Directors of Tongwei Co., Ltd. was held, and Mr. Xie Yi was Appointed as the New Chairman of the Board of Directors of the company.

